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Taxation of Owner-Occupied and Rental Housing

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Abstract

This paper illustrates how the different tax treatments of owner-occupied and rented houses affect the relative costs of owning and renting. In the examples, a representative landlord computes the rental rate (the ratio of the rent to the value of the house) required to break even on an investment in a house. Potential homeowners compare that market rental rate as a tenant with an implicit rental rate that reflects the cost of owning a home.

The tax advantages tend to make owning more advantageous than renting for higher-income households, but lower-income households can find renting cheaper than owning. The paper also illustrates how limiting or eliminating certain tax advantages would change the cost of owning relative to renting. While the precise comparisons are specific to the conditions detailed in the examples, their general implications are broadly applicable.

Summary

The federal income tax treats home ownership more favorably than most other investments. People who own and occupy their own homes can deduct mortgage interest and property taxes from income while the rental value of the home—that is, the benefits they derive from home ownership, sometimes referred to as “imputed rent”—is excluded from taxable income. In addition, capital gains on sales of primary residences are largely excluded from tax.

Landlords also receive certain advantages under the tax code. They can deduct amounts for the depreciation of their property that exceed the actual decline in value for most rental housing. While the capital gains from the sale of rental property are not excluded from income, landlords may pay lower taxes on those gains and they have the option to defer gains when one property is sold and another purchased (a “like-kind exchange”). To the extent landlords’ tax benefits are passed through to tenants (as is likely in a competitive market with many landlords and tenants), the costs of renting a home also decline. Thus, the tax system can lower both the costs of owning and renting one’s primary residence.

This paper focuses on how the federal income tax affects the costs of owning and renting single-family houses, the predominant form chosen by households in the United States. For that reason, the landlords represented in this paper are intended to reflect those who typically rent out single-family homes. Those landlords tend to own few houses, own their rental units themselves or in small partnerships, have other employment, and pay taxes under the individual income tax.

Through a series of examples, this paper illustrates how the different tax treatments of rented and owner-occupied houses affect both the choice by investors between investing in rental housing or some other asset, and the choice by households between owning and renting. In the examples, a representative landlord computes his break-even rental rate on an investment in a house. That rate is the ratio of rent to house price that he would need to earn over his expected period of ownership to make the investment as profitable as his alternative investment in financial assets. Likewise, potential homeowners (represented in the examples by married couples) compare that rental rate as tenants with an implicit rental rate that reflects their cost of owning a home—that is, a rate just sufficient to cover the present value of their costs over their expected period of ownership.

The examples are based on mortgage rates in early 2010 and the Congressional Budget Office’s (CBO’s) forecast as of that summer for inflation and house price appreciation over the coming decade. In order to compare the tax treatment of owning and renting, it is also assumed that those conditions reflect stable conditions for landlords and home buyers. Under those circumstances and related assumptions:

- The cost of owning a home for households in the 25 percent tax bracket who claim a deduction for their mortgage interest payments is about 16 percent less than the cost of renting a similar unit, solely because of favorable tax treatment.
- Households that are in lower tax brackets and deduct mortgage interest payments receive smaller tax savings from owning, and those in higher tax brackets receive larger savings.
- Households that are in lower tax brackets and must borrow to buy a home but are not able to claim a deduction for mortgage interest can receive larger tax benefits from renting.
- Homeowners who purchase a home using equity that they would otherwise invest in a taxable account or activity receive a tax advantage comparable to borrowing and claiming a deduction for mortgage interest payments. The spread of tax-favored savings accounts may have reduced the incentive to invest one's own savings in a home.
- The rental rates landlords need to break even are heavily dependent on rates of interest, inflation, and house price appreciation. (The rental rates for homeowners are also heavily dependent on those conditions, but not to the same degree.)
- The rental rates of landlords are modestly influenced by features of the tax code such as accelerated depreciation allowances, passive activity loss rules, and like-kind exchanges.

Changes to the tax treatment of home ownership would affect the incentive to purchase a home as well as how those benefits are distributed among taxpayers. Under the assumptions specified in the examples:

- Including the implicit rental value of owner-occupied houses in the taxable income of homeowners would eliminate the tax advantage of owning a home. Because that rental value is not observed, however, this option would be difficult to implement.
- Repealing the mortgage interest deduction would eliminate much of the incentive to own for home buyers who must borrow to fund most of the purchase price. Renting would become cheaper than owning for more people in lower tax brackets. (Repealing the property tax deduction would have similar, but smaller, effects.) The incentive to own would remain unchanged for people who own their homes outright, with no mortgage debt.
- Converting the mortgage interest deduction to a 15 percent tax credit would make owning cheaper than renting for some lower-income people who currently rent. It would also reduce the tax break for mortgage interest among people in higher tax brackets.
- Eliminating the capital gains exclusion would reduce the incentive to own for middle- and upper-income taxpayers. Those effects, however, would likely be modest under current conditions.

The examples in this paper are designed to highlight how differences in the tax treatment of homeowners and landlords affect the relative costs of buying or renting a home. While the examples are based on plausible market conditions and tax circumstances, they are not intended to represent the population as a whole or to reflect all the factors affecting people's choice of tenure. Furthermore, the analysis of the options to change the tax treatment of housing does not include the full range of adjustments that people and the markets would make in response to such changes.

Tax Treatment of Housing

Investment in residential housing—both by homeowners who reside in the houses they own and by landlords who rent their properties to others—receives preferential treatment under the tax code. While renters do not directly receive similar assistance, they may benefit indirectly from the tax preferences provided to landlords. Because rental markets typically have many landlords competing for tenants and tenants looking for the best rents, this paper assumes that competition will force landlords to pass along their tax advantages to tenants in the form of lower rents.

Tax Treatment of Owner-Occupied Housing

The tax code provides homeowners with several advantages. The largest, and perhaps best-known, is the deduction for mortgage interest on owner-occupied residences. The staff of the Joint Committee on Taxation estimates that the tax expenditure for mortgage interest is \$84 billion in fiscal year 2012—making it the third largest tax expenditure in the budget (see Table 1).¹ Owner-occupied housing receives other tax advantages as well. First, homeowners do not include the benefits they receive from owning a home (often referred to as “imputed rent”) in taxable income. Second, they can deduct state and local property taxes. Finally, they can exclude most capital gains from the sale of their main residence from taxable income.

Although the tax treatment of imputed rent generally receives less attention than the other three provisions, it is closely linked to two of them. The tax benefits of the deductions for mortgage interest and property taxes derive, in large part, from the way the tax code treats imputed rent.

Net Imputed Rental Income. People receive economic benefits by purchasing homes and residing in them, but they are unaccustomed to assigning a dollar value to those benefits. For example, one of the touted advantages of buying a home is that homeowners no longer pay rents to landlords. But viewed from another perspective, homeowners' incomes increase by the value

¹ The Congressional Budget and Impoundment Control Act of 1974 defines tax expenditures as “those revenue losses attributable to provisions of the Federal tax laws which allow a special exclusion, exemption, or deduction from gross income or which provide a special credit, a preferential rate of tax, or a deferral of tax liability.”

of the shelter and other services that they receive from their investment in owner-occupied housing.

Imputed rental income is the analog to the actual rental income on which landlords are taxed. When a person buys a house and rents it out, he or she receives rental income from the tenant. If instead of renting out the house, the owner lives in it, no rent is paid from one party to another, but the owner-occupant receives the same value of housing services as the renter would have. Thus, the owner-occupant effectively receives the same rental income as when he or she rents it to another, but the income is in the form of housing services.²

Gross income of the homeowner thus includes the amount that an owner-occupied home would rent for if it were rented to a tenant. Net rental income would be that gross rent less expenses, such as maintenance and operating expenses, mortgage interest payments, property taxes, and an allowance for actual depreciation of the structure. Because the tax code does not require that owners compute the net rental income from their home and include it in adjusted gross income, that omission is treated by the Treasury Department as a tax expenditure in the federal budget. However, people do not observe how much imputed rent they receive, and thus taxing that income would present administrative challenges. The staff of the Joint Committee on Taxation does not include the exclusion of imputed rent on its list of tax expenditures because its exclusion from taxable income may be an administrative necessity.

Deduction for Mortgage Interest. The deductibility of mortgage interest is considered a tax expenditure only because the tax code does not require that owners include the imputed gross rental value of their home as income. If that imputed rent were included, then mortgage interest would be a legitimate business deduction, just as it is for landlords.

Under current law, homeowners who itemize can deduct the interest on up to \$1 million of debt used to buy, build, or substantially improve their primary residence and one other home (defined as “acquisition debt”). In addition, homeowners can deduct the interest on up to \$100,000 of debt (known as “home equity debt”) secured on the homes that is used for any purpose. To be deductible, home equity debt on a house cannot exceed the difference between the market value of the house and the acquisition debt on the house.

Deduction for Property Tax. Homeowners who itemize are allowed to deduct property taxes levied by state and local governments.³ As with the deduction for mortgage interest, this

² Like housing, other durable goods (such as cars) provide economic benefits to their owners that are not easily measured. These other durables are generally much less expensive than housing and therefore provide less valuable services.

³ One exception is homeowners who are subject to the alternative minimum tax. That tax does not allow the deduction of property taxes by homeowners.

deduction would be a legitimate business expense rather than a tax expenditure if owners were required to include their imputed gross rent as income.

Exclusion of Capital Gains on Primary Residence. When people sell an asset for more than the purchase price (the “basis”), they generally realize a capital gain that is subject to taxation as income.⁴ Long-term capital gains—those realized on assets held for more than a year—are taxed at various rates, most of which are below the rates applied to other types of income. However, the tax code allows taxpayers to exclude some of the capital gains attributable to owner-occupied housing. The current exclusion is limited to gains from the sale of a primary residence of up to \$500,000 for couples filing joint tax returns and \$250,000 for most other taxpayers. The exclusion is further restricted to houses that have been primary residences for two of the last five years.

Tax Treatment of Rental Housing

Like other business owners, landlords determine taxable income from rental housing by subtracting expenses from gross receipts. Thus, landlords generally include rents received as income and deduct expenses such as maintenance and operating costs, mortgage interest, and property taxes. In addition, they are allowed a deduction for the depreciation—the loss in value—of the property as it ages and wears out.

The tax code has several provisions that treat rental housing differently than would a pure income tax. Among those provisions are the size of the qualifying depreciation allowances, limitations on the use of “passive activity losses,” and the tax treatment of capital gains. A fourth provision is the tax credit for low-income housing. Although that credit is one of the larger tax expenditures for rental housing, it is not addressed in the analysis here because it is available only for selected projects.

Depreciation. The value of most assets such as equipment, software, and structures falls—or depreciates—over time as they wear out or become obsolete. The tax code specifies schedules of deductions that businesses may claim over the life of their assets to account the decline in their value.

For rental housing, the tax code specifies that the initial value of structures can be depreciated by using the “straight-line” method over 27.5 years. Under that method, the annual depreciation deduction is a constant amount equal to the initial value of the structure divided by 27.5 years. As a result of those deductions, the remaining undepreciated value of the structure declines in a

⁴ Basis includes the costs of purchasing the property (such as the fee for a title registration).

straight line to zero after 27.5 years. That value at any one time is referred to as the structure's adjusted basis, which is used to compute the capital gain when the property is sold.⁵

At current rates of inflation, the depreciation allowances for rental housing are larger than the amount by which the real value of most rental housing is estimated to fall. The larger deductions reduce the net rental income of landlords during their first 27.5 years of ownership by more than the actual decline in the real value of the structure.⁶ Thus the tax code allows landlords to accelerate the depreciation for tax purposes and defer their taxable income.

Passive Activity Losses. Prior to 1987, several features of the tax code—such as accelerated depreciation allowances—allowed investors to report taxable losses when no economic losses occurred. Investors used those losses to shelter other income from taxation.

The Tax Reform Act of 1986 introduced several provisions to limit such tax sheltering. One provision limits the extent to which an investor in a firm who does not materially participate—that is, participate in a regular, continuous, and substantial manner—in its operations can use losses from that business to reduce his or her taxable income from other sources. In general, losses from such passive activities can only be offset against income from other passive activities. If the taxpayer's passive losses exceed his or her passive income in a year, the losses can be carried forward to another tax year until either enough passive income is earned or the investment in the passive activity is terminated.

Rental real estate is classified as a passive activity. There are, however, exceptions for real estate professionals or others who materially participate in the management of their real estate investment. For those who are not real estate professionals but materially participate in the management of a rental project, up to \$25,000 of rental losses can be used to offset active income such as dividends or wages. The \$25,000 exception phases out for persons with adjusted gross income between \$100,000 and \$150,000. People who own shares in real estate partnerships but do not participate in the management of the partnerships' properties are subject to the passive loss limits.

Capital Gains Realized at Sale. Like other investors, landlords benefit from lower tax rates on capital gains income. In 2012, those rates for joint returns are 0 percent for incomes up to \$70,700 and 15 percent for higher incomes. Unlike homeowners, however, none of the capital gains on rental properties can be excluded from taxable income.

⁵ The total tax basis of the property also includes the purchase price of the land.

⁶ After that time, landlords have no deductions to claim even though most buildings still have some useful life and continue depreciating. This causes their rental income to be overstated. Landlords can avoid having their income overstated by selling the property, buying a new one, and depreciating it.

Landlords and other business owners of real estate do receive a tax preference on capital gains that is not extended to other assets. Generally when business assets are sold, the amounts of any depreciation deductions that have been claimed during the period of ownership are included in taxable income. For real estate, the recapture of depreciation deductions is not treated as ordinary income but as a type of capital gains subject to special tax rates (referred to as unrecaptured section 1250 gains, named for the section of the Internal Revenue Code dealing with real property such as buildings).⁷ Those rates are the same as the rates on ordinary income—but unlike the rates on ordinary income, which currently can be as high as 35 percent, the rates on unrecaptured section 1250 gains are capped at a maximum of 25 percent.

Capital Gains Deferred through a Like-Kind Exchange. A landlord who sells one property and buys another of can defer taxation on the capital gain of the first property until he or she sells the second, provided certain conditions are met. As the name suggests, the two properties must be of a like kind, which for real estate sold in the U.S. can be any other real estate in the country. Another condition is that the sale of the first property and the purchase of the second must occur within a specified period. A third condition is that the money the landlord receives from selling the first property must be held by an intermediary and used to purchase the second; money or property added to or subtracted from the basic exchange are subject to special rules. Like-kind exchanges are not limited to real estate; they can be applied to other types of assets held for use in a trade or business or as an investment, such as when a business sells one truck and buys another. Deferral of taxation on capital gains is advantageous because the taxpayer can use those funds for other purposes until the tax is paid.

Comparing the Tax Advantages of Owning and Renting

Prospective landlords and prospective homeowners face choices about housing. For a prospective landlord, the choice is between buying a rental property and investing the same money in other types of assets. This investor will decide to buy the property if he anticipates that the yield from the property is at least as high as the expected yield on other types of investments. (This assumption does not account for differences in the riskiness of the investments.) The yield from the property depends on the rent the investor can expect compared to expenses during the period of ownership and the gain or loss on the property when it is sold. How much of the yield the landlord keeps depends on his income taxes including the provisions affecting rental housing discussed above.

For a prospective homeowner, the choice is between buying a property to live in or investing the same money in other types of assets and renting a similar property. That choice is framed on one side by the market rent for a house and on the other side by the cost of buying a similar house,

⁷ Owners of buildings purchased before 1987 were allowed to use even more accelerated depreciation schedules than the straight-line version. The more accelerated depreciation is recaptured at ordinary income tax rates.

paying the ongoing expenses, and collecting the gain or absorbing the loss when the house is sold. The costs include the loss of the investment return that could have been earned had the house not been purchased. These costs of buying are affected by the tax treatment of home ownership, as discussed above.

The rent that a potential landlord can expect to earn and that a potential home buyer can expect to pay as a tenant is typically set in a local market for rental housing. With many landlords offering rentals and many households looking for places to live, the workings of supply and demand tend to set rents at which the number of landlords willing to offer units roughly matches the number of households seeking to rent. The market is in a relatively stable condition when rents are high enough that landlords just cover their costs and match their return on alternative investments while just low enough to attract enough households to occupy the houses landlords are willing to offer.⁸

In this paper, a series of examples illustrate the impact of taxes on the choice between owning and renting. The examples compare the choices faced by a representative landlord considering the purchase of a house to rent and households deciding whether to rent or buy similar houses. To isolate the impact of taxes, the examples assume that the market for rental housing is relatively stable so that the rent a potential landlord can expect is just enough to break even on the investment. Furthermore, both the landlord and households face the same pretax costs of buying and operating similar houses. They also face the same interest rates on mortgage loans and on their alternative investments. They expect to own their properties for the same length of time. As is commonly the situation, the landlord is not incorporated, and as a result the income from his investments is subject solely to the individual income tax. Thus, in these examples, the only differences between the landlord and the households arise from their treatment under the federal individual income tax (state income taxes are ignored).

Landlord's Decision

In the examples, a landlord determines the rent needed over the period of ownership to cover the costs of providing the housing services, the net cost of buying and selling the property, and the return he would have earned if the funds invested in the house had been invested elsewhere. Returns on the house and on the alternative investment are compared after income taxes. The “break-even” rent for the landlord is the amount he would have to charge to guarantee the same after-tax return as he would earn from the financial investment. This break-even rent is assumed to be the stable market rent households would pay if they rent.

⁸ The market rent is stable for a longer time when the cost developers face for building new houses equals the amount landlords can pay and still break even at market rents.

To simplify comparisons among houses with different prices, the unit of analysis is the rental rate—that is, the ratio of rent to house value. The break-even rental rate for the landlord, then, is that rate necessary to set the present value of his investment equal to zero.⁹ That present value is computed as the discounted net stream of funds the landlord anticipates putting into and getting out of the house. Specifically, the present value, PV, is computed as:

$$(1) \quad PV = -(1-l)V_0 - C + \sum_{y=1}^Y (rV_{y-1} - E_y - X_y)(1+d)^{-y} + (V_Y - M - S - G)(1+d)^{-Y}$$

where:

l is the ratio of the mortgage loan to the price of the house,
and $(1-l)V_0$ is the down payment.

y is the year. $y = 0$ is the start of year 1,
and $y = Y$ is the year that the landlord sells the property.

V_y is the value of the house at the end of year y .

Annual changes in the value of the house result from inflation, price growth beyond inflation, and depreciation of the structure.

C is the cost of buying, such as points and fees.

r is the break-even rental rate, a constant throughout the period of ownership.

E is the out-of-pocket expenses, including mortgage payment.

X is the landlord's income tax on the net rental income (+ or -).

d is the discount rate.

M is the mortgage balance repaid at time of sale.

S is the cost of selling.

G is capital gains tax paid.

Furthermore, the income tax, X_y is computed as:

$$(2) \quad X = t(rV_{y-1} - iM_{y-1} - O_y - pV_{y-1} - \frac{B_0}{n})$$

where:

t is the landlord's marginal income tax rate
(which is the federal income tax paid on additional income).

i is the market rate of interest paid on mortgages (and the same rate paid on savings).

M_{y-1} is the mortgage balance outstanding at the end of the prior year.

O_y is the operating costs paid in the year

⁹ The break-even rental rates for landlords and home buyers are computed following the method described by Frank deLeeuw and Larry Ozanne, "Housing," in Henry J. Aaron and Joseph A. Pechman, eds. *How Taxes Affect Economic Behavior*, The Brookings Institution (Washington DC: 1981) pp. 283-323.

p is the property tax rate
B₀ is the value of the building at the time of purchase
n is the depreciation period (27.5 years)
B₀/n is the annual tax allowance for depreciation.

Finally, the discount rate, d, is the after-tax and inflation-adjusted return that the landlord would earn on his savings had they not been used to purchase a house (that is, the return on the alternative investment). It is computed as:

$$(3) \quad d = \frac{[1+i(1-t)]}{1+\pi} - 1$$

where: π is the inflation rate (assumed to be constant over the expected years of ownership).

Home Buyer's Decision

When deciding whether to rent or buy, a household compares its costs of owning to the market rent for equivalent housing. The household converts its costs and the foregone earnings on the savings it invests in the home into an equivalent stream of implicit rent that it can compare to the rent it would have to pay as a tenant. As the landlord did, the household computes its break-even rent: the amount that it would have to charge itself in rent to cover the net costs and forgone earnings from alternative investments.

The rental rate for the household as an owner is computed from an expression similar to Equation 1, except that the terms X and G reflect changes to the household's income taxes caused by the purchase. The rental rate that sets the present value of the home buyer's investment to zero just covers the home buyer's costs and alternative return on the invested funds.

The household compares its rental rate from owning to the market rate (reflecting the rental rate of landlords) to determine whether renting or owning is cheaper. The examples repeat these calculations for would-be home buyers under a variety of circumstances to illustrate factors that affect the incentive to own.¹⁰

¹⁰ Other studies have used the concept of the user cost of capital to quantify the tax advantage of owning. See, for example, James M. Poterba and Todd Sinai, "Revenue Costs and Incentive Effects of the Mortgage Interest Deduction for Owner-Occupied Housing," *National Tax Journal*, vol. 64, no. 2, part 2 (June 2011). Studies have also applied the concept of user cost to compute effective tax rates on owner-occupied and tenant-occupied housing. See Congressional Budget Office, *Taxing Capital Income: Effective Tax Rates and Approaches to Reform*, October 2005, p. 8. The rental rates presented in this paper are conceptually similar to user costs, but they incorporate additional factors. Rental rates are intended to reflect market rents that include operating and administrative costs, whereas user costs reflect only the return to capital. Also, the rental rates include capital gains taxes for landlords and homeowners, neither of which is included in typical calculations of user costs.

Effect of Housing-Related Tax Provisions on the Landlord's Investment Decision

The initial set of examples presents a cumulative illustration of how the tax treatment of rental housing affects the decision by landlords to invest. The first of these examples sets the stage by computing the break-even rental rate needed by a landlord expecting to pay a simple income tax on his actual income. Next, the impact on that rental rate of accelerated depreciation for rental housing is added. The first two examples assume that prices are expected to be stable. The third and fourth examples demonstrate how price appreciation of houses and general inflation affect the break-even rental rate through capital gains taxes and other avenues. The fifth example introduces the tax treatment of points and other costs of buying and selling. Rental rates under these five examples are summarized in Table 2. Finally, the effects of passive loss rules and like-kind exchanges are discussed.

All the examples assume that the landlord decides whether to buy a property at the beginning of 2011, plans to own the property for twelve years, and sells at the end of 2022. The analysis assumes that in addition to the tax provisions identified, tax liability is based on features of the tax law in 2010, which are assumed to apply in 2011 through 2022.¹¹ Thus, in the examples, the tax rate reductions in the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010 do not expire at the end of 2012 as scheduled, and the new surtax on investment income, enacted in the Affordable Care Act, does not take effect. Assumptions regarding economic conditions over this period are based on CBO's forecast in the summer of 2010.

Example 1: Simple Income Tax and Stable Prices

The potential landlord expects to pay income tax on his actual rental income. In particular, he expects to deduct the actual depreciation of the structure's value rather than the straight-line tax allowance. He also expects to pay ordinary income tax on the return from his alternative investment. The landlord is assumed to be in the 25 percent tax bracket because that is close to the average of marginal tax rates on rental income in recent years. Such a rate is a plausible one for landlords who break even at equilibrium market rents. Finally, the landlord expects to pay no capital gains tax when he sells the house because prices are expected to be stable.

The house the landlord is considering buying is newly built and selling for \$300,000. (See Table 3 for assumptions used in Example 1.) The value of the land is assessed at \$90,000 and the

¹¹ Tax credits, the alternative minimum tax, and certain other features of the tax system are not taken into account in the examples.

structure is valued at \$210,000. The outlook for stable prices is reflected in a low interest rate of 2.9 percent for 30-year fixed-rate mortgages.¹²

The potential landlord can invest \$60,000 in either financial assets or a rental property. The yield on the financial assets is 2.9 percent before taxes. Because the landlord is in the 25 percent rate bracket, the after-tax return is 2.2 percent. Alternatively, the landlord could purchase the house, using that money as a down payment of 20 percent of the purchase price of the house.¹³ He will purchase the property if it provides at least the same after-tax return.

To compute the break-even rent, the landlord considers the income and expenses associated with the property over the 12 years he intends to own the property (see Table 4). The landlord can predict certain of those items:

- At the beginning of the first year, he makes the \$60,000 down payment.
- In the subsequent years, his anticipated expenses include annual mortgage payments of \$12,042 and other costs—including operating costs and property taxes—that decline as the value of the house drops over time.¹⁴ Another cost over this period will be the income tax liabilities attributable to net receipts from the property—but those amounts will depend on the payments of rental income.
- Finally, he estimates the net proceeds from the sale of the house at the end of 12 years. Those proceeds are equal to the value of the house at that time, net of any mortgage debt.

To convert these annual cash-flows into a single amount, the landlord discounts each year's cash flow at the 2.2 percent after-tax rate of return he could be earning on the funds, had they been invested in his alternative financial assets. The landlord will earn that return when rents are equal to 8.01 percent of the house's value.

¹² The 2.9 percent interest rate is derived by removing the effects of inflation and points from CBO's Summer 2010 forecast of the mortgage interest rate for 2011. That rate was 5.1 percent with points and about 5.2 percent without points. The inflation forecast for the coming decade was about 2.2 percent. The resulting inflation-adjusted interest rate is computed as $100 \times (1 + 0.052) / (1 + 0.022) - 100$, and the result is rounded to the nearest tenth of a percent, yielding 2.9 percent. When inflation is introduced in Example 4, the nominal mortgage rate of 5.2 percent will replace the 2.9 percent rate, and when points are introduced in Example 5, the mortgage rate will be 5.1 percent.

¹³ The 20 percent down payment is a common threshold for loans that do not require home buyers to purchase mortgage insurance. The same down payment percentage is used throughout the examples. Increases in the percentage have little impact on break-even rental rates in the initial examples because mortgage interest rates are assumed to equal interest rates on alternative investments. Down payment percentages below 20 percent would affect rental rates if lenders required mortgage insurance.

¹⁴ Property taxes are treated as a cost of providing housing services. Landlords are assumed to be able to pass those taxes along to their tenants through higher rents. Homeowners are assumed to pay the taxes. Tenants and homeowners view those taxes as burdens only loosely related to the local public services they wish to consume.

Example 2: Effect of Depreciation Allowances

In the second example, the landlord uses the accelerated depreciation allowances specified in the tax law. Because the tax code specifies a faster rate of depreciation for the structure than actually occurs, the landlord's annual taxes are lowered during the twelve years he would own the house. However, he would also realize a taxable capital gain when he sells the house because the depreciation allowances would be subtracted from his cost basis.

Under the straight-line method allowed under the tax code, the potential landlord determines the annual depreciation deduction by taking the initial price of the structure on the property and dividing that amount by 27.5 years. Because the structure is initially valued at \$210,000, the annual depreciation deduction would be \$7,636. That deduction is larger than the \$3,150 estimated economic depreciation in the first year. The extra deduction of \$4,486 reduces the landlord's tax in the first year by \$1,122. The dollar amount of economic depreciation declines each year, so the advantage of using the constant tax depreciation allowance grows over the 12-year span for the investment

Offsetting that advantage is the impact of claiming tax depreciation on taxable capital gains. When the landlord sells the house after 12 years, its sales price – \$265,168 – is the same as in the first example. But the capital gain on the sale is positive in this example because the larger depreciation allowances have reduced the house's basis below that sale price. When the property's basis is reduced by the total depreciation allowances over the 12 years (\$91,637), the taxable gains become \$56,804 (computed as $\$265,168 - (\$300,000 - \$91,637)$). The capital gain in this example equals the excess depreciation allowances allowed by the tax code. The tax rate on that type of gain is the landlord's ordinary tax rate up to a maximum of 25 percent. As the landlord expects to be in the 25 percent bracket, he will pay \$14,201 in capital gains tax upon selling the house.

Because the income sheltered from tax during the years that the property was leased is taxed when the house is sold, the total tax benefit of the accelerated depreciation is the benefit of deferring the payment of the tax from the years in which the income would be earned to the year in which the house would be sold. If the landlord's ordinary income placed him in a higher tax bracket, there would be an additional tax benefit from taxing excess depreciation allowances at the maximum 25 percent rate.

With the additions of tax depreciation and the capital gains tax to the first example, the landlord's break even rent falls to 7.95 percent of the house's value, less than the 8.01 percent rental rate in the first example

Example 3: Effect of House Price Appreciation

In the prior two examples, the price of a constant-quality house did not increase over time. However, the price can increase either relative to other prices (a real increase in the value of the home) or along with other prices (general inflation, not a real increase). The impacts on break-even rents differ depending on the source of the price increase. In this example, the price of a constant-quality house (including the lot) is assumed to appreciate at a rate of about 2.4 percent a year, but the general price level is anticipated to remain stable (that is, there is no inflation).¹⁵ After 12 years, the house is expected to sell for about \$350,000, which is \$50,000 more than its initial purchase price, in spite of the gradual depreciation of the structure.

The anticipated appreciation means that the landlord would need to earn less in rent to meet his break-even return. Some of that return would come from the capital gain. Shifting some of the return from rent to capital gain also lowers the tax burden on the property. The capital gain is taxed at a 15 percent rate instead of the 25 percent rate paid on rental income. In the example, the landlord calculates that his break-even rental rate falls from 7.95 percent to 5.32 percent, a reduction of 33 percent.

Expected appreciation of house prices would also lower the break-even rental rate for home buyers. There would be no tax consequences for them, however, so long as their gain was below the thresholds for capital gains taxation.

Example 4: Effect of Inflation

Widely anticipated inflation, which raises house prices in step with all other prices, does not make houses more valuable. However, the tax code does not distinguish between capital gains that are due to changes in the real value of property and price increases that are due to inflation. This example extends the previous case by assuming that, in addition to the real appreciation in housing values, the general price level is widely expected to increase by 2.2 percent per year over the next 12 years. Thus, the price of a constant-quality house is assumed to rise, in total, by almost 4.7 percent per year over the period.¹⁶

¹⁵ The 2.4 percent growth rate is derived from CBO's Summer 2010 forecast that the sale price of existing houses would grow by 40 percent between 2011 and 2020 and the general price level would rise by about half as much. When those forecasts are extended over 12 years, converted to annual rates, and adjusted for the depreciation of structures at a rate of 1.5 percent per year, the annual growth rate of a constant-quality property is 2.4 percent beyond inflation.

¹⁶ The almost 4.7 percent growth rate in the price of a constant-quality house is computed as $(100+2.4)*(100+2.2)-100$, where the growth rate of house prices beyond inflation is 2.4 percent and the growth rate of inflation is 2.2 percent.

Inflation increases the capital gains tax the landlord must pay without increasing the value of his investment, and the landlord therefore requires a higher rent to break even. In addition, inflation raises break-even rental rates via another mechanism: The depreciation allowances that landlords can claim are set by the value of the structure at the time of purchase, and the faster prices rise, the lower the value of those annual fixed-dollar deductions. Consequently, landlords must once again raise the rent to break even.

Another way in which inflation interacts with the tax code is through interest rates. In this case, the effect is to put downward pressure on rental rates because the landlord's cost of borrowing is reduced. When inflation is anticipated over the length of a loan, lenders typically demand a higher interest rate to repay them for the lost purchasing power of the loan repayment. The amount by which interest rates increase has varied historically, but the most common assumption is that the increase matches the rate of inflation. Applying that adjustment in this example, the mortgage rate increases from about 2.9 percent without inflation to 5.2 percent.

That increase in the nominal interest rate would lead to a reduction in the real costs incurred by the landlord. Despite its name, the inflation premium in interest rates is not an interest expense to borrowers or interest income to lenders, but instead captures how the repayment of principal is eroded by inflation. Because the tax code allows borrowers to deduct that repayment from income and requires lenders to include that amount, the code creates a tax advantage for borrowers and a disadvantage for lenders.

In the example here, the landlord would borrow to buy and deduct his nominal interest payments. Because he is in the 25 percent tax bracket, his after-tax interest rate would be 3.9 percent [$5.2 \times (1 - .25)$]. Furthermore, because inflation reduces the value of this payment at the rate of 2.2 percent per year, the real cost would be about 1.7 percent—essentially one-half of one percentage point lower than in the previous examples when the after-tax interest rate is 2.2 percent and there is no inflation.

The lower burden of repaying loans is mirrored in a lower benefit from lending. The funds that the landlord could invest in financial assets would have their return rise to 5.2 percent, and they would have to pay tax on the inflation premium. That would reduce the inflation-adjusted, after-tax return from 2.2 percent to 1.7 percent. Thus the inflationary increase in interest rates in this example encourages the landlord to borrow and buy rather than to save.¹⁷

The net effect of inflation is to reduce the break-even rent of the landlord: The effect of inflation on his inflation-adjusted interest rates lowers his break-even rent by more than it is raised by the

¹⁷ To keep borrowers and lenders as well off under inflation of 2.2 percent as they were when inflation did not exist and interest rates were 2.9 percent, interest rates would have to rise to about 5.9 percent. That rate would keep the real after-tax cost of borrowing and lending at 2.2 percent. The appearance of equality of the 2.2 percent inflation rate and the 2.2 percent after-tax rate of return when there is no inflation is due solely to rounding.

effects of inflation on his capital gains tax and depreciation deductions. In the presence of inflation, the landlord's required rental ratio falls to 4.9 percent.

The increase in inflation and interest rates in this example would lower the borrowing costs for home buyers in the same way as for landlords. Most home buyers, however, would not be affected by the capital gains tax on the inflationary gain and none would be affected by the decline in the value of depreciation deductions.

Example 5: Effect of Costs of Buying, Borrowing, and Selling a House

When people buy a house, they pay fees for services such as the transfer of title and, if they finance part of the cost with a mortgage, they also pay fees for originating the mortgage loan. They may also pay points, which are up-front charges that lenders require in exchange for lower mortgage interest rates.¹⁸ When people sell, they typically pay realtor fees. Including these costs in the examples gives a more complete calculation of the rental rates faced by landlords and home buyers. In addition, the tax law treats the payment of points more favorably for home buyers than for landlords while it indirectly treats the costs of buying and selling more favorably for landlords.

The income tax treats points as the prepayment of interest. For home buyers, that interest is deductible in the year the home is purchased and the loan originated.¹⁹ For landlords, however, points must be deducted evenly over the term of the loan. If a landlord repays the loan early, the remaining amount of points paid can be deducted in that year. This difference in treatment adds to the tax advantage of owning over renting because the homeowner gets to accelerate the deduction of some interest expenses. In contrast, other costs of originating a mortgage cannot be deducted from income.

Costs of buying and selling a house—other than those costs incurred when taking out a mortgage—can be subtracted from the capital gain realized from the sale of that house. While landlords and home buyers are treated equally in this regard, homeowners whose gains are below \$250,000 and \$500,000 generally do not receive any additional benefit from this provision (because their capital gains are exempted from tax).

Example 5 builds on Example 4 by replacing its mortgage without points with one that has points. The mortgage interest rate declines from 5.2 percent to 5.1 percent, and landlords instead pay 0.7 percent points (the national average for points on conventional 30-year mortgages in

¹⁸ People often take out larger mortgages to pay for points. In that case, the borrower is trading a larger loan for a lower interest rate. Other costs of buying are sometimes financed by larger mortgages, as well.

¹⁹ Points are deductible as long as the home buyer pays at least that amount at the time of settlement. Points are not deductible when a loan is refinanced.

2010 and 2011).²⁰ Loan origination costs are set at 2.3 percent of the mortgage amount for landlords and home buyers. Other costs of buying, such as title registration and inspections, are assumed to be 0.9 percent of the house value.²¹ Selling costs—largely realtors’ fees—are set at 6 percent of the value of the house at the time of sale. Those costs are assumed to be the same for landlords and home buyers.

When the costs of buying, borrowing, and selling are added to the calculations, the break-even rental rates of the landlord rise to 5.79 percent.²²

Effect of Passive Activity Loss Rules and Like-Kind Exchanges

Passive activity loss rules and like-kind exchanges affect the break-even rent for some landlords, but they may affect too few landlords renting individual houses to make a difference in market rents. For that reason, their effects are considered here, but they are not carried forward into subsequent examples.

Passive Activity Losses. Landlords subject to the passive activity loss rules cannot use annual losses on their rental houses to reduce their other taxable income unless that income comes from other passive activities. Instead, they must defer the losses until they start receiving passive income or sell their rental unit.

The rules are of concern to many landlords because several features of the market for rental housing can cause them to have annual losses on their rental houses even when they expect to break even on their investment. Tax depreciation allowances in excess of actual depreciation, rising house prices, and general inflation each tend to lower the rents that landlords need to break even. But none of those factors reduce annual costs. In fact, general inflation raises those costs

²⁰ A common rule of thumb is that payment of one point reduces the mortgage interest rate by one-eighth of a percentage point. Following that rule, payment of 0.7 points reduces the mortgage rate by about one-tenth of a percentage point. In the examples, points are assumed to be paid from savings at the time the house is purchased rather than being financed. Financing points does not affect their deductibility. Whether points are paid up front or financed has a tiny impact on rental rates.

²¹ The costs of buying a home and originating a mortgage are taken from typical amounts reported in *A Consumer’s Guide to Mortgage Settlement Costs* provided by the Federal Reserve Board at www.federalreserve.gov/pubs/settlement/default.htm. Some settlement costs such as inspections and title insurance can be undertaken for both the buyer’s interest in purchasing the house and the lender’s interest in securing the loan. The division used in the example largely follows the division on the standard settlement statement form provided by the Department of Housing and Urban Development. Depending on the terms buyers and sellers of houses negotiate, the seller may agree to pay some of the costs of buying and originating a loan. In the examples here, the potential home buyers and landlords assume they will pay all of their costs when they buy and only their selling costs when they sell.

²² The change in the mortgage to one with points has a negligible impact on rental rates. That occurs because the present value of payments over 12 years is approximately equal for the mortgage in this example and the one without points in Example 4. The mortgage with points would raise rental rates if the mortgage were held for many fewer years and it would lower rental rates if the mortgage were held for many more years.

by increasing interest payments. As a result, landlords can have tax losses during many of their years of operation that are offset by capital gains at the time the house is sold. In Examples 2 through 5, landlords have tax losses that they can claim in every year.

If those losses were instead subject to the passive activity rules, the landlord could be required to defer the claiming of losses until he sells the house. Not being able to deduct tax losses when they occur reduces their value by delaying the receipt of their associated tax savings. The higher taxes that must be paid temporarily take funds that cannot be used for other purposes. If the landlord in the previous examples could not deduct any of his losses until the project was sold, the rental rate he would need to break even would rise by almost three-tenths of a percentage point.

Many landlords, however, appear to be unaffected by the passive activity loss rules. In 2006, over 60 percent of taxpayers reporting losses from rental real estate on Schedule E were able to deduct all of their losses. It is likely that most rentals of single-family homes are reported on Schedule E, and therefore the landlords are able to deduct their losses. Because most landlords renting out single-family houses appear to deduct losses as they occur, the remaining examples continue to assume that losses would be deducted in the years they are incurred.

Like-Kind Exchanges. As noted earlier, a landlord who sells one property and buys another can defer taxation on the capital gain of the first property until he or she sells the second. Deferral is accomplished by having the basis of the first property become the basis of the second along with any additional cash invested in the second property. In that way, when the second property is sold, the combined gains from the sales of the two properties are treated as a taxable gain on the second property.

Using a like-kind exchange has a drawback, however, because the depreciation deductions remain on the taxpayer's schedule from the first property, except to the extent of new investment. Had the landlord not used a like-kind exchange, the depreciation schedule on the second house would be based on the value of the second structure, which usually would allow higher depreciation deductions.

If the landlord from example 4 was expecting to reinvest the proceeds from selling his first house into the purchase of a second house of the same value and hold it for another 12 years, he normally would need to earn the same break-even rental rate on the second property as on the first. If instead he buys the second through a like-kind exchange, he would be able to defer the payment of the capital gain on the first property until he sells the second. Use of that exchange

would reduce his break-even rental rate on the two properties by about two-tenths of a percentage point.²³

The size of the benefit from like-kind exchanges varies with certain circumstances. One circumstance is the amount of capital gain on the deferred property. A second is the length of deferral. If deferrals are repeated until the owner dies, the heirs are exempt from the capital gains tax because of the step-up of basis to fair market values when an owner dies.

Information on the frequency with which landlords rely on like-kind exchanges is not generally available. The remaining examples continue to assume that the landlord does not take advantage of like-kind exchanges.

Effect of Tax Provisions on a Household's Decision to Buy or Rent

The primary provisions benefiting homeowners are the exclusion of their imputed net rental income from taxation, the ability to include mortgage interest and property taxes in their itemized deductions, and the exclusion of some capital gains on most home sales. How these provisions affect the cost of owning in turn depends on three other features of the tax code: the tax bracket of the household, the size of its deductions relative to the standard deduction, and the taxation of the return on the household's alternative investments.

The impacts of these provisions are illustrated through a second set of examples. The examples are of households with different incomes that cause them to face different tax rates and have different amounts of itemized deductions. The households also differ in their wealth, allowing some of them to consider the purchase of a house without a mortgage.

All households in the examples are married couples who file a joint return and have no dependents. These specifications allow the standard deduction and personal exemptions for which the home buyers qualify to be determined; however, the results and implications apply to most households.

Three households represent couples in the 15 percent, 25 percent, and 35 percent tax brackets.

- Each couple is assigned an amount of earnings that is roughly consistent with its tax bracket.
- Itemized deductions, other than mortgage interest and property taxes, are set at 10 percent of earnings, which is typical for taxpayers who itemize. An exception is made for the couple in the 15 percent tax bracket, which would itemize if it rented—its non-housing

²³ For simplicity, the reduction in rental rates from like-kind exchanges was computed under the assumption that the landlord would purchase the first and second homes without a mortgage.

deductions are set just above the standard deduction, about 14 percent of the couple's earnings. Each of these households itemize whether they rent or own.

- House values are set at 2.5 times earnings, also about the national average.²⁴
- The couples are assumed to have savings equal to two-thirds of their earnings, which is sufficient to enable them to purchase homes with a 20 percent down payment.

Two additional households are introduced to illustrate the effects of the decision to itemize deductions. They are similar to the households above except that they have lower incomes and are considering proportionately less expensive houses. Both are in the 15 percent tax bracket, and unlike the couples with higher income, they would find it more advantageous to take the standard deduction if they chose to rent. If they chose to buy, one of them would benefit by itemizing, while the other would still find it more advantageous to claim the standard deduction.

Finally, three households are included to illustrate how the benefits of owning are affected by financing with a mortgage when people do or do not itemize their deductions. They are similar to the other three households in the 15 percent tax bracket with one major exception—they have enough savings to purchase a home without taking out a mortgage.²⁵ The characteristics of all the households are summarized in Table 5.

All of these households face the same market conditions as the landlord in Example 5. They have similar expectations about their length of tenure and future price increases. They also face similar financing terms and proportionate costs of operating their homes. They all pay ordinary income taxes on the return from their alternative investments, as has been the norm for most people for most of the time since World War II. Since the 1980s, however, changes in tax laws have extended access to savings accounts that effectively exempt investment earnings from taxation. Subsequent examples illustrate the impact of tax-free savings alternatives on the costs of owning.

The market rents faced by households in the examples are based on the landlord's rental rate from Example 5. As a result, all households compare their rental rates of owning to a market rental rate for tenants of 5.79 percent.

Effect of the Home Buyer's Tax Bracket

Among home buyers who expect to itemize whether they own or rent, the higher the tax rate they face, the lower the rental rate they require to cover their costs. One reason is that the tax savings from deducting a dollar of mortgage interest or property tax increase with one's tax rate. A

²⁴ The national average ratio is chosen for simplicity even though people with lower incomes tend to buy proportionately more expensive houses and people with higher incomes tend to buy proportionately less expensive houses. Rental rates do not vary with house prices unless the price alters the decision to itemize.

²⁵ The other substantive difference is that their earnings are reduced so that their combined income from earnings and interest is similar to their counterpart couples if they all rent.

household in the 15 percent tax bracket saves 15 cents per dollar deducted, while a household in the 35 percent tax bracket saves 35 cents.

A second reason is that the after-tax interest on savings invested in financial assets declines as tax rates increase. Therefore, home buyers in higher tax brackets demand less of a return on the savings they invest in a home. In the examples here, the market rate of interest on savings is 5.2 percent. For a couple in the 15 percent tax bracket, the after-tax rate of return is 4.4 percent ($5.2 \times (1 - 0.15)$). In contrast, a couple in the 35 percent tax bracket earns an after-tax return of 3.4 percent on the same savings. That lower return means this couple needs to earn less from savings invested in a home in order to match its return from investments in financial assets. (Adjusting for inflation at 2.2 percent, the target real rates of return are about 2.2, 1.7, and 1.2 percent, respectively, for the couples in the 15, 25, and 35 percent tax brackets.)

Rental rates computed for couples in each of the three tax brackets illustrate how higher tax rates reduce the costs of owning (Table 6). A couple in the 15 percent tax bracket faces a rental rate of 5.46 percent to own. Rental rates decline to 4.85 percent for a couple in the 25 percent tax bracket and 4.26 percent for a couple in the 35 percent tax bracket. Compared to rental rates of 5.79 percent for renting, home buyers in the 15 percent tax bracket save 5.6 percent by owning. Home buyers in each higher tax bracket save more, with the couple in the 25 percent tax bracket saving 16.3 percent and the couple in the 35 percent tax bracket saving 26.5 percent.

Those savings reflect the net tax advantage of home ownership compared to the taxation of rental housing. In particular, while landlords pay tax on their net rental income, households exclude their imputed rent but still deduct their mortgage interest and property tax. In addition, the landlords pay tax on the capital gain, while many households do not. Those advantages are partially offset because landlords get to claim accelerated depreciation deductions, but even that advantage is eroded by inflation. The small advantage home buyers receive from being able to deduct points on the mortgage in the first year is essentially offset by the ability of landlords to deduct their costs of buying and selling a house.

The dollar savings from owning a home tend to rise faster than the discounts in the rental rates for people in higher tax brackets because they have higher incomes and more expensive houses. The couple in the 15 percent tax bracket considering a house priced at \$200,000 would need an imputed rent of \$10,928 in the first year to break even over 12 years as an owner, compared to a rent of \$11,581 if they rented a comparable home. The difference is a \$653 saving in the first year from buying. The couple in the 35 percent tax bracket would save \$19,155 by buying instead of renting similar houses. That dollar savings in the top bracket is about 30 times as large

as the dollar saving in the 15 percent bracket, while the saving in rental rates is only about 5 times as large (26.3 percent compared to 5.6 percent).²⁶

The tax advantages of owning not only encourage households to own rather than rent but also encourage them to spend more on their housing (for example, for a bigger home or for a house in a more desirable neighborhood). Thus while the comparisons above are for rents on similar houses, households would generally prefer to buy a larger home or one in a “better” neighborhood than a house they would rent.

Effect of Choice Between Itemizing and Taking the Standard Deduction

Another aspect of the tax code that affects the decision to purchase a home is the size of the potential buyer’s itemized deductions relative to the standard deduction. In 2010, married couples could claim a standard deduction of \$11,400 in lieu of claiming itemized deductions. Homeowners generally do not benefit from the interest and property tax deductions if their itemized deductions are less than the standard deduction.²⁷

The impact of itemizing mortgage interest and property tax on the housing decision can be illustrated through the examples of the three households in the 15 percent tax bracket who would borrow to buy a home.

In the example from the previous section, a couple in the 15 percent tax bracket is considering a house priced at \$200,000 and has enough deductions to itemize as a renter. If the couple bought the house, its itemized deductions would increase in that year by \$11,280, from \$11,500 to \$22,780 (see row 3 of Table 7). Because the couple is in the 15 percent tax bracket, its increased deductions from owning would reduce its taxes by an additional \$1,692. That additional reduction contributes to the earlier finding that the costs of owning would be covered by a rent equal to 5.46 percent of the house’s value, making it advantageous to own a home rather than rent.²⁸

²⁶ The 30 percent larger savings in rents in the examples somewhat overstates the actual differential in the U.S. economy because the examples assume that couples with higher incomes purchase houses with proportionately higher value. In practice, higher-income households purchase houses with proportionately lower value to their income than lower-income couples. Nonetheless, as long as people with higher income buy more expensive houses, the dollar savings in rent will rise more rapidly than the savings in rental rates.

²⁷ There are circumstances in which people might itemize even if their deductions were less than the standard deduction. One case occurs when couples file separately. In that case, both spouses have to make the same choice regarding whether to itemize or claim the standard deduction. Another case occurs when taxpayers benefit more from itemizing on their state taxes than they do from the standard deduction on their federal taxes but must, under state law, either itemize or claim the standard deduction on both returns.

²⁸ The couple’s total tax savings in the first year would be \$2,004 including \$312 saved by shifting \$40,000 from their savings account to the down payment. That amount is far larger than the \$653 of savings in annual housing costs the couple would receive from owning compared to what the landlord would charge in rent. The first year savings in taxes exceeds the savings in housing costs for several reasons. First, the landlord also has some tax savings, arising from accelerated depreciation deductions. Second, the landlord is in a higher tax bracket and

Another couple in the 15 percent tax bracket is considering the purchase of a house priced at \$175,000 with a mortgage of \$140,000 (see row 2 of Table 7). As a renter, the couple has only \$7,000 of itemized deductions, \$4,400 less than the \$11,400 standard deduction, so it currently claims the standard deduction. If it purchased the house, the couple would pay mortgage interest, points, and property taxes of \$9,870 in the first year. With itemized deductions totaling \$16,870, the couple would switch to itemizing. The deductions, however, increase by only \$5,470—the amount that the couple’s itemized deductions exceed the standard deduction—causing its taxes to fall by \$821 more than if it still claimed the standard deduction.²⁹ Over the 12 years the couple is considering owning the home, it could cover its costs with a rental rate of 5.82 percent. Because the rental rate is higher than the assumed market rental rate, this couple could rent a house for less than it would cost it to own.

The third example is of a couple considering the purchase of a house priced at \$100,000 financed in part with a mortgage of \$80,000 (see row 1 of Table 7). As a renter, the couple expects to take the standard deduction because its \$4,000 of non-housing deductions is less than the \$11,400 standard deduction. Even as an owner, the couple’s mortgage interest, points, and property tax expenses would not be enough to bring its total deductions up to the level of the standard deduction. As a result, the couple would continue to take the standard deduction as an owner. This couple would need a rental rate of 6.09 percent to cover its costs of owning. Even more than the previous couple, this couple would find it cheaper to rent than to own.

Many households face circumstances similar to those of the couples in the last two examples. In 2006, for example, about one out of five homeowners were like the couple in the second example that does not get the full incentive to own from deducting its mortgage interest and property taxes. Another one out of four homeowners was like the couple in the third example that has mortgage interest and property taxes but does not itemize.³⁰ In addition, many renters do not itemize, and therefore they would not gain the full benefit of the mortgage interest and property tax deductions if they were to buy.

Effect of Buying Without Borrowing.

When buyers finance more of their purchase with their own assets (“equity finance”), the itemized deduction for mortgage interest has less impact on their decisions to buy a home. As

therefore needs to earn a lower after-tax return on his investment. Third, the homeowner’s tax savings in the first year are boosted by the one-time deduction of points. Fourth, the \$653 savings in overall housing costs grows annually with the growth of the house’s value.

²⁹ The couple would save another \$273 from investing its down payment in a home instead of in a taxable savings account.

³⁰ The fractions are based on data from tax returns supplemented by the number of owner-occupied homes from Census data. The fractions are for all homeowners rather than only those people considering a purchase, as in the examples.

noted earlier, savings invested in a home receive another tax benefit: the net rental value of owning a home is excluded from taxable income. Had that money been invested in the alternative asset, its interest earnings would have been taxable. That benefit is similar to the benefit from itemizing the mortgage interest deduction. The difference, however, is that the tax advantage from equity finance is available whether or not buyers itemize.

The benefits of equity finance can be illustrated using the three other couples in the 15 percent bracket who are considering the purchase of their homes entirely from their own savings.³¹ One of these is considering the purchase of a \$200,000 house entirely from their savings. The couple would have no mortgage interest to itemize, but it would shelter more asset income from tax by getting its return in the form of housing services. Its break-even rental rate would be 5.31 percent (see row 6 of Table 7)—slightly lower than the similar couple that relies on a mortgage to finance its purchase and faces a rental rate of 5.46 percent. The lower rate arises because the couple does not have to pay any mortgage origination fees. Aside from those savings, the rental rate for buying with an 80 percent mortgage is the same as for buying with no mortgage.

The two couples considering the purchase of lower-cost houses using their savings would have a lower rental rate—5.46 percent (see rows 4 and 5 of Table 7)—than their counterparts who take out a mortgage instead.³² Most of that reduction reflects the benefit of not taxing the net rental value of owning a home. The rental rates for these couples are higher than for the couple considering buying the \$200,000 house without a mortgage, because they would not have sufficient other deductions to itemize; specifically, they could not claim the itemized deduction for their property tax.

The tax benefits of owning without a mortgage are not confined to persons who can buy without borrowing. Once owners pay off their mortgage, they receive the same benefits. Furthermore, those benefits do not appear the moment the mortgage is paid off but accumulate over time as the loan is repaid.

Effect of Tax-Favored Savings Accounts

So far, all the examples have assumed that the alternative to investing in a house is investing in financial assets that pay interest that is subject to income taxes. As a result, a household thinking of investing their savings in the purchase of a home seeks to earn a rental rate high enough to

³¹ In 2007, one-third of homeowners had no mortgage.

³² By coincidence, the rental rates for the couples buying the homes for under \$200,000 from savings appear to be the same as the rate for the couple buying the \$200,000 house with 20 percent from savings and an 80 percent mortgage. The similarities are due, in part, to rounding. The similar results also occur because the benefits to the couples buying the less expensive houses from not paying mortgage origination costs approximately equal the benefit to the couple buying the more expensive house from itemizing their property taxes.

equal the net return that dollar could have earned in the taxable alternative investment—that is, the after-tax return.

Since the 1980s, access to tax-favored accounts has spread. By 2010, many workers could save in 401(k) and related employment-based plans, individual retirement accounts (IRAs), education savings accounts, and health savings accounts. Although taxes on most of these plans are deferred until funds are withdrawn, they offer depositors the equivalent of the before-tax returns explicitly offered by Roth IRAs and Roth 401(k) plans.³³

Access to those tax-favored accounts raises the break-even rents for home buyers because the return on alternative investments has increased to the before-tax return. However, the cost of borrowing does not change, which has implications for how access to those accounts affects how people finance the purchase of their homes. Consider home buyers who would itemize. They would still deduct their interest payments and therefore pay only the after-tax cost of the loan. The cost of a loan would thus be lower than the return they would want to earn on their own savings invested in a home. That creates a tax incentive to borrow more of the purchase price and to pay off that borrowing more slowly than they would have done when both borrowing and saving were equally costly. By using more debt to fund their house, they can deposit more of their own savings in a tax-favored account that earns the before-tax return. These buyers would also have an incentive to buy less expensive houses so they could have less equity tied up in their house.

In contrast, people who do not itemize would not find it advantageous to borrow on their home in order to save more in tax-favored accounts. They would, however, have the same incentive to buy less expensive houses.

Among home buyers whose alternative savings account is tax-favored, the required rate of return on savings invested in a home is the before-tax rate of return. When such accounts were unavailable, home buyers in higher tax brackets needed to earn less on their savings invested in a home than buyers in lower tax brackets because the after-tax return from savings accounts declines as tax rates increase. Thus, the spread of tax-favored accounts raises the break-even rental rate more for home buyers in higher tax brackets. It also creates a stronger incentive for them to borrow more on their home.

³³ Traditional IRA and 401(k) accounts pay depositors the equivalent of the before-tax return because the tax on withdrawals offsets the tax deduction allowed on contributions. When a person's tax rates are similar at the time a contribution is made and later withdrawn with interest, the tax on the withdrawal equals the tax foregone on the contribution plus interest on that foregone tax. The remainder of the withdrawal equals the contribution the person could have made if the deposit had been taxed plus the interest on that after-tax deposit. That amount is the same as provided by a Roth-style account where the contribution is not deductible and the withdrawal is not taxed.

Extending four examples from the previous section illustrates the impact on rental rates of access to a tax-favored alternative (see Table 8). All these couples face higher rental rates when they have access to the tax-favored accounts. Furthermore, the increase in rental rates is larger for couples in higher tax brackets. It is also larger for the couple in the 15 percent tax bracket that buys without a mortgage than it is for the corresponding couple buying with a mortgage, which shows the incentive to borrow to finance a home under these conditions.³⁴

The effect of the availability of tax-favored accounts depends on how people value those accounts. Many people may not consider saving for retirement or the other permissible purposes to be good alternatives to saving for a house. Employer 401(k)-type plans and IRAs impose penalties on most withdrawals before age 59 1/2, and many people save for needs that may arise before that age. In addition, the plans have maximum contribution limits, so that persons already contributing the maximum amount must place any extra saving in taxable accounts. Finally, some people are averse to being in debt and would prefer to pay down their mortgages faster rather than contribute more to other savings plans.³⁵ The biggest effect of tax-favored savings accounts is likely to be among workers with above-average earnings who are further along in their careers. They have among the highest rates of home ownership, and those who own tend to have built up equity in their homes that could be shifted to tax-favored accounts. Furthermore, they would have a relatively high tax advantage from shifting equity because of their high tax brackets. They also are the most likely to contribute to 401(k)-type plans and IRAs which indicates that they consider saving in such accounts acceptable alternatives to investing in a house.³⁶

Options

The tax treatment of home ownership could be changed in a number of ways. The options described in this section have been selected to illustrate how the four provisions that benefit owner-occupants affect the choice between buying and renting a home. For each option, the rental rate of owning is recomputed for the potential buyers in Tables 7 and 8. Those potential buyers differ in their tax brackets, use of the standard deduction, and use of mortgage debt. For these options, households' alternative source of saving is assumed to be in taxable accounts unless stated otherwise. The options affect the incentives to buy a house differently for various segments of the population. (See Table 9 for a summary of the options and their effects on the incentives to own a house.)

³⁴ Use of tax-favored savings accounts is also likely to spread among landlords, which would affect their break-even rents similarly to those of home buyers. The result could be higher market rents which would preserve the incentive for home ownership.

³⁵ Gene Amromin, Jennifer Huang, Clemens Sialm, "The tradeoff between mortgage prepayments and tax-deferred retirement savings," *Journal of Public Economics*, vol. 91, no. 10 (2007), pp. 2014-2040.

³⁶ Congressional Budget Office, *Use of Tax Incentives for Retirement Saving in 2006* (October 2011).

In this analysis, the adjustment costs during the years immediately following enactment of each provision are ignored to highlight the ultimate impact on the incentive to own. Furthermore, to identify that impact, the analysis assumes that buyers under each option would consider the same houses as they would under current law and do not alter their decisions regarding how much (if any) mortgage debt to incur. House prices, interest rates, and other costs are assumed to not change in response to the options.

While the adjustment costs are ignored in the discussion below, they are important, and are likely to be greatest for the options that would substantially reduce or eliminate the tax benefits of homeownership. Abrupt repeal of existing tax advantages for home ownership would impose substantial tax increases on many homeowners, reduce at least temporarily the resale value of their homes, and curtail new housing construction. Given time to adjust, people, prices, and construction could reach a new balance with less disruption. In that new balance, potential homeowners would adjust their housing in a variety of ways: buy less costly homes, take on less mortgage debt, postpone their purchases, or even remain as renters. They could also spend less on other investments and consumption to cushion the impact on their housing.

Tax the Imputed Rental Income of Homeowners

In the first half of the 20th century, several countries in Europe imputed rental income to owner-occupied housing and included it in taxable income.³⁷ As of 2005, the practice had been abandoned in all but two countries, the Netherlands and Belgium.³⁸ Countries tended to use one of two methods for imputing rental income. One was for tax authorities to assign a rent to each owner-occupied house based on the rents landlords were charging for similar houses. Then the owners would subtract allowable costs to arrive at their net rental income, similar to what a landlord would do. The other method was for tax authorities to assign a market return to the value of each house and allow the owners to subtract the mortgage interest they paid to arrive at the return on the owner's equity. Other expenses were not subtracted because the assigned return was not the gross market rent for the house but the return on the invested capital.

Each of the two approaches presents administrative challenges. The first approach is more precise but is difficult to implement because it requires estimates of rental values for homes, complex recordkeeping by homeowners, and additional monitoring responsibilities for the Internal Revenue Service (IRS). The second approach requires less recordkeeping but would still require the IRS to take on more administrative responsibilities, such as verifying whether taxpayers owned or rented the home in which they reside and what they reported as house values. This would be more challenging than verifying the current law deduction for mortgage

³⁷ Paul E. Merz, "Foreign Income Tax Treatment of the Imputed Rental Value of Owner-Occupied Housing: Synopsis and Commentary," *National Tax Journal*, vol. 30, no. 4 (December 1977), pp. 435-439.

³⁸ Paul van den Noord, "Tax Incentives and House Price Volatility in the Euro Area: Theory and Evidence," *Économie Internationale*, vol. 101 (2005), p. 36.

interest because all filers—including those who do not currently itemize or who do not have mortgages on their home—would be affected.

This option adopts the second method. The federal tax authorities would assign a rate of return to the value of each owner-occupied house equal to the return that amount of money would earn if it were instead invested in a savings account. As in the previous examples, those savings accounts would earn 5.2 percent in interest. Homeowners would subtract their mortgage interest (at approximately the same interest rate) to arrive at the return they would be assumed to earn on their equity in the house. That net amount would be added to their taxable income. Mortgage interest and property taxes would no longer be allowed as itemized deductions, but even homeowners who do not itemize under current law would be able to deduct mortgage interest payments from their assigned return.

For example, the two couples considering the purchase of the \$200,000 house would both be assigned a gross return in the first year of \$10,400 (5.2 percent of \$200,000). The couple intending to purchase without a mortgage would include that entire amount in its taxable income in the first year. The couple buying the house with a 5.1 percent mortgage and 0.7 percent in points would deduct \$9,280 of interest and points in the first year, leaving an imputed return on its equity of \$1,120.

In spite of the large difference in imputed rental income between the couple purchasing a house from savings and the one purchasing a house with a mortgage, their tax increases would be similar. This would generally be true if couples are in the same tax bracket and the borrowers benefit fully from deducting their mortgage interest under current law. That result occurs because the current tax code already allows taxpayers to deduct mortgage interest expenses, even though imputed rent is excluded from income. Thus, the inclusion of the imputed rent effectively increases their taxable income by the gross earnings on the full value of the house, the same amount as for those who self-finance their home purchase. As a result, both couples considering the purchase of the \$200,000 house—the couple who takes out the mortgage and the couple who uses their savings—would see their income taxes increase by \$1,860 in the first year. They would also both see their rental rates increase by 0.93 percentage points (see Table 10).³⁹

The exception to that equality of treatment would be people who do not currently receive the full benefit of the mortgage interest deduction. Under the option, their mortgage interest would be fully deductible. Thus, the two lowest-income couples who would buy with a mortgage would pay less additional tax under repeal than their counterparts, who would use their savings to finance the purchase. That smaller tax increase would cause their rental rates to rise by less than the rates of their counterparts. For example, the rental ratio would increase by 0.3 percentage

³⁹ The rental rate of the couple that would self-finance is lower than that for the couple who would borrow, because self-financers do not pay any origination fees for a mortgage.

points for the couple buying the \$100,000 house with a 20 percent down payment, while the couple buying the same house with its own savings would have an increase of 0.78 percentage points.

A striking feature of taxing imputed rental income is that it would nearly equalize the rental rates among prospective home buyers in all tax brackets. Potential buyers in higher brackets would face the largest increase in their rental rates and their taxes relative to current law. Another striking result is that the rental rates would exceed those for the landlords in the examples, making renting more advantageous in all the examples. That result is partly because of the stylized assumptions that constrain the landlords' tax rates to 25 percent in all cases. However, the advantage to renting also reflects the feature of current law that allows landlords to defer taxes through the accelerated depreciation allowances available to them. Slowing the depreciation deductions allowed for landlords at the same time as taxing imputed rental income of owners would increase neutrality between the rental rates of owning and renting.⁴⁰

Taxing the imputed rental income would make investing in a home less advantageous compared to investing in a tax-favored account. To compensate, people whose alternative to investing in a home is investing in a tax-favored account would want a higher rental rate than they do under current law. As shown in Table 9, that rate under current law is already higher than the break-even rate for people with a taxable alternative account (5.34 percent compared to 4.85 percent for people in the 25 percent tax bracket). When the imputed rent is taxed, those home buyers with a tax-favored alternative would break even with a rental rate of 6.89 percent.

Repeal Mortgage Interest Deduction

Another option would repeal the mortgage interest deduction. Unlike the option to tax imputed rental income, this option would affect only those who borrow in order to purchase a home and who have sufficient deductions to itemize. Among those affected, the higher their tax bracket, the larger the increase in their break-even rental rate.

For example, because the lowest-income couple with a mortgage does not itemize, it would not be affected by repeal of the mortgage interest deduction (Table 11). But for the other two couples in the 15 percent bracket with a mortgage, the repeal would increase rental ratios significantly and would actually increase their implicit rental rate from ownership above the assumed market rental rate of 5.79 percent, making renting more advantageous than owning. The couples in the 25 percent and 35 percent brackets would face even larger increases in their rental rates, but those increases would still leave some incentive to own rather than rent. For example, the couple

⁴⁰ An alternative approach to taxing investment in home ownership similarly to other investments is to exempt all investment income from taxation as is done in many proposals for a consumption-based tax. Homeowners would continue to pay no tax on their imputed rental income, but their interest payments would not be deductible. Interest deductions generally are not allowed under a standard consumption tax.

in the 25 percent tax bracket buying a \$300,000 house would see its break-even rental rate rise from 4.85 percent to 5.64 percent.⁴¹

The increases in rental rates are needed to cover the increases in taxes, over the home buyer's tenure in the house, caused by repeal of the mortgage interest deduction. In the first year, however, the increases in rents are substantially smaller than the increases in taxes. The increase in the rental rate for the couple buying a \$300,000 house would raise the first year rent by \$2,365, but its first-year taxes would rise by \$3,480. The tax increase is especially high in the first year because the home buyers can no longer deduct mortgage points, and also because interest payments are a relatively high share of their annual mortgage payments. Over time, rents rise (due to the increase in the housing value), and the amount of the annual tax loss drops because interest payments decline as more of the loan principal is paid off.

In contrast to those who borrow, the three couples who would buy without a mortgage would keep their tax benefits. Their benefits come from the exclusion of their imputed rental income rather than the mortgage interest deduction.

Repealing the tax benefit for mortgage interest but not for imputed rental income would encourage people who must borrow in order to purchase a house to buy less expensive houses. In addition it would encourage them to buy with smaller mortgages and to pay down those mortgages faster. People who had additional savings in accounts that paid taxable interest could use those funds to repay mortgage debt and thereby retain their tax savings, through the exclusion of imputed rent rather than mortgage interest deductions.

People whose alternative savings were in a tax-favored account would no longer have the incentive to borrow more against their home to fund contributions to that account. Unlike the owners saving in a taxable account, though, they would not have an incentive to use savings in those accounts to pay down their mortgage.

Replace the Mortgage Interest Deduction with a Capped Tax Credit

Under this option, people buying with a mortgage would receive a credit equal to 15 percent of the qualifying mortgage interest they paid. To qualify, the interest would have to be on mortgage debt of \$500,000 or less. Further, the proceeds from the mortgage could be used solely to buy, build, or substantially improve a primary residence. Compared to current law, those restrictions are less generous—the \$500,000 limit is half the amount allowed under the current law deduction for the same purposes and would not cover home-equity debt or a second home. However, the credit would be available to people who claimed the standard deduction.

⁴¹ The decline in the incentive to own could be moderated by slowing the rate of depreciation allowed to landlords, as shown in the first and second examples of Table 2. Doing so, however, would raise rents.

Lower-income taxpayers are among the taxpayers most likely to benefit from the option. Consider the examples of couples in the 15 percent tax bracket who would borrow in order to finance a home purchase. The lowest-income couple would receive no benefit from the mortgage interest deduction under current law because the couple does not itemize. Under the option, the couple's taxes would be reduced by 15 percent of the interest payment, or \$696 in the first year. As a result, the break-even rental rate would decline to 5.61 percent, which is sufficiently lower to make owning a home cheaper than renting (Table 12). By contrast, the couple that could itemize with or without buying sees no change in the tax advantages of owning under the option. The 15 percent credit would exactly replace the benefit the couple receives from deducting mortgage interest.

For couples in the higher tax brackets, replacing the deduction with a tax credit would cause their taxes to rise. Under current law, they could deduct all their mortgage interest and the tax savings would be the product of that deduction and their marginal tax rate. Under the option, they would effectively be deducting that interest at only the 15 percent rate.⁴² Further, the couple with the largest house would not receive the credit on debt over \$500,000. However, all couples in the higher tax brackets would still find owning cheaper than renting.

Repeal Property Tax Deduction

Repealing the deduction for property taxes would affect most people in the same way as the option to repeal the deduction for mortgage interest. However, the effect would generally be smaller because property taxes are usually less than mortgage interest. In 2009, for example, taxpayers deducted, on average, \$4,200 in property taxes compared to \$11,500 in mortgage interest. Repeal would not affect the incentives to buy for couples who currently do not itemize (Table 13). For couples who do, the option would increase their taxes and their break-even rental rates.⁴³ Those increases are larger for people in the higher tax brackets and who have more expensive houses. Among the examples, one couple—the couple considering the purchase of the \$200,000 house without a mortgage—would face a larger tax increase from repeal of the property tax deduction than from the elimination of the mortgage interest deduction (see the final row of Table 13). About 1 out of 10 homeowners deduct more in property taxes than in mortgage interest.

⁴² Although not shown in the examples, some people in higher tax brackets would no longer itemize when their mortgage interest was not deductible. Their tax increase would be lessened by the availability of the standard deduction.

⁴³ As in the original examples, property taxes are treated as a cost of providing housing rather than a payment for the precise collection of local government services the home buyer wants.

Repeal Capital Gains Exclusion

This option would repeal the exclusion of capital gains on principal residences. Repealing that exclusion would tax capital gains realizations from the sale of a principal residence like most other capital gains. Those rates currently are 0 and 15 percent, depending on the income of the taxpayer. The zero rate applies to capital gains included in taxable income that is below the threshold for the 25 percent tax bracket on ordinary income. For couples filing a joint return in 2012, that income threshold is \$70,700.

All houses in the examples appreciate at the same rate and face the same costs (as a fraction of house value) for buying and selling. Over the 12 years of assumed occupancy, the couples expect to have a capital gain of about 40 percent of the purchase price. Only the couple considering the purchase of the largest house, priced at \$1,250,000, anticipates paying any capital gain tax under current law (Table 14). Even that gain of \$532,943 is largely protected from taxation by the \$500,000 exclusion. Between that exclusion and the 15 percent tax rate on capital gains, that couple expects to pay only \$4,941 in tax.

Without the exclusion, the same couple would pay \$79,941 in capital gains tax which would increase the rental rate from 4.26 percent to 4.60 percent. The couple in the 25 percent tax bracket that purchases a less expensive home would incur a smaller tax increase, but the increase in the rental rate would be similar to the increase for the couple in the top bracket because this couple will also pay the 15 percent tax rate on gains.⁴⁴

The couples, whose ordinary income places them in the 15 percent tax bracket, would be in somewhat different circumstances. They would pay no tax on capital gains as long as their gains were small enough to keep their taxable income below the bottom of the 25 percent bracket. If the capital gain on a home sale were large enough to push their total income into that bracket, they would pay at the 15 percent rate on the amount of capital gains in excess of the bracket threshold.

Assuming the couples' incomes rise with inflation over the 12 years of occupancy, the lowest-income couple considering the purchase of the \$100,000 house would not expect to have enough capital gains to push any of its income above the 15 percent bracket. As a result, the couple would not expect to owe any capital gains tax and its anticipated rental rate would not change. The other couples in the 15 percent bracket would expect some of their capital gain to be taxable. The resulting tax would raise their break-even rental rates, but not by as much as for the higher-income couples whose entire gains would be taxable at the 15 percent rate. Overall, the impact of

⁴⁴ Repeal of the exclusion raises the rental rate of the couple in the 35 percent tax bracket by 0.34 percentage points while it raises the rental rate of the couple in the 25 percent brackets by 0.36 percentage points. The small difference arises because the couple in the top tax bracket pays a small tax under current law and therefore has a proportionately smaller increase under repeal of the exclusion.

the provision on rental rates will depend on the amount of capital gains, as well as the tax bracket.

Combining this option with the repeal of preferential treatment of like-kind exchanges for rental housing would make the tax code more neutral between owning and renting in the taxation of capital gains. As discussed above, repealing like-kind exchanges would raise rental rates for landlords in the examples by about two-tenths of a percentage point.

The effect of repealing this option on home purchases may be smaller than its impact on rental rates suggests. People deciding to buy a home will have only limited information about how much appreciation that home would accrue, which could lead them to pay less attention to the benefits of the capital gains exclusion than to the benefits of the mortgage interest and property tax deduction whose impact would be clearer.

Limitations of Examples

The examples in this paper were chosen to illustrate how differences in the taxation of homeowners and landlords lead to differences in the relative costs of buying or renting a home. While the examples are based on plausible market conditions and several important tax circumstances of representative home buyers and landlords, they do not represent the full range of circumstances faced by the many home buyers and landlords in the United States. Thus, the examples do not illustrate the full range of how taxes affect the relative costs of owning and renting a home.

Simplifying Tax Assumptions

The examples in this paper assume that home buyers and landlords do not have very complicated tax returns. The simplifying assumptions about their family lives and financial circumstances are helpful for highlighting the direct effects of the tax treatment of owner-occupied and rental properties. In some cases, however, the simplifying assumptions may have ignored certain complexities of the real estate market that could affect the decision to buy or rent.

Among the simplifying assumptions, the most important arise in the limited examples of landlords. Only three situations for landlords are shown. They differ only in that one has no limit on losses and does not use like-kind exchanges, a second is subject to the limitations on losses from passive activity, and the third uses a like-kind exchange. The landlords' tax rates are fixed (always 25 percent) in spite of serving markets for home buyers of very different incomes.

Those assumptions about landlords affect the calculation of their rental rates, as well as the tax advantages to purchasing a home for one's own use. For example, if market rents in the

examples were set by landlords in the 35 percent tax bracket—instead of the 25 percent tax bracket—the break-even rental rate drops from 5.79 percent to 4.98 percent. That lower break-even rental rate would reduce the cost of renting and could sway some people to remain as tenants.

Another assumption is that tax rates do not change in 2013: The rate reductions that are currently scheduled to expire at the end of 2012 are extended throughout the period. In addition, the surtax of 3.8 percent on “unearned” income scheduled to begin in 2013 is assumed to not occur. It would apply to some landlords because rental income is in the class of incomes subject to the surtax, and it would apply to the taxable savings of some higher-income home buyers.

State income taxes are ignored in the examples as well. Many state taxes follow the federal tax treatment of homeowners and landlords, and therefore add to the difference in rental rates between owners and renters.

Another limitation is that the examples do not show how many taxpayers are in each tax bracket and how the impacts of the options for change would be spread among the population. Analyses of the distribution of existing tax benefits to homeowners and the impact of options to change those benefits are available elsewhere.⁴⁵

Other Simplifying Assumptions

The interest rates used in the examples are low by historical standards, especially when adjusted for inflation. Actual interest rates in 2011 turned out to be even lower, but actual and inflation-adjusted rates are expected to rise as the economy recovers from the recession of 2008 and 2009. Higher interest rates would raise the rental rates of landlords and home buyers almost in step with the higher interest rates. The relative advantages of homeownership would increase by much less, however, preserving the main results of the examples.

To isolate the influence of tax differences, the examples assume that homeowners and landlords incur similar costs. There is evidence, however, that some of their costs differ. For example, rental housing appears to depreciate at faster rates than owner-occupied housing because home owners typically take more care to maintain their properties. Landlords also may have different access to credit, possibly leading to different financing costs.

In addition, some costs were ignored. The examples discussed above have ignored risk entirely, which has probably led to understating the rental rates of both landlords and homeowners. Risks

⁴⁵ See Adam J. Cole, Geoffrey Gee, and Nicholas Turner, “The Distributional and Revenue Consequences of Reforming the Mortgage Interest Deduction,” *National Tax Journal*, vol. 64, no. 4 (December 2011), pp. 977-1000, and sources cited therein.

differ for owning and renting as well, and those differences influence people's choice of tenure independently of their tax circumstances. The costs specified for operating and maintaining houses are loosely based on averages for rental housing as reported on tax returns; actual costs can vary widely for specific rentals and owner-occupied houses. Rents and house prices are also influenced by fluctuations in supply and demand for each type of housing. As a result, the market rents and house prices may lead to rental rates that diverge from the equilibrium rates used in the examples.

The examples also assume that potential home buyers consider comparable single-family homes in their decision to rent or buy. If home buyers instead consider multifamily dwellings as rental alternatives to owning a single-family home, then the tax circumstances and other cost differences in multifamily housing are likely to lead to different costs of renting than shown in the examples.⁴⁶

The expected length of tenure also affects the estimates. The relative cost of owning compared to renting changes when people who are looking for a place to live have shorter tenures in mind than do the landlords investing in rental properties. People expecting to occupy a housing unit for only a few years would have to recover the costs of buying and selling over a much shorter time than a landlord who expected to own the property for many years. Those costs could easily offset the tax advantage of owning for a few years.

⁴⁶ Analyses of the way taxes affect investments in multifamily rental housing are presented by deLeeuw and Ozanne, "Housing," and Leonard E. Burman, Thomas S. Neubig, and D. Gordon Wilson, "The Use and Abuse of Rental Project Models," in *Compendium of Tax Research 1987* (Washington DC: 1987), Office of Tax Analysis, Department of the Treasury, pp. 307-349.

Table 1.
Tax Expenditures in Fiscal Year 2012
(Billions of dollars)

Tax Provision	Joint Committee on Taxation	Treasury Department
Mortgage Interest Deduction	83.7	86.9
Exclusion of Imputed Net Rental Income	n.a.	50.6
Property Tax Deduction	15.1	16.2
Capital Gains Exclusion	22.9	16.0

Sources: Joint Committee on Taxation, *Estimates of Federal Tax Expenditures for Fiscal Years 2011-2015*, January 17, 2012, p. 36; Budget of the U.S. Government, Fiscal Year 2013, Analytical Perspectives, p. 250.

Note: n.a. = not available. The staff of the Joint Committee on Taxation does not consider the exclusion of rental income to be a tax expenditure.

Table 2.
Cumulative Effects of Various Conditions on Rental Rates for a Hypothetical Landlord
(Percent)

	Rental Rates
Simple Income Tax and Stable Prices	8.01
Depreciation Allowances	7.95
Appreciation of House Prices	5.32
Inflation	4.91
Costs of Buying, Borrowing, and Selling a House	5.79

Note: The landlord's tax rate is 25 percent on ordinary income and 15 percent on capital gains; other assumptions differ in each example (see Table 3).

Table 3.

Characteristics of House and Financing in Examples 1 Through 5

	Example 1	Example 2	Example 3	Example 4	Example 5
Characteristics of House					
House price (Dollars)	300,000	300,000	300,000	300,000	300,000
Land share (Percent)	30	30	30	30	30
Annual real appreciation of land (Percent)	0	0	2.41	2.41	2.41
Annual real appreciation of structure (Percent)	0	0	2.41	2.41	2.41
Years will own	12	12	12	12	12
Costs of purchase as percent of house price	0	0	0	0	0.9
Costs of selling as percent of house price	0	0	0	0	6
Annual maintenance and operating costs					
General costs as percent of annual house price	1	1	1	1	1
Structure costs as percent of annual structure price	3	3	3	3	3
Rate of economic depreciation (Percent)	1.5	1.5	1.5	1.5	1.5
Annual tax depreciation allowance for structure	1.5%	\$7,636	\$7,636	\$7,636	\$7,636
Characteristics of Financing					
Loan-to-value ratio (Percent)	80	80	80	80	80
Mortgage origination cost ratio (Percent)	0	0	0	0	2.3
Term of mortgage (Percent)	30	30	30	30	30
Mortgage interest rate (Percent)	2.94	2.94	2.94	5.20	5.10
Mortgage points (Percent)	0	0	0	0	1
Interest rate on savings (Percent)	2.94	2.94	2.94	5.20	5.20
Inflation rate (Percent)	0	0	0	2.2	2.2
Real after-tax return on savings (Percent)	2.20	2.20	2.20	1.66	1.66

Table 4.
Landlord Calculations
(Dollars, unless indicated otherwise)

	Start of Year 1	End of Year Values												End of Year 12
		1	2	3	4	5	6	7	8	9	10	11	12	
Assets and Liabilities														
Value of Property	300,000	296,850	293,747	290,691	287,681	284,715	281,795	278,918	276,084	273,293	270,543	267,835	265,168	265,168
Value of land	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000
Value of structure	210,000	206,850	203,747	200,691	197,681	194,715	191,795	188,918	186,084	183,293	180,543	177,835	175,168	
Economic depreciation		3,150	3,103	3,056	3,010	2,965	2,921	2,877	2,834	2,791	2,749	2,708	2,668	
Mortgage debt	240,000	235,003	229,859	224,564	219,114	213,504	207,729	201,785	195,666	189,367	182,884	176,210	169,341	169,341
Operating Cash Flow														
Rent		24,032	23,780	23,531	23,286	23,045	22,808	22,574	22,343	22,116	21,893	21,672	21,456	
Operating & maintenance costs		9,300	9,174	9,050	8,928	8,807	8,689	8,572	8,457	8,343	8,232	8,122	8,013	
Mortgage payment		12,042	12,042	12,042	12,042	12,042	12,042	12,042	12,042	12,042	12,042	12,042	12,042	
Mortgage interest		7,045	6,898	6,747	6,592	6,432	6,267	6,098	5,923	5,744	5,559	5,368	5,173	
Mortgage amortization		4,997	5,144	5,295	5,450	5,610	5,775	5,944	6,119	6,299	6,483	6,674	6,870	
Property tax		3,000	2,969	2,937	2,907	2,877	2,847	2,818	2,789	2,761	2,733	2,705	2,678	
Net cash flow: rent less outlays		-310	-405	-498	-590	-681	-770	-858	-945	-1,030	-1,114	-1,197	-1,278	
Income Tax on Rental Income														
Tax depreciation allowance		3,150	3,103	3,056	3,010	2,965	2,921	2,877	2,834	2,791	2,749	2,708	2,668	
Taxable rental income ^a		1,537	1,636	1,740	1,850	1,964	2,084	2,209	2,340	2,477	2,620	2,769	2,924	
Tax		384	409	435	462	491	521	552	585	619	655	692	731	
Start-up and Close-out Cash Flow														
Downpayment	-60,000													
Sale price less mortgage debt														95,827
Total depreciation claimed														34,832
Unrecaptured sec. 1250 gain														0
Other capital gain														0
Total capital gains tax														0
Cash out														95,827
After-tax Cash Flow	(60,000)	(694)	(814)	(933)	(1,053)	(1,172)	(1,291)	(1,410)	(1,530)	(1,649)	(1,769)	(1,889)	(2,009)	95,827
Nominal discount factor	1.00	1.02	1.04	1.07	1.09	1.12	1.14	1.16	1.19	1.22	1.24	1.27	1.30	1.30
Present Value Contribution	(60,000)	(679)	(779)	(874)	(965)	(1,051)	(1,133)	(1,211)	(1,285)	(1,356)	(1,423)	(1,487)	(1,547)	73,790
Present Value	0													
Rent Ratio (Percent)	8.01													

Note: Negative amounts are in parentheses; numbers may not add to totals because of rounding.

a. Taxable rental income equals rent less the sum of operating and maintenance costs, interest, property tax, and depreciation allowance.

Table 5.

Characteristics of Couples Considering Buying or Renting

Assets		Income		Tax Brackets		Other Deductions (Dollars)	Itemization Status ^c	
House Price (Dollars)	Initial Savings (Dollars)	Earnings (Dollars)	Income if Rent ^a (Dollars)	Ordinary Income (Percent)	Capital Gain ^b (Percent)		If Rent	If Own
<i>Finance with 20 Percent Downpayment</i>								
100,000	26,667	40,000	41,387	15	0	4,000	no	no
175,000	46,667	70,000	72,427	15	0	7,000	no	yes
200,000	53,333	80,000	82,773	15	0	11,500	yes	yes
300,000	80,000	120,000	124,160	25	15	12,000	yes	yes
1,250,000	333,333	500,000	517,333	35	15	50,000	yes	yes
<i>Finance with 100 Percent Downpayment</i>								
100,000	106,667	36,000	41,547	15	0	4,000	no	no
175,000	186,667	63,000	72,707	15	0	7,000	no	no
200,000	213,333	72,000	83,093	15	0	11,500	yes	yes

a. Income if rent is computed as earnings plus interest of 5.2 percent on savings.

b. Capital gains tax bracket applies to small amounts of realized gains. Large amounts could cause a portion to be taxed at the 15 percent rate.

c. Standard deduction for couple filing joint return is \$11,400.

Table 6.
Effect of Home Buyer's Tax Bracket

Tax Bracket (Percent)	House Price (Dollars)	Discount Rate ^a (Percent)	Rental Rates (Percent)			Rent in First Year (Dollars)		
			Home Buyer	Landlord	Home Buyer Savings	Home Buyer	Landlord	Home Buyer Savings
15	200,000	2.17	5.46	5.79	5.63	10,928	11,581	653
25	300,000	1.66	4.85	5.79	16.25	14,549	17,372	2,823
35	1,250,000	1.15	4.26	5.79	26.46	53,226	72,381	19,155

Note: Home buyers can itemize whether they own or rent; home buyers finance purchase with 20 percent down payment and 80 percent mortgage; subtraction may not match home buyer savings because of rounding.

a. Discount rate for home buyers based on interest rate of 5.2 percent, inflation rate of 2.2 percent and tax bracket.

Table 7.

Effect of Choice Between Itemizing and the Standard Deduction

Home Buyer's Down Payment (Percent)	House Price (Dollars)	Home Buyer Itemization Status		Home Buyer Deductions in the First Year (Dollars)		Rental Rates (Percent)			Rent in First Year (Dollars)		
		If Rent	If Own	If Rent	If Own	Home Buyer	Landlord	Home Buyer Savings	Home Buyer	Landlord	Home Buyer Savings
20	100,000	no	no	4,000	9,640	6.09	5.79	-5.2	6,089	5,791	-298
20	175,000	no	yes	7,000	16,870	5.82	5.79	-0.4	10,177	10,133	-44
20	200,000	yes	yes	11,500	22,780	5.46	5.79	5.6	10,928	11,581	653
100	100,000	no	no	4,000	5,000	5.46	5.79	5.8	5,455	5,791	335
100	175,000	no	no	7,000	8,750	5.46	5.79	5.8	9,547	10,133	587
100	200,000	yes	yes	11,500	13,500	5.31	5.79	8.4	10,610	11,581	971

Notes: Home buyers are in 15 percent tax bracket; standard deduction is \$11,400; subtraction may not match home buyer savings because of rounding.

Table 8.
 Effect of Tax-favored Savings Accounts on Home Buyers' Rental Rates
 (Percent)

Home Buyer's Tax Bracket (Percent)	House Price (Dollars)	Rental Rates (Percent)		
		Taxable Savings	Tax-Favored Savings	Change
<i>20 Percent Down Payment</i>				
15	200,000	5.46	5.76	0.30
25	300,000	4.85	5.34	0.49
35	1,250,000	4.26	4.94	0.69
<i>100 Percent Down Payment</i>				
15	200,000	5.31	6.07	0.76

Note: Subtraction may not match change because of rounding.

Table 9.

Rental Rates for Potential Home Buyers Under Tax Law of 2010 and Changes in Rates Under Options

Potential Home Buyer's Tax Bracket, and House Value	2010 Tax Law (Percent)	Tax Imputed Rental Income of Homeowners (Change in Percent)	Repeal Mortgage Interest Deduction (Change in Percent)	Replace the Mortgage Interest Deduction with a 15% Credit (Change in Percent)	Repeal the Property Tax Deduction (Change in Percent)	Repeal the Capital Gains Exclusion (Change in Percent)
<i>20 Percent Down Payment</i>						
15% Bracket						
\$100,000 house	6.09	0.31	0	-0.47	0	0
\$175,000 house	5.82	0.58	0.27	-0.20	0.15	0.24
\$200,000 house	5.46	0.93	0.47	0	0.15	0.28
25% Bracket						
\$300,000 house	4.85	1.55	0.79	0.32	0.25	0.36
35% Bracket,						
\$1,250,000 house	4.26	2.17	1.10	0.85	0.35	0.34
<i>100 Percent Down Payment</i>						
15% Bracket						
\$100,000 house	5.46	0.78	0	0	0	0
\$175,000 house	5.46	0.78	0	0	0	0.24
\$200,000 house	5.31	0.93	0	0	0.15	0.28

Note: Results are for conditions specified in text; changes in rental rates do not reflect conditions during period of adjustment to tax changes; rental rates assume people's alternative to investing in a home is investing in a taxable savings account; see text for alternative assumption.

Table 10.

Effect of Taxing Imputed Rental Income of Owner-occupied Houses on Income Taxes and Rental Rates of Home Buyers

Home Buyer's Tax Bracket (Percent)	House Price (Dollars)	Imputed Net Rental Income ^a (Dollars)	Itemization Status		Taxes ^a (Dollars)			Rental Rates (Percent)	
			Current Law	Option	Current Law	Option	Change	Current Law	Option
<i>20 Percent Down Payment</i>									
15	100,000	560	No	No	2,410	2,494	84	6.09	6.39
15	175,000	980	Yes	No	6,128	7,096	968	5.82	6.39
15	200,000	1,120	Yes	Yes	6,755	8,615	1,860	5.46	6.39
25	300,000	1,680	Yes	Yes	13,568	18,218	4,650	4.85	6.40
35	1,250,000	7,000	Yes	Yes	102,095	129,220	27,125	4.26	6.43
<i>100 Percent Down Payment</i>									
15	100,000	5,200	No	No	1,810	2,590	780	5.46	6.24
15	175,000	9,100	No	No	5,899	7,264	1,365	5.46	6.24
15	200,000	10,400	Yes	Yes	6,947	8,807	1,860	5.31	6.24

Note: Rental rate of landlords is 5.79 percent, subtraction may not match change because of rounding.

a. Net imputed rental income and taxes are amounts in first year of ownership.

Table 11.

Effect of Repealing the Mortgage Interest Deduction on Income Taxes and Rental Rates of Home Buyers

Home Buyer's Tax Bracket (Percent)	House Price (Dollars)	Mortgage Interest ^a (Dollars)	Itemization Status		Taxes ^a (Dollars)			Rental Rates (Percent)	
			Current		Current		Current		
			Law	Option	Law	Option	Change	Law	Option
<i>20 Percent Down Payment</i>									
15	100,000	4,640	No	No	2,410	2,410	0	6.09	6.09
15	175,000	8,120	Yes	No	6,128	6,949	821	5.82	6.09
15	200,000	9,280	Yes	Yes	6,755	8,147	1,392	5.46	5.94
25	300,000	13,920	Yes	Yes	13,568	17,048	3,480	4.85	5.64
35	1,250,000	58,000	Yes	Yes	102,095	122,395	20,300	4.26	5.36
<i>100 Percent Down Payment</i>									
15	100,000	0	No	No	1,810	1,810	0	5.46	5.46
15	175,000	0	No	No	5,899	5,899	0	5.46	5.46
15	200,000	0	Yes	Yes	6,947	6,947	0	5.31	5.31

Note: Interest paid is based on loan with 5.1 percent interest rate, 0.7 points, and 30-year fixed rate term; rental rate of landlord is 5.79 percent; subtraction may not match change because of rounding.

a. Interest and taxes are amounts paid in first year of owning.

Table 12.

Effect of Replacing Mortgage Interest Deduction with 15 Percent Credit on Income Taxes and Rental Rates of Home Buyers

Home Buyer's Tax Bracket (Percent)	House Price (Dollars)	Mortgage Interest ^a (Dollars)	Itemization Status		Taxes ^a (Dollars)			Rental Rates (Percent)	
			Current		Current		Current		
			Law	Option	Law	Option	Change	Law	Option
<i>20 Percent Down Payment</i>									
15	100,000	4,640	No	No	2,410	1,714	-696	6.09	5.61
15	175,000	8,120	Yes	No	6,128	5,731	-398	5.82	5.61
15	200,000	9,280	Yes	Yes	6,755	6,755	0	5.46	5.46
25	300,000	13,920	Yes	Yes	13,568	14,960	1,392	4.85	5.16
35	1,250,000	58,000	Yes	Yes	102,095	118,570	16,475	4.26	5.10
<i>100 Percent Down Payment</i>									
15	100,000	0	No	No	1,810	1,810	0	5.46	5.46
15	175,000	0	No	No	5,899	5,899	0	5.46	5.46
15	200,000	0	Yes	Yes	6,947	6,947	0	5.31	5.31

Notes: Interest paid is based on loan with 5.1 percent interest rate, 0.7 points, and 30-year fixed rate term; rental rate of landlord is 5.79 percent; subtraction may not match change because of rounding.

a. Interest and taxes are amounts paid in first year of owning.

Table 13.

Effect of Repealing the Property Tax Deduction on Income Taxes and Rental Rates of Home Buyers

Home Buyer's Tax Bracket (Percent)	House Price (Dollars)	Property Tax ^a (Dollars)	Itemization Status		Taxes ^a (Dollars)			Rental Rates (Percent)	
			Current Law	Option	Current Law	Option	Change	Current Law	Option
<i>20 Percent Down Payment</i>									
15	100,000	1,000	No	No	2,410	2,410	0	6.09	6.09
15	175,000	1,750	Yes	Yes	6,128	6,391	263	5.82	5.97
15	200,000	2,000	Yes	Yes	6,755	7,055	300	5.46	5.61
25	300,000	3,000	Yes	Yes	13,568	14,318	750	4.85	5.10
35	1,250,000	12,500	Yes	Yes	102,095	106,470	4,375	4.26	4.61
<i>100 Percent Down Payment</i>									
15	100,000	1,000	No	No	1,810	1,810	0	5.46	5.46
15	175,000	1,750	No	No	5,899	5,899	0	5.46	5.46
15	200,000	2,000	Yes	Yes	6,947	7,247	300	5.31	5.46

Note: Property tax is 1 percent of the house price at the start of each year, rental rate of landlords is 5.79 percent; subtraction may not match change because of rounding.

a. Property taxes and income taxes are as of the first year of ownership.

Table 14.

Effect of Repealing the \$500,000 Exclusion for Capital Gains on Capital Gains Taxes and Rental Rates of Home Buyers

Home Buyer's Tax Bracket (Percent)	House Price (Dollars)	Capital Gain ^a (Dollars)	Tax Rate ^b (Percent)	Capital Gain Taxes ^a			Rental Rates (Percent)	
				Current Law	Option	Change	Current Law	Option
<i>20 Percent Down Payment</i>								
15	100,000	42,635	0	0	0	0	6.09	6.09
15	175,000	74,612	10	0	7,685	7,685	5.82	6.06
15	200,000	85,271	12	0	10,197	10,197	5.46	5.74
25	300,000	127,906	15	0	19,186	19,186	4.85	5.21
35	1,250,000	532,943	15	4,941	79,941	75,000	4.26	4.60
<i>100 Percent Down Payment</i>								
15	100,000	42,635	0	0	0	0	5.46	5.46
15	175,000	74,612	9	0	6,694	6,694	5.46	5.70
15	200,000	85,271	11	0	9,585	9,585	5.31	5.58

Note: Rental rate of landlords is 5.79 percent; subtraction may not match change because of rounding.

a. Capital gains and Taxes are amounts at time sell.

b. Average tax rates on capital gains at time sell. Some buyers would be taxed at average of 0 and 15 percent rates.