

CHAPTER 12: RENTAL INCOME OF PERSONS

(Updated: March 2022)

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Rental income of persons reflects the income earned by persons for the provision, to others, of their property. The featured measure of rental income of persons—rental income of persons with capital consumption adjustment—is provided net of depreciation and the costs associated with providing property. As such, it can be viewed as a “profit-like” measure.

In the summary NIPA tables, rental income of persons is a component of gross domestic income and of national income for the total economy, as well as measures of personal income and of private enterprise income.

Definitions and Concepts

Rental income of persons reflects the income that accrues from the provision of property (i.e., housing or other structures, equipment, intellectual property, or natural resources) owned by persons who are resident in the United States.¹ As shown in the sample of NIPA table 7.9 below, separate measures of rental income are provided for legal forms of organizations—for “other private business” and for “households and nonprofit institutions.”² The NIPAs classify persons that own property as either part of the household and NPISH sector or as part of the business sector. Specifically, individuals that rent property and are required to report rental and royalty income on the IRS individual income tax return, and tax-exempt cooperatives, are classified as part of “other private business,” a subsector of the NIPA business sector.³ Individuals that occupy the homes that they own are treated as unincorporated businesses and are classified in the household and institutions sector. Because both types of property owners

¹ Persons resident in the United States are those who are physically located in the United States and who have resided, or expect to reside, in this country for 1 year or more. For more information on residence, see “Definitions and Concepts” in [Chapter 8: Net Exports of Goods and Services](#).

² For more information on legal forms, see [Chapter 2: Fundamental Concepts](#).

³ Rental and royalty income are reported on IRS Schedule E, Supplemental Income and Loss, a section of the individual income tax return. “Other private business” also includes entities that are not required to file but would be so required if they met size or income criteria.

reflect individuals or households, their rental and royalty incomes are included in the NIPA measure of rental income of persons (and therefore, as a component of personal income).⁴ The NIPAs also provide measures of income from the rental of property owned by persons who are classified as proprietors or partnerships (included in proprietors' income), by corporations (in corporate profits), and by governments (as part of government rents and royalties).

As noted in "[Chapter 2: Fundamental Concepts](#)," the NIPA production boundary for households is limited to the housing services provided by homeowners to themselves ("owner-occupied housing") and the production of domestic services (e.g., market cleaning services). Thus, the rental income of households is limited to the services of owner-occupied housing. The provision of nonresidential properties, of rights to intellectual and natural resources, and of permanent-site housing services to tenants more closely resembles business activity; as such, it is recorded as production and income of other private business or of nonprofit institutions serving households (NPISH). Measures of nonmarket household production, such as housework and childcare, are excluded from the NIPAs.⁵ The incomes associated with the production by households of other market goods and services are recorded as proprietors' income.⁶

Separate measures of rental income are provided by type of property and by type of occupant. Specifically, for other private business, separate measures are prepared for rental income from farm and nonfarm tenant-occupied permanent-site housing, from nonresidential properties (structures, equipment, and the real estate investments of private pension plans), and from the rights to intellectual property and natural resources (recorded as royalties). For households and NPISH, measures are prepared for rental income from nonfarm owner-occupied permanent-site dwellings, from mobile dwellings, from farm owner-occupied housing, and from tenant-occupied housing owned by NPISH. By convention, all rental income of persons from tenant-occupied permanent site housing is recorded as other private business or as NPISH, as noted above; also by convention, rental income from tenant-occupied mobile homes owned by persons is recorded as proprietors' income.

Table 12.1 shows the types of transactions that are included in, and excluded from, rental income of persons.

⁴ The NIPAs also provide measures of the income and outlays of the households and institutions sector that exclude the income of "other private business," and, as part of the 2003 comprehensive revision of the NIPAs, BEA began providing separate estimates of household and of NPISH income and outlays; see Charles Ian Mead, Clinton P. McCully, and Marshall B. Reinsdorf, "[Income and Outlays of Households and of Nonprofit Institutions Serving Households](#)," *Survey of Current Business* volume 83 (April 2003): 13-17. Additionally, the NIPAs provide measures of saving and investment of households and institutions sector that exclude "other private business."

⁵ BEA has prepared alternative measures of household output that include the value of nonmarket household production; see Benjamin Bridgman, "[Accounting for Household Production in the National Accounts](#)," *Survey*, volume 96 (February 2016): 1-5.

⁶ Before 2003, the services of owner-occupied housing were also classified as output of the business sector. As part of the 2003 comprehensive revision of the NIPAs, owner-occupied housing was reclassified to the households and institutions sector to reflect the fact that the housing in this case is produced by households for their own use and is not sold on the market.

Table 12.1 Content of Rental Income of Persons

Category of transaction	Comments
Tenant-occupied housing	Includes tenant-occupied permanent-site housing owned by individuals and by NPISH. Excludes mobile housing. Excludes expenses associated with property ownership and rental services.
Owner-occupied housing	Includes housing services provided by farm and nonfarm owner-occupied permanent-site housing and by nonfarm owner-occupied mobile housing. Excludes expenses exclusively associated with rental services.
Nonresidential properties	Includes structures, equipment, and the rental income of private employee pension funds (imputed to persons). Excludes expenses associated with property ownership and rental services.
Royalties	Includes royalties for the provision of rights to natural resources and intellectual property.
Capital consumption adjustment	Conversion of tax-based measures of depreciation at historical cost to economic depreciation at current cost measures.

The bulk of rental income of persons (about 79 percent in 2020) is generated from the provision of housing services by households and NPISH; specifically, from owner-occupied housing (households). The remainder (about 21 percent) is generated from the provision by other private business of tenant-occupied housing, of nonresidential properties, and of rights to intellectual property and natural resources.

Table 7.9. Rental Income of Persons by Legal Form of Organization and by Type of Income

[Billions of dollars]

Line		2020
1	Rental income of persons with capital consumption adjustment	711.6
2	Other private business	146.0
3	Tenant-occupied housing	123.2
4	Nonfarm ¹	122.9
5	Farm	0.3
6	Nonfarm nonresidential properties ²	-0.3
7	Royalties	23.1
8	Households and nonprofit institutions	565.6
9	Owner-occupied housing, nonfarm	544.0
10	Permanent site	497.2
11	Mobile units	46.8
12	Farm owner-occupied housing	10.9
13	Tenant-occupied housing owned by nonprofit institutions	10.7
	Addendum:	
14	Rental income with capital consumption adjustment (1-7)	688.5

1. Includes permanent site housing only. Rental income from tenant-occupied mobile units is reflected in corporate profits and proprietors' income.

2. Includes rental income of private employee pension funds imputed to persons.

The measure of rental income of persons includes income from nonresidential structures and from royalties, so it is not an exclusive measure of the income generated by housing services. Table 7.9 also includes a measure of “rental income with capital consumption adjustment” that excludes royalty income and is therefore more conceptually aligned with the provision of tangible property; however, it includes income from the provision of structures and equipment, as well as housing. Neither is rental income of persons a comprehensive measure of the income generated by housing, as housing services are also provided by governments, by corporations, and by sole proprietorships and partnerships. Given the importance of housing to the health of the economy, the NIPAs also provide measures that reflect the production and income of an alternative “housing” sector, of which the households and institutions sector is only a part; these measures reflect the output associated with housing—and only housing—provided by all owners.⁷ Measures of final expenditures for housing services that are consistent with the output of the housing sector are reflected in BEA’s estimates of personal consumption expenditures.

The inclusion in rental income of persons of income from tenant-occupied permanent-site housing, from nonresidential properties, and from rights to intellectual property or natural resources is straightforward; as explained in [chapter 2](#), the income approach measures GDP—or gross domestic income (GDI)—as the sum of the income

⁷ Measures for the housing sector are discussed in Mayerhauser, Nicole and Marshall Reinsdorf, “[Housing Services in the National Economic Accounts](#),” September 2007.

payments and other costs incurred in the production of goods and services, and rental income of persons reflects income payments for the production of housing and other property services. The inclusion of income from owner-occupied housing (both permanent-site and mobile homes) in rental income of persons warrants further explanation. As noted in [chapter 2](#), purchases of newly constructed housing are treated as private fixed investment rather than as consumption expenditures in the NIPAs, and the stock of housing is treated as fixed assets. The housing stock provides a flow of housing services that are consumed by persons who rent their housing and by persons who own the housing they occupy (referred to as “owner-occupiers”). In the NIPAs, owner-occupiers are treated as owning unincorporated enterprises that provide housing services to themselves in the form of the rental value of their dwellings.⁸ Thus, personal consumption expenditures (PCE) for housing services includes both the monetary rents paid by tenants and an imputed rental value for owner-occupied dwellings (measured as the income the homeowner could have received if the house had been rented to a tenant), and rental income of persons includes the monetary income earned by landlords and an imputed rental income earned by owner-occupiers. This treatment is designed to make PCE, GDP, and the incomes associated with them invariant to whether the house is rented by a landlord to a tenant or is lived in by the homeowner.

The imputation also increases the international comparability of the NIPAs because rates of home ownership differ significantly from country to country; by including both tenant-occupied and owner-occupied housing services in output and income measures, comparisons are not affected by these differences.

It is also worth noting that as a component of income, depreciation—a cost incurred in production—is reflected in the measures of rental income, as shown in table 12.1 above. Much of the source data underlying BEA’s measures of depreciation are based on tax-accounting information, so the source data must be adjusted to reflect consistent economic-accounting measures that are valued at current-replacement cost. The capital consumption adjustment (CCAdj) is a two-part adjustment that (1) converts depreciation measures that are based on a mixture of service lives and depreciation patterns specified in the tax code to measures that are based on uniform service lives and empirically based depreciation patterns; and (2) converts the measures to a current-cost basis by removing from rental income the gain or loss that arises from valuing the depreciation of fixed assets using prices from earlier periods (i.e. prices at the time the asset was acquired).⁹

⁸This treatment is consistent with that of the international [System of National Accounts 2008](#) (SNA 2008): “Households that own the dwellings they occupy are formally treated as owners of unincorporated enterprises that produce housing services consumed by those same households.” Commission of the European Communities, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations, and the World Bank, [System of National Accounts 2008](#): 6.117.

⁹ For information on the derivation of the CCAdj, see [Fixed Assets and Consumer Durable Goods in the United States, 1925–97](#), September 2003, available on BEA’s website at www.bea.gov.

Recording in the NIPAs

As described in [chapter 2](#), the NIPAs can be viewed as aggregations of accounts belonging to individual transactors in the economy. In the seven summary accounts of the NIPAs, “rental income of persons with capital consumption adjustment” appears as an income component in the Private Enterprise Income Account (account 2) and in the Personal Income and Outlay Account (account 3). Additionally, it is a component of national income and, as a component of net operating surplus, it is reflected in gross domestic income (GDI) in the Domestic Income and Product Account (account 1).

In the NIPAs, rental income of persons is shown by sector and by legal form of organization for other private business, for households, and for NPISH. The following is a list of the principal NIPA tables that present annual and, in some cases, quarterly, current-dollar estimates of rental income of persons with capital consumption adjustment as a component of GDI and of national income.¹⁰

- 1.10 Gross Domestic Income by Type of Income (A) (Q)
- 1.11 Percentage Shares of Gross Domestic Income (A)
- 1.12 National Income by Type of Income (A) (Q)
- 1.13 National Income by Sector, Legal Form of Organization, and Type of Income (A)
- 1.16 Sources and Uses of Private Enterprise Income (A)
- 7.4.5 Housing Sector Output, Gross Housing Value Added, and Net Value Added (A)
- 7.9 Rental Income of Persons by Legal Form of Organization and by Type of Income (A)
- 7.12 Imputations in the National Income and Product Accounts (A)

BEA also prepares nominal, or “current-dollar” estimates of rental income of persons that are not seasonally adjusted; these are available in Section 8 of the NIPA Interactive Data Tables.

Overview of Source Data and Estimating Methods

As described earlier, NIPA estimates, including those for rental income of persons, are prepared using a wide variety of source data (See “[Chapter 3: Principal Source Data](#)”) and using estimating methods that adjust the source data to the required NIPA concepts and that fill in gaps in coverage and timing (see “[Chapter 4: Estimating Methods](#)”). For rental income of persons, the estimates are based on statistical surveys and reports primarily from the Census Bureau, the Federal Reserve Board, the Internal Revenue Service (IRS), and the Office of Management and Budget, as well as from

¹⁰ The NIPAs also present annual and quarterly aggregate estimates of rental income of persons in NIPA table group 2 as a component of personal income. Annual and quarterly estimates of aggregate rental income of persons are available in table 2.1; quarterly and monthly estimates are available in table 2.6. BEA also prepares [state- and local-area](#) estimates of rental income of persons as part of its regional economic accounts.

private organizations such as Black Knight Financial Services.¹¹

Table 12.A below summarizes the source data and estimating methods that are used to prepare the current-dollar benchmark, nonbenchmark, and current quarterly estimates for rental of income of persons as shown by legal form of organization and by type of income in NIPA table 7.9. The source data and methods for the current quarterly estimates reflect both seasonally adjusted and not seasonally adjusted estimates unless otherwise noted.

Benchmark year estimates

For all dwellings, rental income is equal to the rental value of the dwelling, as reflected in BEA’s measures of personal consumption expenditures (PCE) for housing services, less the expenses associated with owning the property, plus any subsidies related to the property. Housing-related expenses are deducted because they are considered intermediate inputs to the production of rental services and as such, are already reflected in the rent charged for the service. In contrast, subsidies are added because it is assumed that owners reduce the rents they charge by the value of any property-related subsidies they receive.

Measures of PCE for the services provided by tenant-occupied housing are based on data on rent paid by tenants and data on the number of tenant-occupied units, both from the American Community Survey’s (ACS) Public Use Microdata Sample (PUMS).¹² For measures of PCE for the services provided by owner-occupied housing, estimates of rent per unit are derived using the rental equivalence approach, adjusted to include an “owner premium,” based on the same ACS data. The estimates of PCE for housing services are described in greater detail in [“Chapter 5: Personal Consumption Expenditures.”](#)

Nonfarm tenant-occupied permanent site housing

For *nonfarm tenant-occupied permanent site housing*, the ACS data on rental value as well as the data described below from other sources on expenses and subsidies cover all owners—that is, corporations, proprietors, NPISH, and individuals. Total rental income is split between the personal and business sectors based on data from the Census Bureau’s Census of Housing Residential Finance Survey (RFS) on the percentage of rental receipts that are received by businesses. The personal sector is then further split between individuals (classified as other private business) and NPISH based on RFS data on the percentage of permanent-site rental units that each subsector provides. Finally, business sector rental income is then split between corporations and

¹¹ Black Knight Financial Services was formerly Lender Processing Services Applied Analytics.

¹² BEA uses “1-year” ACS data; that is, data that are collected over 12 months of a calendar year. 1-year data are collected for areas with populations of 65,000 or more. The ACS provides both “1-year” estimates “5-year” estimates (collected over five calendar years). For more information on the ACS single- and multi-year estimates, see chapter 3 of the Census Bureau’s [“Understanding and Using American Community Survey Data: What All Data Users Need to Know.”](#)

sole proprietorships and partnerships using BEA data on each subsector's share of housing-related capital consumption allowances.

Expenses for nonfarm dwellings include mortgage interest paid, maintenance and repairs, property taxes, property insurance, financial costs associated with obtaining mortgages (origination fees, credit reports, and adjustment and collections services), depreciation, and other housing costs (condominium and cooperative fees, mortgage guaranty insurance, property management fees, imputed bank service charges, advertising, pool maintenance, and "all other").

Data on expenses come from various sources, including BEA's benchmark input-output accounts, the Census Bureau's censuses of governments and of housing, and the Federal Housing Finance Agency. BEA allocates each type of expense to tenant-occupied and to owner-occupied housing based on data from BEA's benchmark input-output accounts, unpublished source data, or judgmental trends.

For tenant-occupied housing, the current surplus of state and local housing enterprises and the following subsidies are added.¹³ Subsidies are added to either tenant- or owner-occupied housing based on the nature of the subsidy. For tenant-occupied housing, the following subsidies are added:

- **Section 8:** This program provides rental assistance payments to landlords on behalf of low-income tenants. Estimates are provided by type of landlord (nonprofit, private, and state and local enterprises).
- **Section 236:** Under the Housing and Urban Development Act of 1968 (Rental Housing Assistance Program) the federal government subsidizes the monthly mortgage payment that a qualified owner of a rental or cooperative project is required to make. This subsidy reduces rents for lower income tenants
- **Rural housing service (RHS):** Under the Rental Assistance Program, the U.S. Department of Agriculture's RHS provides assistance to tenants through the Rural Rental Housing or Farm Labor Housing projects.
- **Other housing subsidies:** Includes rental assistance and affordable housing programs provided by other public enterprises.

Nonfarm owner-occupied permanent site housing

For *nonfarm owner-occupied permanent site housing*, the PCE measure of the rental value is imputed using a stratified rental equivalent approach that regresses tenant rents, from which utilities have been excluded, on characteristics of tenant-occupied units reported in the ACS. Regression characteristics include structure type, number of rooms,

¹³ For state and local enterprises that provide housing, net operating income is comprised of federal subsidies and rental payments received by tenants, less expenses. It is measured as the current surplus of these government enterprises.

number of bedrooms, age of structure, and location.¹⁴

As with tenant-occupied housing, the aggregate measure of each type of expense is allocated between, and then deducted from, tenant- and owner-occupied housing based on the same source data; the expenses deducted from owner-occupied housing are the same as those for tenant-occupied housing with the exception of property management fees, imputed bank service charges, and advertising, which are only deducted from tenant-occupied housing.

For owner-occupied housing, the following subsidies are added:

- **Section 235:** The Housing and Urban Recovery Act of 1983 program subsidizes the interest payments of eligible homeowners for 10 years.
- **Federal Emergency Management Agency (FEMA):** FEMA provides disaster-related subsidy payments for temporary housing, repairs, mortgage and rental assistance, etc.
- **Road Home Grants:** The Road Home program was a Federal grant to the states of Louisiana and Mississippi to aid persons displaced by Hurricanes Katrina and Rita. The program, which provided subsidies for property repairs, operated from 2007 to 2018.

Nonfarm owner- and tenant-occupied mobile homes

For *nonfarm owner- and tenant-occupied mobile homes*, the PCE measure of the rental value is estimated in the same manner and using the same source data as measures of permanent site housing. The expenses deducted from this measure include “contract site rent”—the charge for the site upon which the home is located, where applicable—as well as mortgage interest paid, property taxes, consumption of fixed capital, and miscellaneous other costs (including property insurance and maintenance and repairs). Subsidies are not added in the measurement of rental income from mobile homes. As noted previously, only rental income from owner-occupied mobile units is attributed to households and NPISH; rental income from tenant-occupied mobile homes is instead recorded as proprietors’ income. Mobile home units include any non-permanent site dwelling identified in the ACS as a residence, including manufactured homes, houseboats, and recreational vehicles, etc.

Farm owner- and tenant-occupied housing

For *owner- and tenant-occupied farm housing*, the PCE measure of the rental value is estimated in the same manner and with the same source data as measures of nonfarm owner-occupied and tenant-occupied rental values.

¹⁴ According to the SNA, “The ratio of owner-occupied to rented dwellings can vary significantly...so both international and inter-temporal comparisons of the production and consumption of housing services could be distorted if no imputation were made for the value of own-account housing services.” ([SNA 2008](#): 6.34).

Farm housing is classified in the ACS data as housing units with agricultural sales exceeding \$1,000 per year. The rental value is adjusted to exclude expenses for maintenance and repairs, property taxes, mortgage interest, and property insurance. Estimates of these expenses are based on data from the United States Department of Agriculture's (USDA) Economic Research Service (ERS). For tenant-occupied farm housing, the rental value is also adjusted for the capital consumption allowances of operator and non-operator landlords, based on IRS Statistics of Income (SOI) data. For owner-occupied housing, the rental value is adjusted to remove an estimate of consumption of fixed capital, based on data from BEA's Fixed Assets Accounts. No subsidies are added to either owner- or tenant-occupied measures.

The NIPAs do not record separate estimates of permanent site and mobile farm housing because source data on expenses are insufficient to support such a split. When a housing unit is identified in the ACS as a mobile unit and a farm unit, BEA allocates that unit as a farm unit.

Tenant-occupied housing owned by NPISH

For *tenant-occupied housing owned by nonprofit institutions*, the measure of the rental value is derived and allocated between individuals and NPISH as described above. Deducted expenses include property taxes, mortgage interest, depreciation, property insurance, maintenance and repairs, and administrative expenses; no subsidies are added.

Nonfarm nonresidential properties

For *nonfarm nonresidential properties*, rental income is estimated by multiplying BEA's measures of the nonfarm nonresidential capital stock of structures and equipment owned by persons by an estimated rate of return on these assets. The rate of return on these assets is estimated by dividing the profits of corporate real estate operators and lessors of buildings, based on SOI data, by the value of their depreciable assets, also based on SOI data. The rental income of private employee pension funds imputed to persons is added to the total measure, based on data from the Federal Reserve Board.

Royalty income

For *royalty income* from intellectual property and from the rights to natural resources, rental income is equal to the net royalties received by individuals, by fiduciaries, and by nonprofit organizations less the expense of bonus payments for drilling rights for what are ultimately found to be "dry holes." Data are primarily from the IRS SOI program.

Nonbenchmark annual estimates

Estimates for nonbenchmark years are generally prepared at the same level of detail as those for benchmark years. Nonbenchmark annual estimates of housing services reflected in PCE (as described in chapter 5) use the same source data as benchmark year

estimates, with the exception of the most recent year, for which ACS data are not yet available. For the most recent year, the estimate is judgmentally extrapolated from the benchmark values. Nonbenchmark annual estimates of expenses and subsidies are extrapolated based on various source data or by judgmental trend, as described in table 12.A.

Current quarterly estimates

The seasonally adjusted quarterly current-dollar estimates of the rental values reflected in PCE for all housing are prepared by reflating the estimates of real PCE for each type of dwelling using the CPI for rent of primary residence for tenant-occupied dwellings and the CPI for owners- equivalent rent of primary residence for owner-occupied dwellings.¹⁵ For expenses and subsidies, quarterly values are extrapolated based on various source data or by judgmental trend, as described in table 12A. For nonresidential structures and for royalty income, current quarterly estimates are primarily derived by judgmental trend.

The not seasonally adjusted current quarterly estimates of rental income of persons are derived using the same methods as the seasonally adjusted current quarterly estimates, using the not seasonally adjusted versions of the same indicators. BEA has not found evidence of seasonality in housing services; consequently, the not seasonally adjusted estimates are equal to the seasonally adjusted estimates.¹⁶

¹⁵ As a component of the product-side measure of personal consumption expenditures, BEA prepares real (inflation-adjusted) measures of personal consumption expenditures for housing services; most income measures, including rental income of persons, are not adjusted for inflation. For more information on the derivation of inflation-adjusted measures, see “Price and Quantity Estimates in [chapter 4](#) of this handbook. For more information on the derivation of real consumption expenditures for housing services, see “Quantity and price estimates” in chapter 5.

¹⁶ See [NIPA table 8.2 Gross Domestic Income by Type of Income, Not Seasonally Adjusted](#).

Table 12.A—Summary of Methodology Used to Prepare Estimates of Rental Income of Persons

Line in NIPA table 7.9	Component	Benchmark year	Nonbenchmark year	Current quarterly estimates
		Indicator series used to interpolate and extrapolate*		
2	Other private business			
3	Tenant-occupied housing ¹			
4	Nonfarm	<p>Rental value of tenant-occupied nonfarm housing less expenses and plus subsidies. <u>Rental value of tenant-occupied nonfarm housing:</u> Unit stocks and rents based on Census Bureau ACS data. <u>Expenses:</u> Allocated portion of aggregate of unpublished measures: (1) Maintenance and repairs: 1997 benchmark I-O-based value extrapolated based on National Association of Realtors existing home sales forecasts. (2) Mortgage interest paid: Based on FRB data on mortgage debt outstanding, effective rate of interest from Black Knight Financial Services, and BEA judgmental adjustments to include discount points. (3) Property insurance: Direct premiums earned, investment income of policyholder reserves, and normal losses from AM Best. (4) Property taxes: Real estate taxes by size of housing unit from Census Bureau Census of Governments data. (5) Financial costs: Rates of initial fees and charges from Federal Housing Finance Agency (FHFA), multiplied by mortgage originations from Freddie Mac. (6) Property management fees: benchmark I-O tables. (7) Consumption of fixed capital: IRS tabulations of capital consumption allowances and BEA's capital consumption adjustment estimates. (8) All other housing expenses: BEA's benchmark I-O tables. <u>Subsidies:</u> Aggregate of unpublished detail from BEA's Federal Budget Translation, and unpublished NIPA detail on current surplus of government enterprises.</p>	<p>Rental value of tenant-occupied nonfarm housing, less expenses and plus subsidies. <u>Rental value of tenant-occupied nonfarm housing:</u> Same as benchmark year. Prior to ACS availability, judgmental trend. <u>Expenses:</u> Tenant-occupied portion of aggregate of unpublished extrapolated measures: (1) Maintenance and repairs: same as benchmark year. (2) Mortgage interest paid: same as benchmark year. (3) Property insurance: same as benchmark year. (4) Property taxes: Growth rate in state and local tax collections from Census Bureau's quinquennial Census of Government and Annual Survey of State and Local Government Finances. (5) Financial costs: Extrapolated based on value of mortgage originations from Freddie Mac. (6) Property management fees: same as benchmark year. (7) Consumption of fixed capital: same as benchmark year. (8) All other housing expenses: trade association data and judgmental trends. <u>Subsidies:</u> same as benchmark year.</p>	<p>Rental value of tenant-occupied nonfarm housing, less expenses and plus subsidies. <u>Rental value of tenant-occupied nonfarm housing:</u> For unit stocks, Census Bureau data on new privately-owned housing units completed. For average rent, CPI for rent of primary residence. <u>Expenses:</u> For mortgage interest paid, quarterly mortgage debt outstanding from FRB and monthly mortgage servicing data from Black Knight Financial Services. For financial costs, extrapolated based on value of mortgage originations from Freddie Mac and moving average of number of loan applications from Mortgage Bankers Association. For all other expenses, judgmental trend. <u>Subsidies:</u> Judgmental trend.</p>

Table 12.A—Summary of Methodology Used to Prepare Estimates of Rental Income of Persons

Line in NIPA table 7.9	Component	Benchmark year	Nonbenchmark year	Current quarterly estimates
		Indicator series used to interpolate and extrapolate*		
5	Farm	Gross rental value based on ACS data, less expenses (including property insurance, property taxes, mortgage interest, maintenance and repairs, and provision of housing as compensation in kind to hired labor), based on USDA data and less BEA data for consumption of fixed capital.	Same as benchmark year. Prior to ACS availability, judgmental trend.	Judgmental trend.
6	Nonfarm nonresidential properties ²	Sum of rental income from nonfarm nonresidential structures and equipment and rental income of private employee pension funds imputed to persons. For rental income from nonfarm nonresidential structures and equipment, gross stock from BEA's Fixed Assets Accounts multiplied by the rate of return to corporate real estate assets based on SOI data. For rental income from private employee pension funds imputed to persons, IRS tabulations of Form 5500 data on rental income from properties for 1984 extrapolated using FRB data on growth in miscellaneous assets of pension plans. Capital consumption allowances and capital consumption adjustment from BEA's Fixed Asset Accounts.	Same as benchmark year.	Judgmental trend.
7	Royalties	Net royalty of individuals less oil bonus payments. <u>Net royalty income of individuals</u> : Net royalties of fiduciaries from SOI plus judgmentally determined royalty income of nonprofit organizations. <u>Oil bonus payments</u> : Judgmentally determined based on SOI data on intangible drilling costs.	For years in which SOI data is available, same as benchmark year. For most recent year, extrapolated based on Industry account estimates of gross output of oil and gas extraction industries (NAICS 211).	Product of BLS producer price index for oil and gas extraction and FRB industrial production index for oil and gas extraction.
8	Households and nonprofit institutions			
9	Owner-occupied housing, nonfarm			

Table 12.A—Summary of Methodology Used to Prepare Estimates of Rental Income of Persons

Line in NIPA table 7.9	Component	Benchmark year	Nonbenchmark year	Current quarterly estimates
		Indicator series used to interpolate and extrapolate*		
10	Permanent site	<p>Imputed rental value of owner-occupied nonfarm permanent-site housing, less expenses and plus subsidies.</p> <p><u>Imputed rental value of owner-occupied nonfarm housing:</u> Unit stock and imputed rents based on Census Bureau ACS data, plus BEA-estimated owner-premium.</p> <p><u>Expenses:</u> Same as for nonfarm tenant-occupied permanent-site housing (excluding property management fees, imputed bank service charges, and advertising); for consumption of fixed capital, BEA's Fixed Assets Accounts.</p> <p><u>Subsidies:</u> Aggregate of unpublished detail from BEA's Federal Budget Translation.</p>	<p>Imputed rental value of owner-occupied nonfarm housing, less expenses and plus subsidies.</p> <p><u>Imputed rental value of owner-occupied nonfarm housing:</u> Same as benchmark year. Prior to ACS availability, judgmental trend.</p> <p><u>Expenses:</u> Same as benchmark year.</p> <p><u>Subsidies:</u> Same as benchmark year.</p>	<p>Imputed rental value of owner-occupied nonfarm housing, less expenses and plus subsidies.</p> <p><u>Imputed rental value of owner-occupied nonfarm housing:</u> Unit stocks from Census Bureau data on housing completions; average rent same as for nonbenchmark years.</p> <p><u>Expenses:</u> same as for nonfarm tenant-occupied permanent site.</p> <p><u>Subsidies:</u> Judgmental trend.</p>
11	Mobile Units	<p>Imputed rental value of owner-occupied nonfarm mobile housing, less expenses and plus subsidies.</p> <p><u>Imputed rental value of owner-occupied manufactured homes:</u> Unit stocks and imputed rents based on Census Bureau ACS data, plus BEA estimated owner-premium.</p> <p><u>Expenses:</u> Aggregate of unpublished measures:</p> <p>(1) Contract site rent: Historical value extrapolated by the rate of change in rents and units from ACS data.</p> <p>(2) Mortgage interest paid: Mortgage debt outstanding extrapolated using growth rate in sales of manufactured homes from Census Bureau Manufactured Housing Survey; effective rate of interest extrapolated using growth rate in FRB blended rate for manufactured homes.</p> <p>(3) Property taxes: 2001 RFS-based value extrapolated using growth rate in rental value of owner-occupied mobile homes.</p> <p>(3) Consumption of fixed capital: BEA's Fixed Asset Accounts.</p> <p>(4) Miscellaneous costs: BEA's Input-Output Accounts.</p>	<p>Imputed rental value of owner-occupied nonfarm housing, less expenses and plus subsidies.</p> <p><u>Imputed rental value:</u> Same as benchmark year. Prior to ACS availability, judgmental trends.</p> <p><u>Expenses:</u> Aggregate of unpublished measures:.</p> <p>(1) Contract site rent: same as benchmark year.</p> <p>(2) Mortgage interest paid: same as benchmark year.</p> <p>(3) Property taxes: same as benchmark year.</p> <p>(4) Consumption of fixed capital: same as benchmark year.</p> <p>(5) Miscellaneous costs: extrapolated using the growth rate in the rental value of owner-occupied mobile homes less contract site rent.</p>	<p><u>Imputed rental value:</u> For unit stocks, new shipments of manufactured homes from Census Bureau. For average rent, CPI for owners' equivalent rent of primary residence.</p> <p><u>Expenses:</u> Judgmental trend.</p>

Table 12.A—Summary of Methodology Used to Prepare Estimates of Rental Income of Persons				
Line in NIPA table 7.9	Component	Benchmark year	Nonbenchmark year	Current quarterly estimates
			Indicator series used to interpolate and extrapolate*	
12	Farm owner-occupied housing	Same as farm tenant-occupied farm housing.	Same as farm tenant-occupied farm housing.	Same as farm tenant-occupied farm housing.
13	Tenant-occupied housing owned by nonprofit institutions	Allocated portion of rental value of tenant-occupied housing less allocated portion of expenses and plus allocated portion of subsidies.	Same as benchmark year.	Judgmental trend.

* The description “Same as for benchmark year” indicates that the estimate is prepared using a methodology similar to that used for the benchmark estimate rather than by using an indicator series to interpolate or extrapolate the benchmark estimate.

¹ Permanent site housing. Tenant-occupied mobile housing is allocated to the business sector.

² Includes rental income of private employee pension funds imputed to persons.

ACS: American Community Survey, Census Bureau

AHS: American Housing Survey, Census Bureau

BLS: Bureau of Labor Statistics

CPI: Consumer Price Index, Census Bureau

FRB: Federal Reserve Board

FHFA: Federal Housing Finance Agency

I-O: Input-Output

IRS: Internal Revenue Service

RFS: Decennial Census of Housing, Residential Finance Survey—discontinued in 2001

NAICS: North American Industry Classification System

SOL: Statistics of Income, Internal Revenue Service