



# Household Expenditures and Income

Balancing family finances in today's economy



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This report benefited from the insights and expertise of Jonathan Fisher, research associate in the University of California, Santa Cruz department of economics. Neither he nor his organization necessarily endorses the conclusions of this chartbook.

## Acknowledgments

The financial security and mobility team thanks Pew staff members Hassan Burke, Samantha Chao, Rica Santos, Alan van der Hilst, Jonathan Moody, Sultana Ali, Jennifer V. Doctors, and David Merchant for providing valuable feedback on this report. We also thank all those involved for their thoughtful suggestions and production assistance. Many thanks also to other current and former colleagues who made this work possible.

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## Overview

Expenditures are a key but often overlooked element of family balance sheets. In measuring household financial security, significant attention is typically paid to income, but much less to whether those resources are sufficient to cover expenses. To begin addressing this gap in the policy discourse, this chartbook uses the Bureau of Labor Statistics' Consumer Expenditure Survey to explore household expenditures, examining changes in overall spending and across individual categories from 1996 to 2014.<sup>1</sup> It also details the differences in expenditures by income, with a particular focus on the degree to which households have slack in their budgets that could be devoted to savings and other wealth-building efforts.

This analysis focuses on the working-age population, which includes survey respondents or their spouses who are between the ages of 20 and 60. For the purpose of examining differences in spending by income, the sample was divided into thirds.

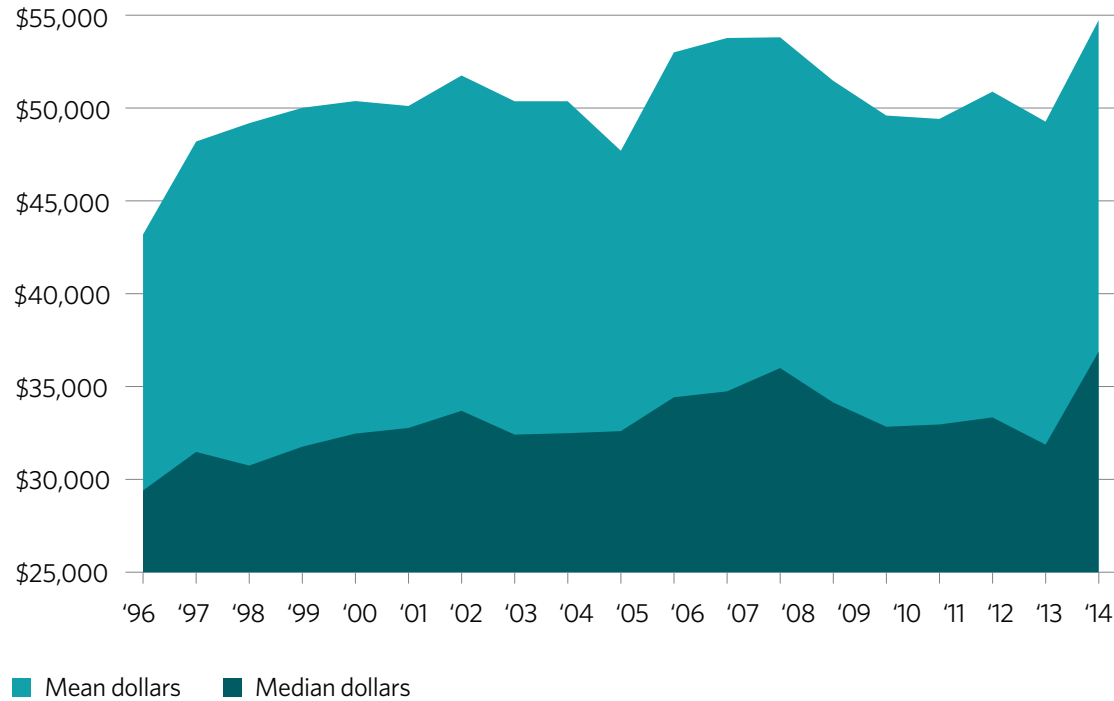
The analysis shows that both median income and expenditures contracted after the Great Recession, reflecting the economic turmoil of the country. By examining household spending, this research helps to shed light on family financial security over time, and especially in recent years. Key findings include:

- **Overall median household expenditures grew by about 25 percent between 1996 and 2014, returning to pre-recession levels.**<sup>2</sup> After declining during and after the Great Recession, expenditures increased between 2013 and 2014 in particular. In 2014, the typical American household spent \$36,800.
- **Although expenditures recovered from the downturn, income did not.** As the recovery began, median household expenditures returned to pre-crisis levels, but median household income continued to contract. By 2014, median income had fallen by 13 percent from 2004 levels, while expenditures had increased by nearly 14 percent.
- **Low-income families spent a far greater share of their income on core needs, such as housing, transportation, and food, than did upper-income families.** Households in the lower third spent 40 percent of their income on housing, while renters in that third spent nearly half of their income on housing, as of 2014. Because their core spending absorbed so much of their income, households in the lower income tier spent considerably less than their middle- and upper-income counterparts on discretionary items, such as food away from home and entertainment.
- **Although all households had less slack in their budgets in 2014 than in 2004, lower-income households went into the red.** In 2004, typical households at the bottom had \$1,500 of income left over after expenses. By 2014, this figure had decreased by \$3,800, putting them \$2,300 in the red. The lack of financial flexibility threatens low-income households' financial security in the short term and their economic mobility in the long term.

Figure 1

## After a Long Recovery, Household Spending Increased by 25%, Returning to Pre-Recession Levels

Average and median household expenditures, 1996-2014



Households spent more in 2014 than they did in 1996, after adjusting for inflation; this holds whether the figures are based on averages (means) or medians. The typical household saw its expenditures grow by more than 25 percent, from \$29,400 in 1996 to \$36,800 in 2014. Mean expenditures grew 27 percent since 1996, rising from \$43,200 to \$54,800. Much of the growth occurred between 2012 and 2014, signaling a promising recovery from the Great Recession and the housing crisis.

Notes: Data are adjusted for inflation using the Bureau of Economic Analysis' Personal Consumption Expenditure Price Index; population is limited to households in which the respondent or spouse is between the ages of 20 and 60.

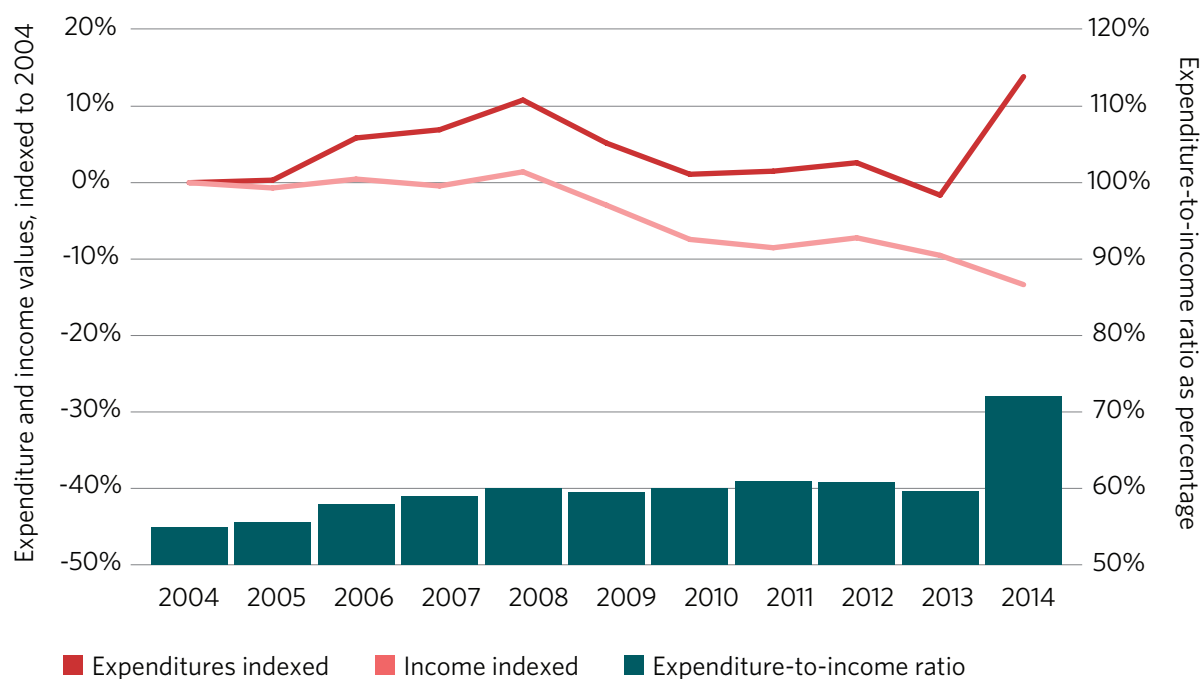
Sources: Pew's analysis of Bureau of Labor Statistics Consumer Expenditure Survey Public-Use Microdata, 1996-2014

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Figure 2

## Expenditures Grew and Income Dropped Since the End of the Great Recession

Trends, 2004-14



From 2004 to 2008, median household income grew by only 1.5 percent,<sup>3</sup> while median expenditures increased by about 11 percent. During that period, the expenditure-to-income ratio (the percentage of a household's budget used for spending) jumped by 9 percent. As the recovery began, median household expenditures returned to pre-crisis levels, but median household income continued to contract. By 2014, median income had fallen by 13 percent from 2004 levels, while expenditures had increased by nearly 14 percent. This change in the expenditure-to-income ratio in the years following the financial crisis is a clear indication of why and how households feel financially strained.

Notes: Data are adjusted for inflation using the Bureau of Economic Analysis' Personal Consumption Index; population is limited to households in which the respondent or spouse is between the ages of 20 and 60.

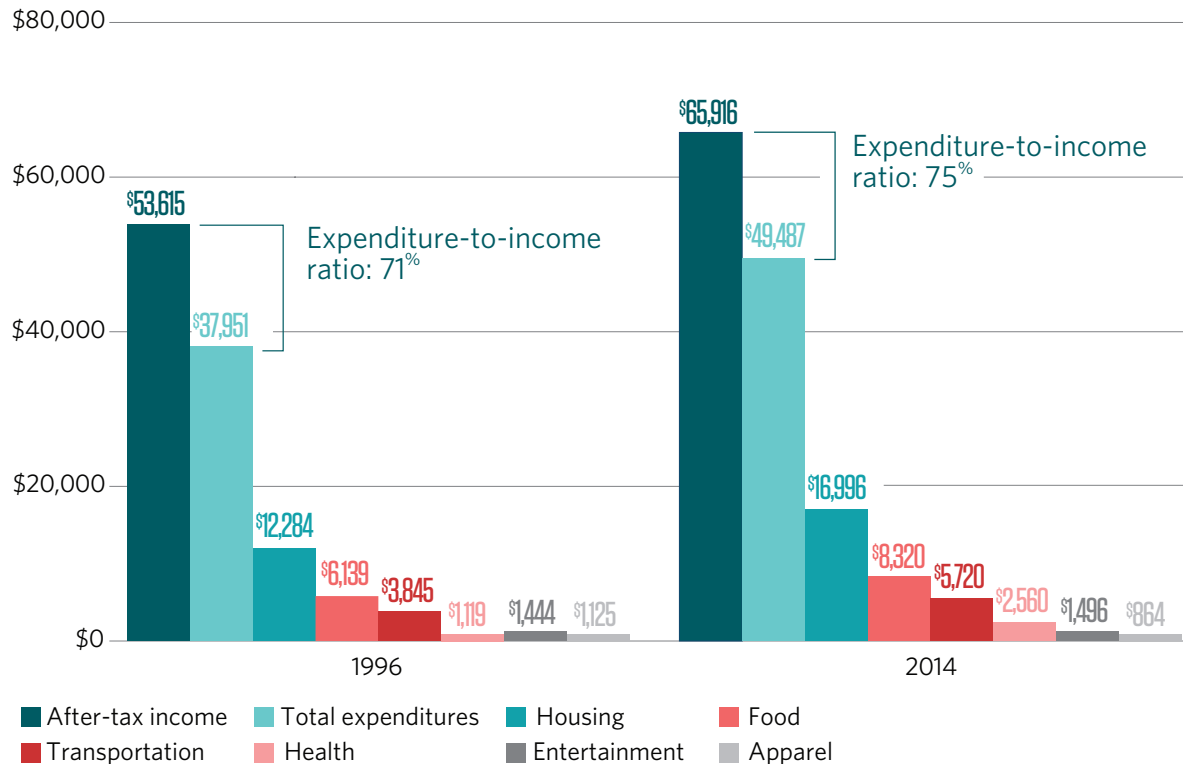
Sources: Pew's analysis of Bureau of Labor Statistics Consumer Expenditure Survey Public-Use Microdata, 2004-14

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Figure 3

## A Typical Family of Four Had Higher Expenses Relative to Income in 2014 Than It Did Almost 19 Years Earlier

Median expenditures for households with two earners and two children, 1996 and 2014



For a typical family of four (two earners and two children), while median household income increased by about \$10,000 between 1996 and 2014, annual expenditures also increased by about the same amount, driven largely by higher spending for core needs: housing, food, and transportation. Although the absolute change in income and expenditures was similar, this family had less slack in its budget in 2014 than in 1996, as its expenditure-to-income ratio grew from 71 percent to 75 percent.

Notes: Data are adjusted for inflation using the Bureau of Economic Analysis' Personal Consumption Expenditure Price Index; population is limited to households in which the respondent or spouse is between the ages of 20 and 60. Tax liability was calculated assuming median income for a family of four in 1996 and 2014. See the methodology for more information.

Sources: Pew's analysis of Bureau of Labor Statistics Consumer Expenditure Survey Public-Use Microdata, 1996-2014

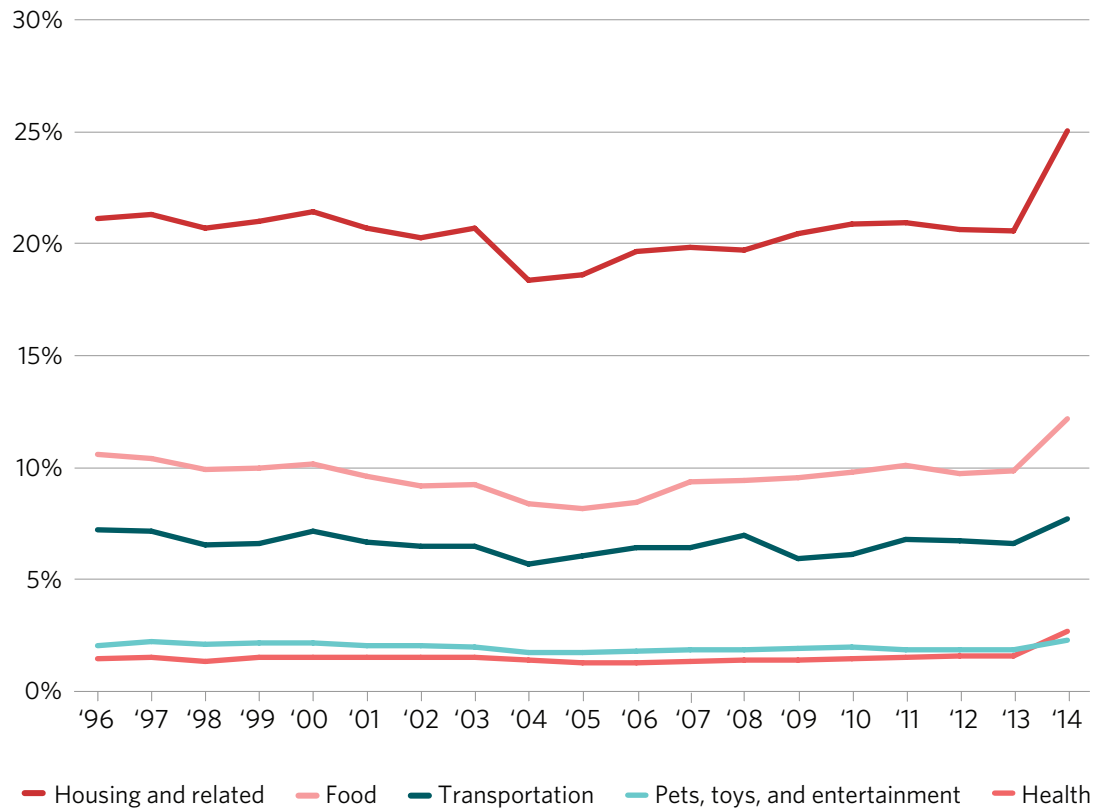
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Figure 4

## Housing, Food, and Health Care Consumed Larger Shares of Income in 2014 Than They Did 19 Years Earlier

Median expenditures as a percentage of income, 1996-2014



About two-thirds of families' spending goes to core needs: housing, food, and transportation. In 2014, housing obligations accounted for the largest share of household pretax income, about 25 percent. Over the 19-year study period, aggregate median housing expenditures absorbed 21 percent of families' pretax income. The second-largest expenditure, food, typically consumed nearly 10 percent of family income, while transportation took 7 percent. The proportion of household spending that these categories account for has shifted very little over the past two decades.

Notes: Data are adjusted for inflation using the Bureau of Economic Analysis' Personal Consumption Expenditure Price Index; population is limited to households in which the respondent or spouse is between the ages of 20 and 60.

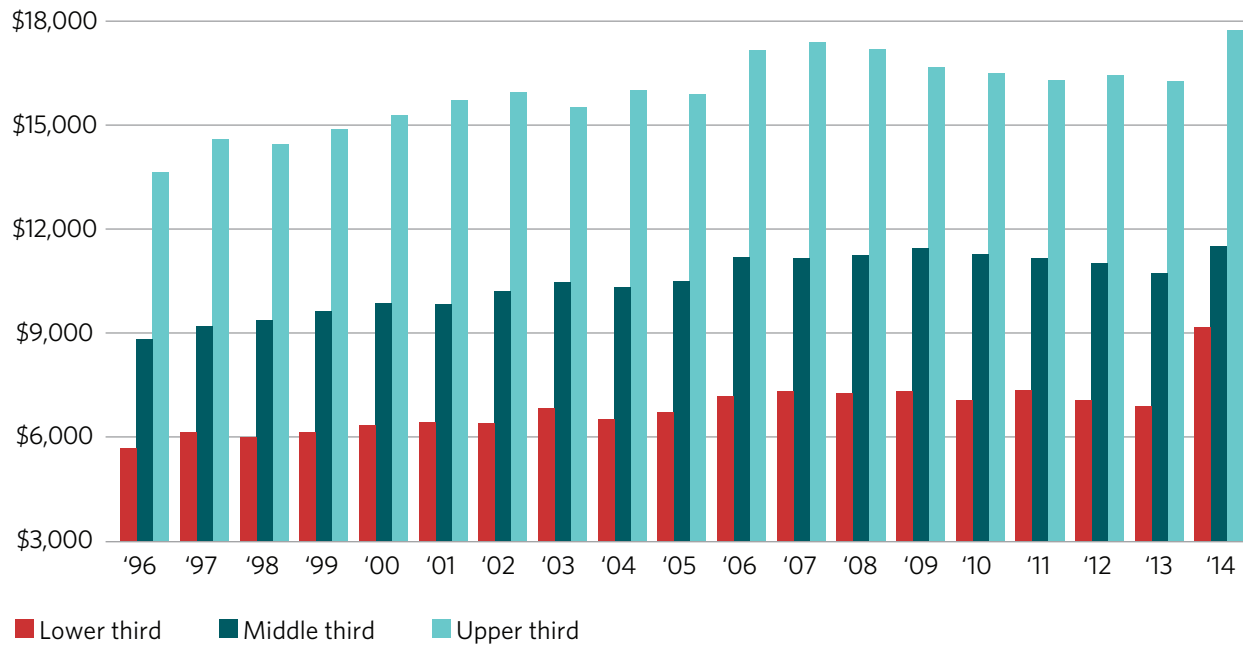
Sources: Pew's analysis of Bureau of Labor Statistics Consumer Expenditure Survey Public-Use Microdata, 1996-2014

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Figure 5

## Lower-Income Households' Housing Costs Grew by More Than 50% Over the Past 19 Years

Housing expenditures by income thirds, 1996-2014



Over the past two decades, spending on housing increased for Americans in all income tiers. In 2014, households in the lower third spent much less in absolute dollar terms (about \$9,200) than those in the middle or upper thirds, whose median housing expenditures reached \$11,500 and \$18,000, respectively. However, the typical lower-income household spent far more on housing as a share of income (40 percent) than those in the middle (25 percent) or at the top (17 percent).

Notes: Data are adjusted for inflation using the Bureau of Economic Analysis' Personal Consumption Expenditure Price Index; population is limited to households in which the respondent or spouse is between the ages of 20 and 60.

Sources: Pew's analysis of Bureau of Labor Statistics Consumer Expenditure Survey Public-Use Microdata, 1996-2014

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Figure 6

## Lower-Income Renters Spent Close to 50% of Their Income on Rent in 2014

Percentage of income used for shelter by income third and housing status, 2000-14



Since the start of the housing crisis in 2007, homeownership rates have declined among households in the middle- and upper-income tiers. These decreases have affected the rental market, as former owners became renters, leading to rental vacancy rates at historical lows below 7 percent.<sup>4</sup> The diminished supply of rental properties increased the cost of rental housing dramatically; in 2014, renters at each rung of the income ladder spent a higher share of their income on housing than they had in any year since 2004. Although both renters and homeowners spent more for housing in 2014, notable differences in the proportion of household resources going to shelter were evident across income groups, with lower-income renter households spending close to half of their pretax income on rent.

Notes: Data are adjusted for inflation using the Bureau of Economic Analysis' Personal Consumption Expenditure Price Index; population is limited to households in which the respondent or spouse is between the ages of 20 and 60. For homeowners, housing costs include mortgage principal and interest and property taxes; for renters, they include rent.

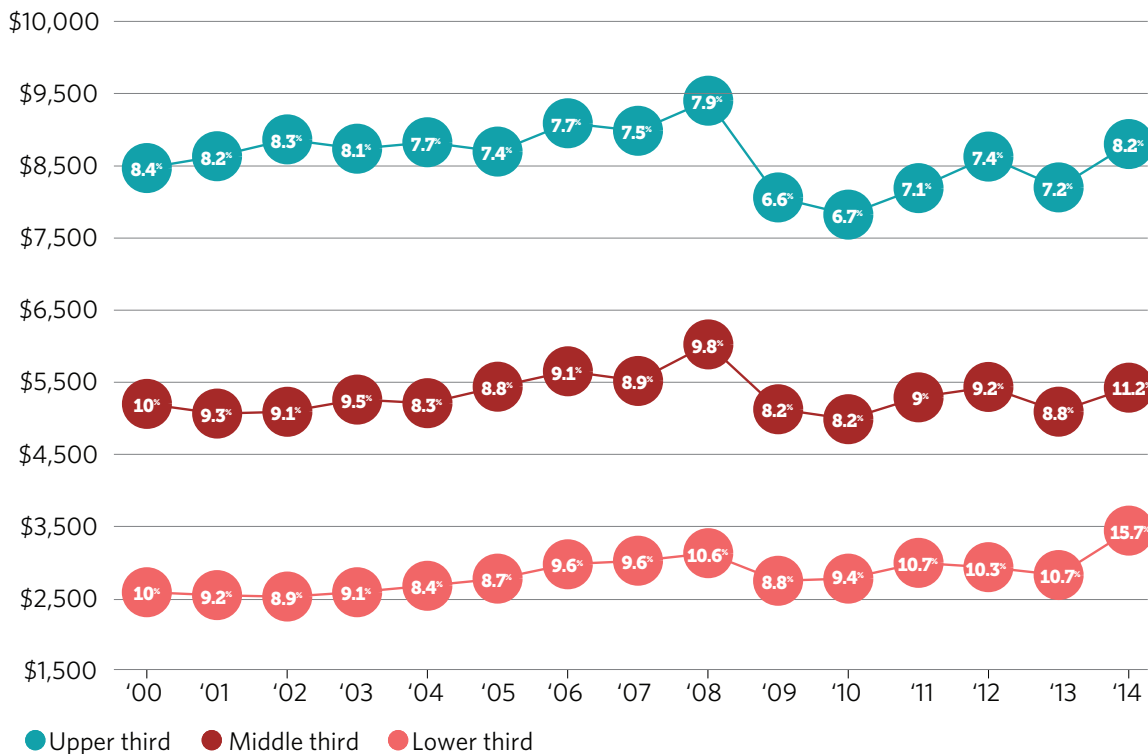
Sources: Pew's analysis of Bureau of Labor Statistics Consumer Expenditure Survey Public-Use Microdata, 2000-14

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Figure 7

## Lower-Income Families Routinely Spent a Larger Share of Income on Transportation Than Wealthier Families Did During the Past 15 Years

Expenditures in dollars and as a share of income, by income thirds, 2000-14



Notes: Data are adjusted for inflation using the Bureau of Economic Analysis' Personal Consumption Expenditure Price Index; population is limited to households in which the respondent or spouse is between the ages of 20 and 60. The data shown reflect transportation "expenditure outlays," which include all costs related to owning, leasing, renting, and maintaining a vehicle for legal operation, excluding tolls; spending related to the use of public transportation; and principal payments, such as cash used for vehicle purchase down payments that are counted in other transportation expenditure categories.

Sources: Pew's analysis of Bureau of Labor Statistics Consumer Expenditure Survey Public-Use Microdata, 2000-14

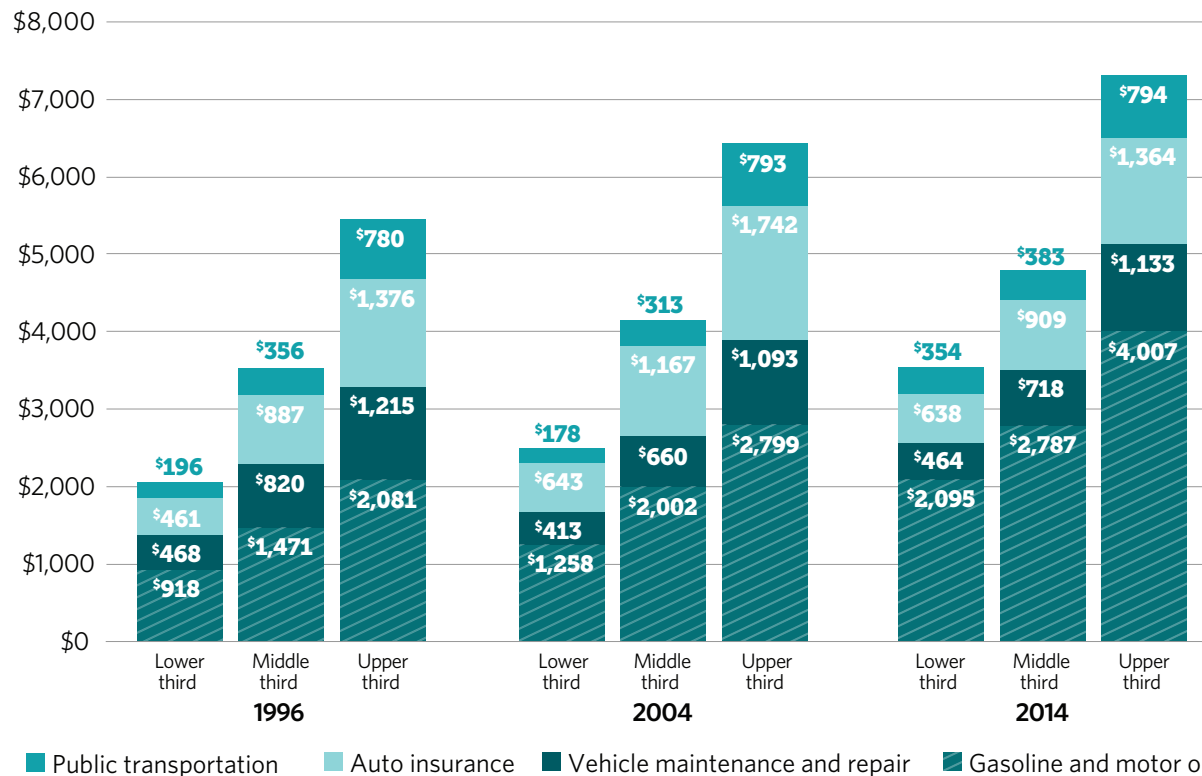
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As with housing, households in the lower income group spend significantly less in absolute dollars, but much more as a share of their income, on transportation than did those in the middle- or upper-income groups. Further, transportation costs increased in recent years for households at the bottom, while this spending was more stable for the other income groups. Lower-income households spent nearly 16 percent of their income on transportation in 2014, up from 9 percent four years earlier. In contrast, households in the middle spent about 11 percent of their income on transportation in 2014, while those at the top spent 8 percent.

Figure 8

## Households at the Bottom Spent More on Gas in 2014 Than on All Transportation 19 Years Earlier

Subcategory spending by income thirds, 1996, 2004, and 2014



As the share of household income used for transportation increased, the amount going to various subcategories also grew. For all income groups, expenditures for gasoline and motor oil doubled between 1996 and 2014. For households in the lower third, the average annual cost of fuel, auto insurance, vehicle maintenance and repair, and public transportation in 1996 averaged \$2,000 a year; by 2014, this group spent nearly \$2,100 just on fuel. These extreme cost increases force households to make difficult choices and trade-offs to meet core needs.

Notes: Data are adjusted for inflation using the Bureau of Economic Analysis' Personal Consumption Expenditure Price Index; population is limited to households in which the respondent or spouse is between the ages of 20 and 60. This figure uses weighted population means instead of medians because the median values of all expenditures except gasoline and motor oil equaled zero for both the middle- and lower-income households.

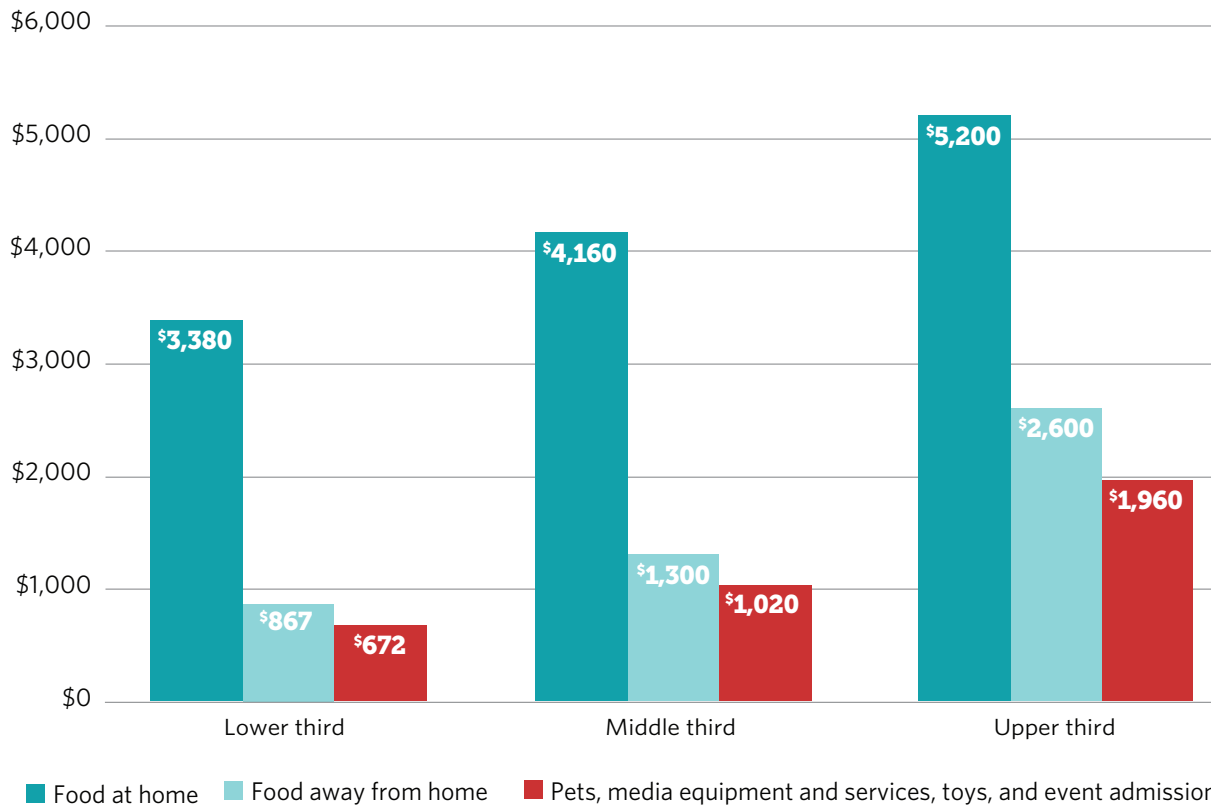
Sources: Pew's analysis of Bureau of Labor Statistics Consumer Expenditure Survey Public-Use Microdata, 1996-2014

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Figure 9

## Households With More Slack in Their Budgets Spent More on Food and Entertainment

Food and entertainment spending by income thirds, 2014



Though systemic economic conditions, such as recessions or stock market changes, affect trends in consumer expenditures, individual households also make decisions about how to spend their discretionary dollars. In 2014, households across the income distribution spent much more on groceries than on eating out, but, predictably, those in the top third spent much more on food away from home than the other groups. Households at the top also spent more than others on entertainment, including pets and pet care, media equipment and services, admission to events such as movies or plays, and toys for children. Typical households at the top spent \$380 a month on eating out and entertainment. Conversely, households in the bottom third, which had significantly less slack in their budgets, devoted very few resources to these two categories—about \$128 a month.

Notes: Data are adjusted for inflation using the Bureau of Economic Analysis' Personal Consumption Expenditure Price Index; population is limited to households in which the respondent or spouse is between the ages of 20 and 60.

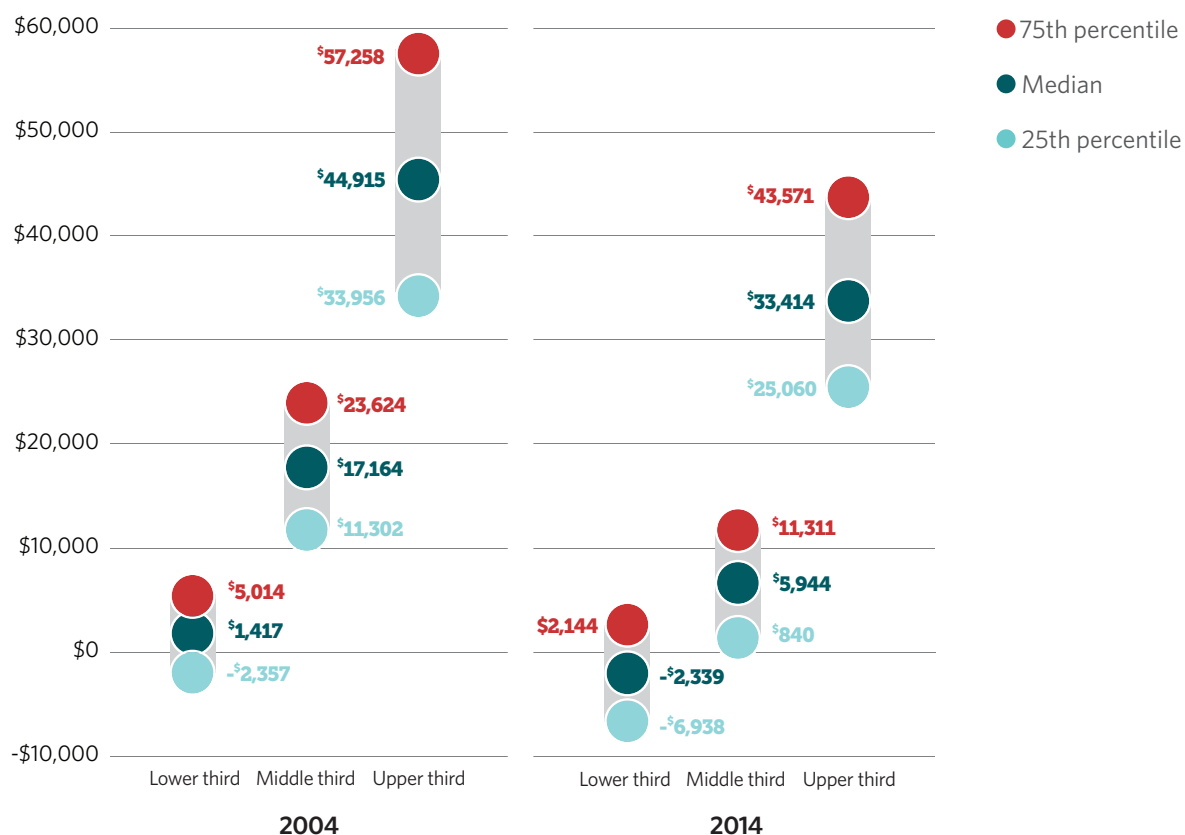
Sources: Pew's analysis of Bureau of Labor Statistics Consumer Expenditure Survey Public-Use Microdata, 2014

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Figure 10

## All Households Had Less Financial Slack in 2014 Than in 2004, but Lower-Income Households Went Into the Red

Amount of income remaining after all expenditures by income thirds, 2004 and 2014



The amount of slack that families had in their budgets declined for all income groups between 2004 and 2014. This means households had less income to devote to wealth-building investments, such as short- and long-term savings, education, and life insurance. In 2004, the typical household in the lower third had a little less than \$1,500 left over after accounting for annual outlays. Just 10 years later, this amount had fallen to negative \$2,300, a \$3,800 decline. These households may have had to use savings, get help from family and friends, or use credit to meet regular annual household expenditures. The typical household in the middle third saw its slack drop from \$17,000 in 2004 to \$6,000 in 2014. Of note, because income is measured before taxes, some families will have had even less slack in their budgets than this figure implies.

Notes: Data are adjusted for inflation using the Bureau of Economic Analysis' Personal Consumption Expenditure Price Index; population is limited to households in which the respondent or spouse is between the ages of 20 and 60. Income is pretax, post-transfer.

Sources: Pew's analysis of Bureau of Labor Statistics Consumer Expenditure Survey Public-Use Microdata, 2004 and 2014

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## Appendix A

### Select Sample Population Demographics

	Demographics	1996			2014		
		Lower third	Middle third	Upper third	Lower third	Middle third	Upper third
	<b>Median Income</b>	\$14,500	\$38,500	\$81,000	\$15,500	\$39,500	\$95,000
<b>Race</b>	<b>Black</b>	21%	12%	8%	22%	14%	8%
	<b>Asian</b>	3%	3%	3%	5%	5%	7%
	<b>White</b>	74%	84%	89%	72%	79%	84%
	<b>Other</b>	2%	1%	0%	2%	2%	2%
<b>Marital status</b>	<b>Married</b>	30%	53%	79%	36%	45%	70%
	<b>Widowed</b>	6%	3%	1%	4%	3%	1%
	<b>Divorced</b>	18%	17%	10%	16%	17%	11%
	<b>Separated</b>	8%	4%	2%	5%	4%	1%
	<b>Never married</b>	38%	23%	9%	40%	32%	17%
<b>Family type</b>	<b>Husband and wife</b>	11%	18%	30%	15%	15%	27%
	<b>Husband and wife, plus children</b>	13%	29%	44%	14%	22%	36%
	<b>Single parent</b>	21%	8%	3%	14%	10%	4%
	<b>Single person or other</b>	56%	44%	23%	57%	52%	33%
<b>Education</b>	<b>Less than high school</b>	28%	15%	6%	14%	15%	4%
	<b>High school graduate</b>	33%	34%	27%	28%	28%	17%
	<b>Some college or associate degree</b>	23%	20%	19%	35%	34%	31%
	<b>College degree or greater</b>	16%	30%	50%	23%	23%	47%



	Demographics	1996			2014		
		Lower third	Middle third	Upper third	Lower third	Middle third	Upper third
Home-ownership	Own	34%	57%	81%	45%	47%	75%
	Rent	66%	43%	19%	55%	53%	25%
Occupation	Manager, professional	14%	24%	44%	14%	31%	52%
	Administrative support, including clerical, retail sales, business goods/services sales, technician	31%	28%	23%	30%	27%	22%
	Service industry	25%	12%	7%	35%	22%	12%
	Operator, assembler, laborer	18%	22%	14%	19%	19%	13%
	Precision production, craft, repair	8%	11%	11%	2%	1%	1%

Notes: Data are adjusted for inflation using the Bureau of Economic Analysis' Personal Consumption Expenditure Price Index; population is limited to households in which the respondent or spouse is between the ages of 20 and 60. The latest occupation data shown are for 2013.

Sources: Pew's analysis of Bureau of Labor Statistics Consumer Expenditure Survey Public-Use Microdata, 1996-2014

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## Methodology

This analysis draws primarily from the Bureau of Labor Statistics' Consumer Expenditure Public-Use Microdata (CEPUMD) to show current and historical trends in expenditures for American households. The CEPUMD consists of nonaggregated household-level data, collected by the the Bureau of Labor Statistics (BLS) and the U.S. Census Bureau on a quarterly basis. The CEPUMD is part of BLS' Consumer Expenditure Survey (CE) program, which seeks to provide information on the buying habits of American consumers and collects data on up to 95 percent of household expenditures, income, and demographics. These data are used by the Census Bureau as the source for the Supplemental Poverty Measure and to regularly revise the marketbasket of goods and services used to weight the Consumer Price Index.

The BLS made significant changes to the methodology and variable construction of the CEPUMD in 2004, 2005, 2013, and 2014, which do not affect the long-term trends. However, when comparing year-to-year expenditures, the variance between a year with and without methodological changes may be different than expected.

All dollar amounts have been adjusted for inflation to 2014 using the Bureau of Economic Analysis' Personal Consumption Expenditure (PCE) Price Index. To ensure that results were not driven by the deflator—the method by which inflation was adjusted—Pew conducted the analyses using the Consumer Price Index for All Urban Consumers (CPI-U), Consumer Price Index Research Series Using Current Methods (CPI-U-RS), and the PCE. Although estimates of total expenditures from some years produced statistically significant differences, other years did not. However, in all years, there did not seem to be an economically significant difference. Ultimately, Pew researchers decided to use the PCE deflator.

The population chosen for observation is all households in which the reference person—or, in the case of married households, the spouse—was age 20 to 60 during at least one of the years studied. Additionally, only households that provided sufficient income information to be ranked by the BLS are included in the analysis.

The after-tax income numbers used in Figure 3 were based on calculations of estimated tax liability assuming median household income, using only standard deductions and exemptions listed on Form 1040 from the Internal Revenue Service for the years studied, and using IRS tax tables. Thus, the figure represents the maximum possible income tax liability for a typical family of four during these years; other factors if considered could alter the estimated tax liability.

## Variables

**Household** is a consumer unit comprising all members who are related by blood, marriage, or legal arrangement; a person living alone or sharing quarters with others who are not financially dependent on each other; or two or more people living together who share income to pay for any food, shelter, or other expenses.

**Food** includes all household spending for food consumed at and away from home.

**Housing** includes all expenditures for shelter, utilities (fuel oil, electricity, water, etc.), property taxes, mortgage interest, repairs, maintenance, rent, insurance, and other costs related to occupying a dwelling.

**Rent** includes only monies used to pay for rental of a housing structure.

**Mortgage** includes mortgage principal payments, mortgage interest, and property taxes.

**Transportation** includes all costs related to owning, leasing, renting, and maintaining a vehicle for legal operation, excluding tolls, and spending related to the use of public transportation.

**Health care** includes expenditures for health care, health insurance premiums, medical services, prescriptions, and medical supplies.

**Entertainment** includes fees for admission, electronics purchases (such as TVs, radios, portable audio players, etc.), and spending related to pets, playgrounds, and other forms of entertainment not specified.

**Apparel** includes all clothing items, footwear, and accessories, and the materials to make both, as well as costs related to storage and cleaning.

**Income** is the total money earned by the household before taxes as well as inflows from social benefits, including alimony, child support, Social Security, life insurance, sales of securities, pensions, worker compensation, and other sources during the 12 months before the interview date. Except where otherwise noted, income figures are pretax, post-transfer.

## Endnotes

- 1 Walter Lake (2015), Kiwi & Cassava Version 3 [Computer software], Washington, <https://github.com/Kiwi-den-den/KIWI.git>.
- 2 This chartbook follows the lead of the Bureau of Labor Statistics in referring to consumer units interchangeably as households and families. However, not all consumer units are families. The BLS definition of a consumer unit is: “(1) All members of a particular household who are related by blood, marriage, adoption, or other legal arrangements; (2) a person living alone or sharing a household with others or living as a roomer in a private home or lodging house or in permanent living quarters in a hotel or motel, but who is financially independent; or (3) two or more persons living together who use their incomes to make joint expenditure decisions. Financial independence is determined by spending behavior with regard to the three major expense categories: Housing, food, and other living expenses. To be considered financially independent, the respondent must provide at least two of the three major expenditure categories, either entirely or in part.”
- 3 In 2004, the Consumer Expenditure Survey started to include income data produced using multiple imputations. This change in methodology allowed the BLS to better capture income data when the respondent did not provide or refused to provide information on one or more sources of income. The result of the methodical change is an increase in household income, which may explain in part the steep increase in income and the decrease in the expenditure-to-income ratio. Some caution should be exercised when comparing income values before 2004 with those after 2004. However, other nonrelated data sets, such as the U.S. Census Bureau’s Table H-8, Median Household Income by State: 1984 to 2014, also indicate that median household income increased by 2.3 percent from 2003 to 2004 and by 6.9 percent from 2004 to 2005. Therefore, this analysis assumes that median household income did increase but that the magnitude of that growth indicated in the Consumer Expenditure Survey may reflect a combination of the improved data collection methodology and the actual increase.
- 4 U.S. Census Bureau, “Annual and Quarterly Charts of Rental and Homeowner Vacancy Rates and Homeownership Rates,” accessed Oct. 13, 2015, <http://www.census.gov/housing/hvs/data/charts.html>.

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