

## Trends in Consumer Spending and Personal Saving, 1959–2009

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**R**ISING consumer demand for goods and services has been a key element of U.S. economic growth over the past 50 years. Consumer spending—measured in the national income and product accounts (NIPAs) as personal consumption expenditures (PCE)—accounts for more than two-thirds of domestic demand in the United States, as measured by gross domestic purchases.<sup>1</sup> PCE consists of household expenditures and of the expenses net of sales of nonprofit institutions serving households. Increases in consumer demand have been supported by increases in disposable personal income (DPI)—personal income less personal current taxes.

Real DPI and real PCE each grew by an average annual rate of 3.4 percent from 1959 to 2009, or 2.2 percent on a per capita basis.<sup>2</sup> Over that time, the composition of PCE by expenditure category and by sources of funding has changed significantly, as has the share of PCE for goods that is accounted for by foreign-made products. There have been significant variations in real PCE growth rates by period and in the patterns of change during recessions and recoveries. Personal saving, which equals DPI less personal outlays, has been affected by variations in household net worth, consumer debt, and housing investment.<sup>3</sup>

The trends and developments in PCE over 1959 to

2009 include the following:

- A large increase in the share of PCE accounted for by services, particularly by health care and by financial services and insurance
- A large decrease in the share of PCE accounted for by goods, particularly by food and by clothing and footwear
- A significant decrease in the share of PCE accounted for by out-of-pocket expenditures
- Much higher rates of price change for services than for goods
- Low rates of change in goods prices associated with large increases in the import shares of expenditures for goods
- A significant slowing in the real PCE growth rate over the last decade
- A longer period of decrease and a slower recovery in real PCE during and after the 2007–2009 recession than in any recession since 1960.<sup>4</sup>

The trends and developments in personal saving between 1959 and 2009 include the following:

- A 25-year upward trend in the personal saving rate followed by a 23-year downward trend until increases in the recession years of 2008 and 2009.
- A 39-year period in which households were net lenders to other sectors, followed by a period from 1999 to 2007 in which they were net borrowers and a reversion to net-lender status in the recession years of 2008 and 2009.

The remainder of this article covers changes in PCE shares, long-term PCE growth, changes in the import shares of PCE goods categories, changes in shares of PCE by source of funds, cyclical patterns of change in PCE, and factors affecting the personal saving rate.

1. Gross domestic purchases—a measure of purchases by U.S. residents regardless of where the purchased goods and services were produced—is calculated as the sum of personal consumption expenditures, gross private domestic investment, and government consumption expenditures and gross investment; thus, gross domestic purchases includes imports of goods and services but excludes exports of goods and services.

2. All growth rates cited in this article are average annual percent changes.

3. Personal outlays consists of PCE, personal interest payments, and personal current transfer payments. Personal interest payments consist of non-mortgage interest paid by households. Personal current transfer payments include payments to general government and to rest of the world. Payments to general government primarily consist of donations, fees, and fines that are paid by households and nonprofit institutions serving households (NPISHs). Current transfer payments to the rest of the world primarily consist of cash and in-kind transfers to foreign residents by households and NPISHs.

4. Recession and business cycle dating is done by the National Bureau of Economic Research (NBER). According to NBER, the peak of the business cycle was December 2007, and the trough—the last month of the recession—was June 2009; see “U.S. Business Cycle Expansions and Contractions” (a table); [www.nber.org](http://www.nber.org).

## PCE Shares and Long-Term Growth

The share of current-dollar PCE accounted for by services increased from 45.7 percent in 1959 to 67.7 percent in 2009 (table 1).<sup>5</sup> This large increase in share was

**Table 1. Contributions to Percent Change, Average Annual Growth, and Shares of PCE by Major Type of Product**

Line		1959 to 2009			Share of current-dollar PCE (percent)			
		Contribution to percent change in real PCE (percentage points)	Average annual growth (percent)		1959	2009	Change in share	
			Quantity <sup>1</sup>	Price				Current dollars
1	<b>PCE</b> <sup>1</sup> .....	<b>3.4</b> <sup>1</sup>	<b>3.4</b>	<b>3.6</b>	<b>7.1</b>	<b>100.0</b>	<b>100.0</b>	.....
2	<b>Goods</b> .....	<b>1.46</b>	<b>3.4</b>	<b>2.6</b>	<b>6.0</b>	<b>54.3</b>	<b>32.3</b>	<b>-22.0</b>
3	Durable goods .....	0.71	5.2	1.2	6.5	14.1	10.3	-3.9
4	Motor vehicles and parts ...	0.21	3.5	2.3	5.8	5.9	3.2	-2.7
5	Furnishings and durable household equipment....	0.15	4.1	1.5	5.7	4.9	2.5	-2.4
6	Recreational goods and vehicles .....	0.28	9.8	-1.5	8.1	2.0	3.2	1.2
7	Other durable goods .....	0.07	4.6	2.5	7.3	1.3	1.4	0.1
8	Nondurable goods .....	0.75	2.5	3.3	5.9	40.2	22.0	-18.2
9	Food and beverages purchased for off-premises consumption ...	0.20	1.6	3.6	5.2	19.4	7.8	-11.6
10	Clothing and footwear .....	0.22	3.9	1.3	5.2	8.0	3.2	-4.8
11	Gasoline and other energy goods .....	0.05	1.5	4.6	6.2	4.8	3.0	-1.8
12	Other nondurable goods ...	0.27	3.4	3.6	7.1	8.0	8.0	0.0
13	<b>Services</b> .....	<b>1.94</b>	<b>3.5</b>	<b>4.4</b>	<b>8.0</b>	<b>45.7</b>	<b>67.7</b>	<b>22.0</b>
14	Household consumption expenditures .....	1.81	3.4	4.5	8.0	44.1	65.1	21.0
15	Housing and utilities.....	0.57	3.2	4.0	7.4	16.6	18.8	2.1
16	Health care .....	0.37	3.9	5.7	9.9	4.7	16.2	11.6
17	Transportation services.....	0.10	3.0	4.1	7.3	2.7	2.9	0.2
18	Recreation services .....	0.12	4.6	3.9	8.7	1.9	3.8	1.9
19	Food services and accommodations.....	0.16	2.5	4.4	7.1	6.2	6.0	-0.2
20	Financial services and insurance .....	0.23	3.9	4.6	8.7	3.9	8.1	4.2
21	Other services .....	0.25	3.1	4.3	7.4	8.0	9.3	1.2
22	Final consumption expenditures of nonprofit institutions serving households .....	0.13	6.7	1.4	8.2	1.6	2.6	1.0

1. Percent change in real PCE

overwhelmingly accounted for by much faster growth in services prices. Growth in real PCE was nearly identical, averaging 3.5 percent for services and 3.4 percent for goods. Services prices increased at an average rate of 4.4 percent, nearly 2 percentage points more than the 2.6 percent change in goods prices. Prices for each of the household services expenditure categories increased at a faster rate than prices for total PCE, which averaged 3.6 percent, while prices for all of the PCE goods categories except gasoline and other energy goods increased at a rate less than, or equal to, this average. Consumer services are generally not tradable commodities, and except for foreign travel by U.S. residents, the import share of PCE services is only about 0.1 percent. For goods, price changes for categories in which imports of finished goods have been an increasing share of consumer purchases over time have been

5. All discussion of PCE shares is in current-dollar terms. PCE shares cannot be calculated in chained dollars because estimates of real PCE are not additive.

particularly low; the categories of clothing and footwear and recreational goods and vehicles exemplify this phenomenon. (See the section "Import Shares of PCE Goods.")

Among PCE services categories, the largest increases in shares were for health care services and for financial services and insurance. The share of PCE accounted for by health care services increased from 4.7 percent in 1959 to 16.2 percent in 2009, while the share accounted for by financial services and insurance increased from 3.9 percent in 1959 to 8.1 percent in 2009. Prices for health care services increased by an average of 5.7 percent, and prices for financial services and insurance increased by an average of 4.6 percent. The growth in real PCE for both health care and for financial services and insurance was 3.9 percent, which was higher than the average growth in total real PCE of 3.4 percent, so that current-dollar expenditures growth averaged 9.9 percent for health care and 8.7 percent for financial services and insurance. Together, these categories accounted for more than two-thirds of the increase in the services share of PCE.

The share of PCE accounted for by goods decreased from 54.3 percent in 1959 to 32.3 percent in 2009. The share accounted for by food and beverages decreased 11.6 percentage points, from 19.4 percent to 7.8 percent, and the share accounted for by clothing and footwear decreased 4.8 percentage points, from 8.0 percent to 3.2 percent.<sup>6</sup> Together, these categories accounted for about three-fourths of the decline in the share of PCE accounted for by goods.

**Health care.** The share of PCE accounted for by health care that includes health care commodities, such as prescription drugs and optical goods, and health care services increased from 5.9 percent in 1959 to 19.7 percent in 2009. The increase in the health care services share of PCE was accounted for by outpatient services, which increased from 2.7 percent to 7.7 percent, and by hospital and nursing home services, which increased from 1.9 percent to 8.5 percent. The share of PCE accounted for by health care commodities increased from 1.2 percent to 3.5 percent; almost all of the increase was accounted for by prescription drugs.

Many factors have contributed to the dramatically increased share of PCE accounted for by health care. Some of these factors include the following:

- Large increases in the share of health care expenditures funded by government and by employers
- The aging of the population, requiring increased levels of health care

6. Food expenditures in PCE goods are for food and beverages purchased for off-premise consumption at grocery stores and similar establishments; prepared meals and snacks served at restaurants and similar establishments are included in PCE for services.

- The development of expensive new medical procedures and technologies

In 1959, 72.7 percent of PCE for health care was paid for by direct out-of-pocket expenditures, and by 2009, this share had declined to 17.6 percent.<sup>7</sup> During this period, the share of PCE for health care paid for by government increased from 3.4 percent to 45.4 percent. The most important changes in government funding of PCE health care resulted from the Medicare and Medicaid programs.

Medicare, which began in 1966, provides health care for those 65 years of age and older, certain disabled persons, and those with kidney failure.<sup>8</sup> It includes Hospital Insurance (Part A) and Supplementary Medical Insurance (Part B). Medicare Advantage (Part C) that gives Medicare enrollees the option of receiving their Medicare benefits through private insurance plans was added in 1997, and prescription drug coverage (Part D) through private plans was added in 2006. Contributing to Medicare's growth since 1966 have been rapid enrollment increases, averaging 2.1 percent from 1966 to 2009, more than twice as fast as the 1.0 percent average increase in the U.S. population. Medicare Part A enrollment was 46.2 million in 2009, more than twice the 1966 enrollment of 19.1 million.<sup>9</sup> This reflects a high rate of growth in the population 65 years and older as well as expansion of Medicare coverage in 1973 to include permanently disabled persons and those with kidney failure. The share of the U.S. population aged 65 and over increased from 9.5 percent in 1966 to 12.9 percent in 2009.<sup>10</sup> Especially notable has been the very rapid growth of those 75 years and older, from 3.4 percent in 1966 to 6.1 percent in 2009. The per capita health care spending of this group has been about twice as high, on average, as the 65-to-74-year-old age group.<sup>11</sup> Enrollment of the permanently disabled and those with kidney failure reached 8.1 million in 2009, 17.5 percent of Medicare Part A enrollment, and was nearly 5 times the 1973 enrollment level.

7. Estimates of out-of-pocket spending for PCE health care are not published in the NIPAs. They are estimated as a residual equal to total PCE health care less medical and hospitalization insurance benefits, less private workers' compensation medical benefits, and less government social benefits for medical care.

8. Medicare is designated as "hospital and supplementary medical insurance" in the NIPAs. See line 6 in NIPA "Table 3.12. Government Social Benefits"; [www.bea.gov/national](http://www.bea.gov/national).

9. Centers for Medicare and Medicaid Services, "Medicare: National Enrollment Trends 1966–2009" (a table); [www.cms.gov](http://www.cms.gov).

10. Census Bureau, "Table 1. Annual Estimates of the Resident Population by Sex and Five-Year Age Groups for the United States: April 1, 2000 to July 1, 2009", and "Resident Population Plus Armed Forces Overseas—Estimates by Age, Sex, and Race: July 1, 1966" (a table); [www.census.gov](http://www.census.gov).

11. Ellen Meara, Chapin White, and David M. Cutler, "Trends in Medical Care Spending by Age, 1963–2000," *Health Affairs* 23, no. 4 (July 2004): 176–183.

Medicaid provides health care to those at low income levels, which is determined as a percentage of the federal poverty line. It is a federal-state partnership program in which participating states receive federal grants for those eligible to access a defined set of medical and long-term care benefits. Eligibility has been gradually expanded over time, and enrollment has grown from 15 million in 1969 to 55 million in 2009, an average rate of growth of 3.3 percent, more than triple the rate of population growth over that time.<sup>12</sup> Medicare and Medicaid, which accounted for 8.3 percent of PCE for health care in 1966, accounted for 44.1 percent in 2009.

The share of health care expenditures accounted for by private health insurance and by private workers' compensation also increased, from 23.9 percent in 1959 to 37.0 percent in 2009. The percentage of the population covered by some form of private health insurance declined from 71.1 percent in 1959 to 63.9 percent in 2009.<sup>13</sup> Private health insurance benefits have grown at an average rate of 10.7 percent, accounted for by an average 0.9 percent growth in the number of enrollees and by an average 9.7 percent growth in benefits per enrollee. The rapid growth in benefits per enrollee reflects both the rapid growth in health care costs and a greatly expanded scope of coverage. In 1959, the majority of coverage was for hospitalization and surgical insurance, and only a small percentage of enrollees were insured for primary care or other out-of-hospital care. Since then, health insurance has expanded to include nonhospital care, including primary care physicians' services, dental and other professional medical services, prescription drugs, and other health care goods and services.

The growing importance of third-party payers for health care has meant an increasing gap between health care costs paid directly by consumers and the full cost of the care. The share of PCE for health care paid for by government and private insurance has grown from 27.3 percent in 1959 to 82.4 percent in 2009. This growth has been associated with a greater demand for health care. In contrast to the majority of consumer goods and services in which the prices reflect the full cost to consumers, access to health care is not based solely on ability to pay. Research on the subject suggests that about 13 percent of the growth in per

12. Kaiser Family Foundation, "Medicaid: A Timeline of Key Developments"; [www.kff.org](http://www.kff.org).

13. Census Bureau, *Persons Covered by Private Health Insurance for Hospital and Surgical Benefits*, Series B401 in *Historical Statistics of the United States: Colonial Times to 1970, Part 1*: 82; [www2.census.gov](http://www2.census.gov). Census Bureau, "Table C–1 Health Insurance Coverage: 1987 to 2009, in *Income, Poverty, and Health Insurance Coverage in the United States: 2009* (September 2010): 71; [www.census.gov](http://www.census.gov).

capita health care expenditures adjusted for general price inflation is attributable to the growth in public and private insurance, and an additional 2 percent is attributable to the aging of the population.<sup>14</sup>

There have been many advances in medical technology—improvements in the procedures, equipment, and processes by which health care is delivered. The development and diffusion of such technology is a major factor in explaining the large increases in health care expenditures relative to spending on other consumer goods and services. Examples of advances in surgical procedures include angioplasty, joint replacements, open-heart surgery, and laser eye surgery. Other advances include the treatment of preterm babies using special ventilators, devices to help infant lungs develop, neonatal intensive care, and steroids for mother and/or baby. The development of new medical commodities and equipment includes new drugs and medical devices such as CT scanners and implantable defibrillators. These advances have undoubtedly improved the quality of medical care, but the advances have in general been quite expensive and have contributed significantly to the growth in health care costs. Research on this issue has generally concluded that around half of the growth in per capita inflation-adjusted health expenditures is attributable to advances in medical technology.

### Financial services and insurance

The 4.2 percentage point increase from 1959 to 2009 in the share of PCE accounted for by financial services and insurance was primarily attributable to financial services, which consists of imputed financial services furnished without payment and of financial service charges, fees, and commissions; the remainder of the increase was attributable to health insurance (table 2). The share of PCE accounted for by financial services increased from 1.8 percent in 1959 to 5.1 percent in 2009, and the increase was evenly divided between imputed and direct charges. The increased share of financial services was associated with greatly increased holdings of regulated investment company—also known as mutual fund—assets by households, greatly increased use of credit cards, and large increases in the fees of banks and other depository institutions.

The share of PCE accounted for by financial services furnished without payment increased from 1.1 percent in 1959 to 2.7 percent in 2009. These services include the services furnished without explicit charge by com-

mercial banks, other depository institutions, and regulated investment companies (RICs), with RICs accounting for most of the growth in the share of PCE. The services of RICs are measured by their expenses, largely portfolio management fees. These services grew from less than 0.1 percent of PCE in 1959 to 0.9 percent of PCE in 2009, reflecting the exponential growth of household holdings of mutual fund shares from \$15.8 billion in 1959 to \$5.5 trillion in 2009, a 12.4 percent annual growth rate.<sup>15</sup> In PCE, RIC services to persons in 2009 were \$68.2 billion, or 1.2 percent of the value of household mutual fund holdings.<sup>16</sup>

The share of PCE accounted for by financial service charges, fees, and commissions increased from 0.7 percent in 1959 to 2.3 percent in 2009. These services include bank and other depository institution fees, credit card fees, securities commissions, portfolio management and investment advisory fees, and trust, fiduciary, and custody activities. The growth in these services was primarily accounted for by financial service charges and fees, including credit card and bank fees, and by portfolio management and investment advisory fees.

The growth in credit card fees reflects the tremendous growth in the use of credit cards. Credit card fees include membership fees, late fees, over-limit fees, cash advance fees, application fees, and setup fees. The first plastic charge card was introduced in 1958 by the American Express Company as a travel and entertainment card for which the balance had to be paid in full each month. In 1966, the first general-purpose credit card was introduced by the Bank of America as the BankAmericard, eventually becoming known as the Visa card, and a group of credit-issuing banks joined together to form the InterBank Association and issued

15. Board of Governors of the Federal Reserve System, *Flow of Funds Accounts of the United States (Statistical Release Z.1, table "B.100 Balance Sheet of Households and Nonprofit Organizations" for 2009 and 1959*, [www.federalreserve.gov](http://www.federalreserve.gov). Holdings include those of nonprofit organizations and combine mutual fund shares and money market fund shares.

16. RIC services to pension funds are also included in PCE.

**Table 2. Financial Services and Insurance Shares of PCE**

[Percent of current-dollar PCE]

	1959	2009	Change in share
<b>Financial services and insurance</b> .....	<b>3.9</b>	<b>8.1</b>	<b>4.2</b>
<b>Financial services</b> .....	<b>1.8</b>	<b>5.1</b>	<b>3.3</b>
Financial services furnished without payment .....	1.1	2.7	1.6
Commercial banks and other depository institutions .....	1.1	1.4	0.3
Regulated investment companies .....	*	0.9	0.9
Pension funds .....	*	0.4	0.4
Financial service charges, fees, and commissions .....	0.7	2.3	1.7
Financial service charges and fees .....	0.2	1.0	0.7
Securities commissions .....	0.4	0.4	0.0
Portfolio management, investment advice services, and trust, fiduciary, and custody activities .....	0.1	1.0	1.0
<b>Insurance</b> .....	<b>2.2</b>	<b>3.1</b>	<b>0.9</b>
Medical care and hospitalization insurance .....	0.2	1.4	1.2
Other insurance .....	1.9	1.7	-0.2

\* Less 0.05 percent.

14. General price inflation as measured by the gross domestic product (GDP) price index. Centers for Medicare and Medicaid Services, "Table 6: Research on Causal Factors Accounting for Growth in Real Per Capita Health Care Spending," *Review of Assumptions and Methods of the Medicare Trustees' Financial Projections* (December 2000): 32; [www.cms.gov](http://www.cms.gov).

a general-purpose credit card that became known as MasterCharge and later as MasterCard.<sup>17</sup> Consumer holdings of revolving credit, the type used for credit cards in which the balance does not have to be paid each month, were \$894.0 billion at the end of 2009, compared with \$2.1 billion at the end of 1968, the first year of available data, an average growth rate of 15.9 percent.<sup>18</sup> Credit card fees in 2009 were \$25.1 billion, 2.8 percent of outstanding balances.

The growth in bank and other depository institution service fees reflects the development of new services and higher-than-average price increases in existing services. New services since 1959 have included ATMs and electronic transfers. Overdraft fees have escalated rapidly, nearly doubling from 2000 to 2009 to a level of \$38.5 billion, and these fees now account for more than three-fourths of the charges on deposit accounts.<sup>19</sup>

### Clothing and footwear and food and beverages

**Clothing and footwear.** The share of PCE accounted for by clothing and footwear declined to 3.2 percent in 2009 from 8.0 percent in 1959. The decline was accounted for by slightly higher-than-average real growth of 3.9 percent and by price increases that averaged 1.3 percent, more than 2 percentage points less than the growth in the overall PCE price of 3.6 percent. The low rate of price change was associated with a large increase in the import share of clothing and footwear expenditures.

**Food and beverages.** The share of PCE accounted for by food and beverages purchased for off-premises consumption declined to 7.8 percent in 2009 from 19.4 percent in 1959 (table 1). The large decline was accounted for by average real growth of 1.6 percent, nearly 2 percentage points less than total PCE growth, and by increases in food prices that equaled the overall average of 3.6 percent. This average rate of change of food prices was associated with a relatively small increase in the share of food expenditures accounted for by imports.

From 1959 to 2009, real per capita food consumption grew at an average annual rate of 0.6 percent, compared with a 2.2 percent growth rate for PCE and disposable personal income, which is indicative of the

income-inelasticity of food consumption.<sup>20</sup> As incomes grow, a larger share is spent on personal services and other discretionary items, and the share spent on food declines. The rate of decline in the food share of PCE slowed markedly in the most recent decade from 1999 to 2009, as overall PCE growth slowed and as growth in food expenditures accelerated, with higher growth in both prices and quantities.

### PCE growth by decade

Real PCE growth was highest from 1959 to 1969, averaging 4.4 percent. Growth in each subsequent decade through 1999 was between 3.3 percent and 3.5 percent. From 1999 to 2009, PCE growth slowed significantly, to an average rate of 2.4 percent (table 3). This slower growth was accounted for by slower growth in disposable personal income and by an increase in the personal saving rate from 3.1 percent in 1999 to 5.9 percent in 2009. During this period, growth in all PCE categories except health care services and food and beverages slowed. PCE for motor vehicles and parts and transportation services decreased, accounted for primarily by decreases in expenditures for new motor vehicles, motor vehicle maintenance and repair, and motor vehicle leasing.

20. Real per capita PCE and disposable personal income are from NIPA "Table 7.1 Selected Per Capita Product and Income Series in Current and Chained Dollars." Real per capita food consumption is derived by multiplying the quantity index for food and beverages purchased for off-premises consumption from NIPA "Table 2.4.3 Real Personal Consumption Expenditures by Major Type of Product, Quantity Indexes" by the 2005 current-dollar value of that consumption and dividing by population estimates from Table 7.1; www.bea.gov.

**Table 3. Real PCE Growth by Decades**

[Average annual percent change]

	1959 to 1969	1969 to 1979	1979 to 1989	1989 to 1999	1999 to 2009
<b>PCE</b> .....	<b>4.4</b>	<b>3.5</b>	<b>3.3</b>	<b>3.3</b>	<b>2.4</b>
<b>Goods</b> .....	<b>4.2</b>	<b>3.0</b>	<b>3.1</b>	<b>3.8</b>	<b>2.7</b>
Durable goods .....	6.4	4.8	4.9	5.9	3.8
Motor vehicles and parts .....	6.4	3.8	4.5	3.4	-0.6
Furnishings and durable household equipment .....	4.8	4.3	3.4	4.3	3.8
Recreational goods and vehicles .....	10.1	7.1	8.3	12.9	10.5
Other durable goods .....	6.3	5.9	3.9	4.3	2.8
Nondurable goods .....	3.3	2.2	2.3	2.6	2.0
Food and beverages purchased for off- premises consumption .....	2.5	1.1	1.5	1.3	1.6
Clothing and footwear .....	3.4	4.4	5.0	3.9	2.9
Gasoline and other energy goods .....	3.4	1.7	0.8	1.7	-0.2
Other nondurable goods .....	5.0	3.0	2.6	3.8	2.8
<b>Services</b> .....	<b>4.7</b>	<b>4.0</b>	<b>3.4</b>	<b>3.1</b>	<b>2.2</b>
Household consumption expenditures .....	4.7	4.0	3.1	2.9	2.1
Housing and utilities .....	5.0	4.0	2.6	2.6	1.9
Health care .....	6.2	5.2	2.8	2.2	3.3
Transportation services .....	4.7	3.4	3.3	4.7	-0.9
Recreation services .....	4.8	5.6	6.4	4.5	1.8
Food services and accommodations .....	3.2	3.5	2.6	1.8	1.6
Financial services and insurance .....	4.1	5.1	4.0	4.3	2.1
Other services .....	4.2	2.3	3.4	3.3	2.2
Final consumption expenditures of nonprofit institutions serving households .....	5.3	3.2	11.6	8.8	4.5
<b>Addendum</b>					
Real disposable personal income .....	4.5	3.6	3.1	3.0	2.7

17. Information is from "The History of Credit Cards"; www.credit-cards.com/credit-card-news/credit-cards-history-1264.php.

18. Board of Governors of the Federal Reserve System, "Consumer Credit" (Federal Reserve Statistical Release G.19) for 2009 and for 1968; www.federalreserve.gov.

19. Saskia Scholtes and Francesco Guerrerra, "Banks Make \$38bn From Overdraft Fees," *Financial Times* (August 9, 2009).

## Import Shares of PCE Goods

The import share of PCE goods, measured as import values as a percentage of PCE valued in final retail or “purchasers” prices, increased from 2.6 percent in 1959 to 16.5 percent in 2009 (table 4). The shares of all

**Table 4. Import Shares of PCE by Major Type of Product**

Line		1959	1969	1979	1989	1999	2009	Change in share 1959 to 2009
1	<b>PCE</b> .....	<b>1.9</b>	<b>2.6</b>	<b>4.1</b>	<b>5.3</b>	<b>6.3</b>	<b>6.2</b>	<b>4.3</b>
2	<b>Goods</b> .....	<b>2.6</b>	<b>3.8</b>	<b>7.5</b>	<b>11.0</b>	<b>14.6</b>	<b>16.5</b>	<b>13.9</b>
3	Durable goods.....	3.2	6.1	12.0	16.1	19.7	21.4	18.2
4	Motor vehicles and parts.....	4.0	5.9	12.9	16.8	21.3	20.3	16.3
5	Furnishings and durable household equipment.....	1.0	2.7	5.4	8.8	13.6	19.6	18.6
6	Recreational goods and vehicles.....	5.7	10.2	17.8	20.4	20.8	20.7	15.0
7	Other durable goods.....	4.0	9.2	15.3	21.4	23.4	28.8	24.8
8	Nondurable goods.....	2.4	2.9	5.5	8.3	11.5	14.2	11.8
9	Food and beverages purchased for off- premises consumption.....	2.4	2.7	4.1	3.5	4.5	6.1	3.7
10	Clothing and footwear.....	3.8	5.1	11.5	21.1	28.0	31.9	28.1
11	Gasoline and other energy goods.....	0.4	0.4	3.0	1.9	2.0	4.1	3.7
12	Other nondurable goods.....	2.0	2.4	5.0	8.3	12.5	18.6	16.6
13	<b>Services</b> .....	<b>1.2</b>	<b>1.3</b>	<b>1.2</b>	<b>1.5</b>	<b>1.7</b>	<b>1.3</b>	<b>0.1</b>
14	Household consumption expenditures....	1.2	1.3	1.3	1.6	1.7	1.3	0.1
15	Housing and utilities.....	0.1	0.1	0.1	0.0	0.1	0.1	0.0
16	Health care.....	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	Transportation services.....	0.5	0.0	0.0	0.0	0.2	0.5	0.0
18	Recreation services.....	0.4	0.1	0.1	0.1	0.1	0.4	0.0
19	Food services and accommodations..	0.0	0.0	0.1	0.0	0.1	0.0	0.0
20	Financial services and insurance.....	0.0	0.1	0.1	0.7	0.1	0.0	0.0
21	Other services.....	6.3	7.4	8.6	11.4	11.9	8.8	2.5
22	Final consumption expenditures of nonprofit institutions serving households.....	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: Import value as a percentage of retail PCE value

the major categories of PCE goods except food and beverages and gasoline and other energy goods increased by at least 15 percentage points.<sup>21</sup>

The largest increase in import share was for clothing and footwear, which increased by 28.1 percentage points from 1959 to 2009. This large increase in the import share of PCE for clothing and footwear was associated with a very low rate of increase in prices for clothing and footwear, which grew by an average rate of 1.3 percent, more than 2 percentage points less than the change in overall PCE prices. In 2009, imported clothing and footwear measured at import value accounted for 31.9 percent of PCE for clothing and footwear measured in purchasers’ prices, compared with 3.8 percent in 1959.<sup>22</sup> When imported clothing and footwear are measured including margins—transportation costs, wholesale and retail margins, and sales

21. Imports in PCE are measured using finished goods only. The import share of gasoline and other energy goods increased from 0.4 percent in 1959 to 4.1 percent in 2009. Although the import share of crude oil increased by a large amount over this period, this is an “intermediate” good rather than a “final” good and is not included in the calculation of import shares in PCE.

22. Imports in PCE are not published in the NIPAs. They are estimated using the import share of the supply of the commodity from domestic production and imports available for domestic sale applied to PCE, calculated using producers’ values (domestic manufacturers’ values and import values exclusive of trade and transportation margins and sales taxes), based on benchmark input-output estimates, with interpolation and extrapolation using detailed import data.

taxes—the share of total PCE accounted for by imports was more than 70 percent in 2009.<sup>23</sup>

Other categories with large increases in shares were motor vehicles and parts, furniture and durable household equipment, recreational goods and vehicles, “other” durable goods, and “other” nondurable goods. Except for “other” nondurable goods, each of these categories had percentage increases in real PCE over the period that were higher than total real PCE, and rates of price change that were at least 1.1 percentage points less than the change in the overall PCE price.<sup>24</sup>

The import share of motor vehicles and parts increased from 4.0 percent in 1959 to 20.3 percent in 2009; the largest import share in 2009 was accounted for by new motor vehicles.<sup>25</sup> The import share of furnishings and durable household equipment increased from 1.0 percent in 1959 to 19.6 percent in 2009. Within furnishings and durable household equipment, the largest import share in 2009 was accounted for by household appliances.

The import share of recreational goods and vehicles, which consists primarily of consumer electronics, increased from 5.7 percent in 1959 to 20.7 percent in 2009. Prices for recreational goods and vehicles have decreased by an average of 1.5 percent, while increases in real expenditures have averaged 9.8 percent. Within recreational goods and vehicles, the largest import shares in 2009 were accounted for by video and audio goods, photographic equipment, and information processing equipment and media.

The import share of “other” durable goods increased from 4.0 percent in 1959 to 28.8 percent in 2009; in 2009, the largest import shares were accounted for by jewelry and watches, luggage and similar personal items, and telephone and facsimile equipment. The import share of “other” nondurable goods increased from 2.0 percent in 1959 to 18.6 percent in 2009; the largest share in 2009 was accounted for by games, toys, and hobbies.

Unlike clothing and footwear and other PCE goods categories, the share of PCE food and beverages accounted for by imports increased only modestly, to 6.1 percent in 2009 from 2.4 percent in 1959. The perishable nature and finite shelf lives of many foods help account for this modest increase in the import share. In contrast, clothing and footwear, which are “dry goods”, are not subject to spoilage, nor are the commodities in

23. The retail values of imported clothing and footwear in PCE are not published in the NIPAs. They are estimated by applying the margin rates (the ratios of purchasers’ to producers’ values) from the 2002 input-output estimates for clothing and footwear to the corresponding import values.

24. “Other” nondurable goods had quantity and price increases that were equal to overall PCE.

25. This includes imports from Canada and Mexico, though in the presentation of the motor vehicle estimates these are classified as “domestic” sales.

the other PCE goods categories with large increases in import shares.

### PCE by Source of Funds

PCE includes direct expenditures by households for goods and services, expenditures funded through government and employers, imputed expenditures for financial services and insurance and for owner-occupied housing, life insurance and pension fund expenses, and the expenditures (net of sales to households) of nonprofit institutions serving households (NPISHs).<sup>26</sup> The share of PCE accounted for by direct household expenditures decreased from 92.8 percent in 1959 to 70.3 percent in 2009 (chart 1). The share of PCE funded through government and employers and by imputed expenditures increased from 4.7 percent in 1959 to 25.9 percent in 2009, while the shares accounted for by life insurance and pensions and by NPISHs changed little between 1959 and 2009.

Expenditures funded through government increased from 0.2 percent of PCE in 1959 to 9.7 percent in 2009. These expenditures are noncash government social benefits in which the benefits have to be used for a specified purpose and for which households do not receive cash income to pay for the benefits. These non-cash benefits are primarily for health care, but they also fund food, education, and other household expenditures.

Total health care social benefits were \$887.1 billion in 2009, or 8.9 percent of total PCE, compared with 0.2 percent in 1959. Health care social benefits accounted for 45.4 percent of PCE for health care in 2009, compared with 3.4 percent in 1959.<sup>27</sup> The largest sources of health care social benefits are expenditures under the Medicare and Medicaid programs. Medicare accounted for \$500.3 billion in expenditures in 2009, or 5.0 percent of total PCE. Medicaid accounted for \$369.3 billion in expenditures in 2009, or 3.7 percent of total PCE.

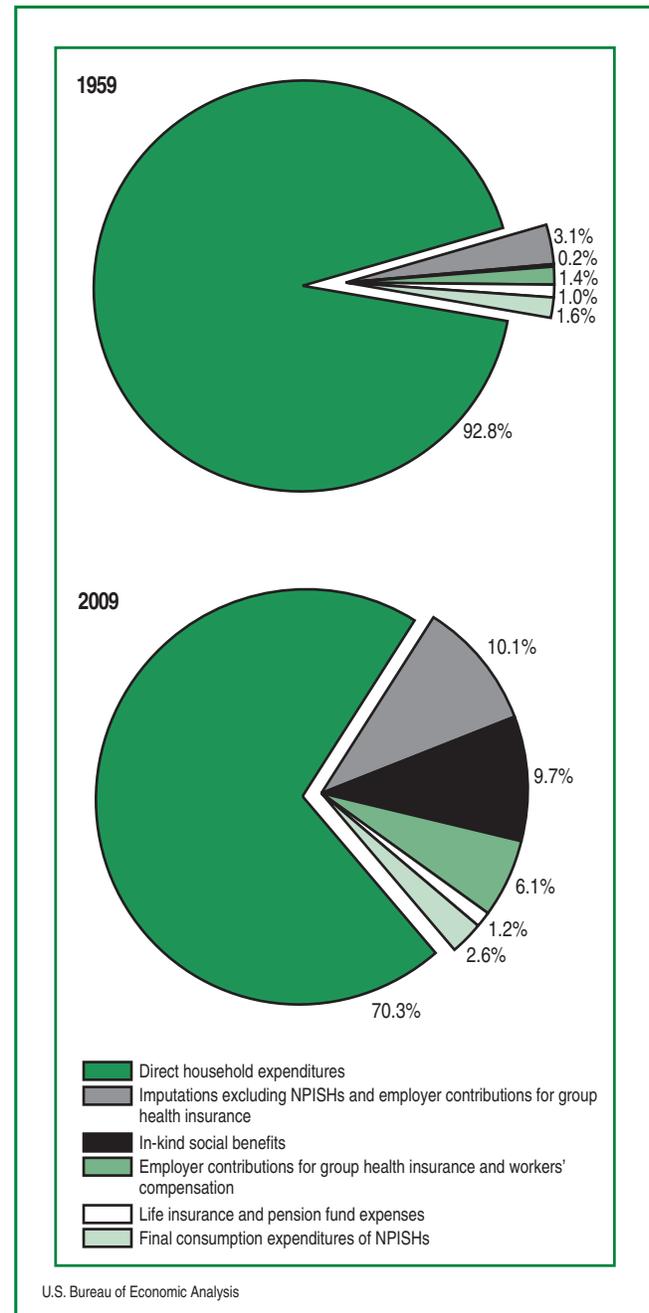
The largest in-kind social benefit other than health care is the federal Supplemental Nutrition Assistance Program (SNAP), which funds food purchases.<sup>28</sup> The program, which started in 1961, accounted for \$54.6 billion in social benefits in 2009, or 0.5 percent of total PCE and 8.2 percent of PCE for food and nonalcoholic beverages purchased for off-premises consumption.

26. PCE also includes small imputations for employment-related in-kind goods and services and for food produced and consumed on farms.

27. The actual share may be slightly lower because a small amount of these benefits fund social assistance expenditures in PCE. See Micah B. Hartman, Robert J. Kornfeld, and Aaron C. Catlin, "A Reconciliation of Health Care Expenditures in the National Health Expenditures Accounts and in Gross Domestic Product," SURVEY OF CURRENT BUSINESS 90 (September 2010): 42–52; [www.bea.gov](http://www.bea.gov).

28. Before October 2008, the program funding food-related benefits was known as Food Stamps.

**Chart 1. Shares of Personal Consumption Expenditures by Source of Funds**



Social benefits under SNAP increased 76.7 percent between 2007 and 2009, as the number of participants increased 8.8 million to 35.3 million.<sup>29</sup> The large increase in the number of unemployed during that period, from 7.1 million in 2007 to 14.3 million in 2009, contributed significantly to the increase in the number of recipients.<sup>30</sup>

29. Average monthly participants are from the U.S. Department of Agriculture "SNAP Monthly Data"; [www.fns.usda.gov](http://www.fns.usda.gov). Since 2009, the number of food stamp recipients has continued to increase, to 44.6 million in March 2011, 14.3 percent of the U.S. population.

30. The annual average number of unemployed persons is from the Bureau of Labor Statistics; [www.bls.gov](http://www.bls.gov).

Employer contributions for group health insurance, which are imputed to PCE, were \$558.9 billion in 2009, or 5.6 percent of total PCE, compared with 1.0 percent in 1959.<sup>31</sup> Benefits paid under this insurance are included in PCE for health care, and premiums net of benefits are included in PCE for insurance. Although the expansion of employer coverage accounted for most of the growth from 1960 through the mid-1980s, changes in employer contributions over the past 25 years have been primarily driven by changes in health insurance premium rates, because the percentage of workers receiving health insurance through their employers has actually decreased. Benefits paid under private health insurance in PCE, including employee-paid and individually purchased insurance, were \$706.6 billion in 2009, 35.8 percent of PCE for health care, compared with 22.1 percent in 1959. Private workers' compensation benefits for medical care were \$23.6 billion in 2009, 1.2 percent of PCE for health. Together, health care social benefits and private insurance benefits accounted for 82.4 percent of PCE for health care in 2009, compared with 27.3 percent in 1959.

The share of PCE accounted for by imputations for owner-occupied housing, financial and insurance services, food produced and consumed on farms, and employer provision of food, clothing, and lodging increased from 3.1 percent in 1959 to 10.1 percent in 2009. The share of imputations for owner-occupied housing in PCE was 1.2 percent in 1959 and 7.5 percent in 2009, and the share varied significantly over that period, ranging from a low of 0.7 percent in 1978 to its high in 2009. Imputed expenditures for owner-occupied housing in PCE are estimated as the imputed rental value of owner-occupied housing less intermediate expenses for repair and maintenance and investment in owner-occupied residential structures.<sup>32</sup>

Both the rental value of owner-occupied housing and intermediate expenses have grown at relatively stable rates over time, and most of the variation in imputed expenditures for owner-occupied housing has been accounted for by changes in owner-occupied investment. Generally, the share of PCE accounted for by

the imputation for owner-occupied housing decreased during expansions, as owner-occupied housing investment increased, and the share increased during recessions. The share ranged from 0.7 percent and 5.1 percent between 1959 and 2001. It reached a level of 4.3 percent in the recession year of 2001, before falling sharply between 2001 and 2005, as large increases in owner-occupied investment resulted in a reduction in the imputed expenditures share to 2.0 percent. A 57.3 percent decrease in owner-occupied investment between 2005 and 2009 pushed the owner-occupied housing imputation share to its record high in 2009.

### Cyclical Patterns of Change in Real PCE

In the each of the eight recessions since 1960, percent changes in real PCE have been more moderate than changes in gross domestic purchases. Real PCE has decreased less than gross domestic purchases in five of those recessions, and it actually increased in the other three recessions. PCE for services has been the most important factor in explaining these relative patterns; PCE for services increased in six of the recessions and decreased less than 0.5 percent in the other two recessions. In contrast, PCE for durable goods decreased in all but two of the recessions, and PCE for nondurable goods decreased in four of the recessions. In the three recessions since 1990, the rate of change in PCE for services has been significantly smaller than in the five recessions from 1960 to 1982. In the three most recent recessions, PCE for services growth has averaged 0.2 percent, compared with an average of 2.5 percent in the earlier recessions.

The decline in real PCE during the 2007–2009 recession continued for 16 months, a longer period than in any of the previous recessions back to 1960, and the 2.6 percent decrease in real PCE was larger than in all but one of those recessions (chart 2). The subsequent recovery in PCE relative to its previous peak has been slower than during any of the previous recoveries back to 1960. Real PCE in the 2007–2009 recession did not surpass its previous peak until October 2010, 34 months after the start of the recession, and on a per capita basis, the previous peak still had not been surpassed as of April 2011, 40 months after the start of the recession. In contrast, during each of the previous recessions back to 1960, real PCE either increased during the recession or surpassed its previous peak within 18 months of the start of the recession.

### Factors Affecting the Personal Saving Rate

The personal saving rate, personal saving as a percentage of disposable personal income (DPI), changed by

31. Imputations in PCE are in NIPA "Table 7.12 Imputations in the National Income and Product Accounts"; www.bea.gov. Employers also pay life insurance premiums for employees, but these are not considered here, because PCE for life insurance is not measured by premiums. Employer contributions for private workers' compensation, whose premiums are entirely paid by employers, account for about 0.5 percent of total PCE.

32. Investment in owner-occupied structures includes owner-occupant purchases of new single-family dwellings, including manufactured homes, expenditures on improvements, and payments of brokers' commissions on the sale of new and existing dwellings, less sales of dwellings to government. Mortgage interest and property taxes paid are also included as owner-occupant expenses and are subtracted from the PCE rental value of owner-occupied housing in determining the rental income from owner-occupied housing, which is part of personal income.

as much as 2 percentage points each year between 1959 and 2009, but there have been two clear trends (chart 3). From 1959 to 1982, the personal saving rate trended upward, and from 1982 to 2007, it trended steeply downward. From a rate of 7.5 percent in 1959, the personal saving rate trended upward until reaching a peak of 10.9 percent in 1982. After 1982, the saving rate trended down, reaching a low of 1.4 percent in 2005, and it then remained at around 2 percent through 2007. In 2008 and 2009, during the most recent recession, the personal saving rate increased about 2 percentage points each year, reaching 5.9 percent in 2009.

Changes in the saving rate are inversely related to changes in household net worth as a percentage of DPI.<sup>33</sup> Capital gains and losses from household holdings of real estate and financial assets affect the level of household net worth, but are not part of personal income or personal saving in the NIPAs. The ratio of household net worth to DPI typically rises during periods in which household real estate and financial assets are appreciating in value, and falls when these assets are losing value. As household assets appreciate, incentives to save from current income are lessened, while incentives to save are increased during periods of falling asset values. From 1959 to 1982, the personal saving rate increased 3.4 percentage points, and household net worth as a percentage of DPI fell 12.3 percent, from 500.8 percent in 1959 to 439.0 percent in 1982. From 1982 to 2007, household net worth as a percentage of DPI increased 41.9 percent to 623.0 percent in 2007, as the personal saving rate decreased from 10.9 percent to 2.1 percent. From 2007 to 2009, the ratio of household net worth to DPI decreased 25.1

percent to 466.6 percent in 2009, as the personal saving rate increased from 2.1 percent to 5.9 percent.

In 2008 and 2009, the ratio of household net worth to DPI returned to a range that prevailed in 1959–69 when the personal saving rate ranged from 7.2 percent to 9.4 percent; however, the personal saving rate may not return to that range because of the increasing importance of third-party expenditures and imputed expenditures. Expenditures funded through government and employers, imputed expenditures for services furnished without payment by banks and other depository institutions, expenditures for the services of regulated investment companies, and premium supplements for property and casualty insurance all have matching counterparts in personal income.<sup>34</sup> Because these incomes are not subject to tax, changes in the corresponding expenditures change DPI and PCE by the same amount. The level of personal saving is not affected, but the personal saving rate is raised if these in-kind transfer payments and employer insurance contributions are excluded, and it is lowered if these incomes are included.

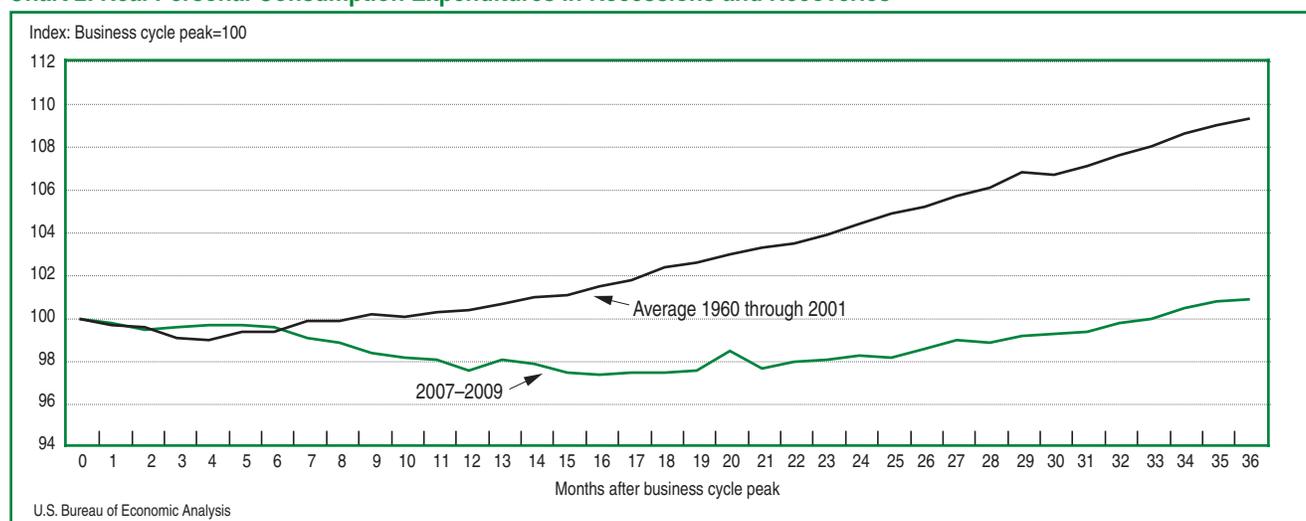
### Housing investment and household net lending and net borrowing

Personal saving from owner-occupied housing is the difference between gross investment in owner-occupied housing (including margins on owner-built housing) and the depreciation at current cost (consumption of fixed capital) of owner-occupied

34. Employer contributions for health insurance and for workers' compensation are included in supplements to wages and salaries, part of employee compensation in personal income. Noncash government social benefits are part of personal current transfer receipts in personal income. For the imputed expenditures, there is corresponding imputed interest income, which is part of personal interest income in personal income. Premium supplements are equal to property and casualty insurance companies' expected earnings on technical reserves.

33. Federal Reserve Table B.100. Net worth also includes nonprofit organizations.

**Chart 2. Real Personal Consumption Expenditures in Recessions and Recoveries**



housing.<sup>35</sup> Personal saving from owner-occupied housing has varied widely over time, ranging from 1.7 percent of DPI in 1982 to 5.4 percent in 2005. Like PCE imputations for owner-occupied housing, the variations are largely associated with cyclical changes in gross investment. Personal saving from owner-occupied housing increased from 3.6 percent of DPI in 2001 to 5.4 percent of DPI in 2005 as gross investment increased 68.1 percent from 2001 to 2005. As a result of a 57.3 percent decrease in gross investment in owner-occupied housing in 2005–2009, personal saving from owner-occupied housing decreased, reaching 0.8 percent of DPI in 2009, the lowest recorded in 1959–2009.

The difference between total personal saving and personal saving from owner-occupied housing equals net lending or net borrowing by households from other sectors, as shown in the integrated macroeco-

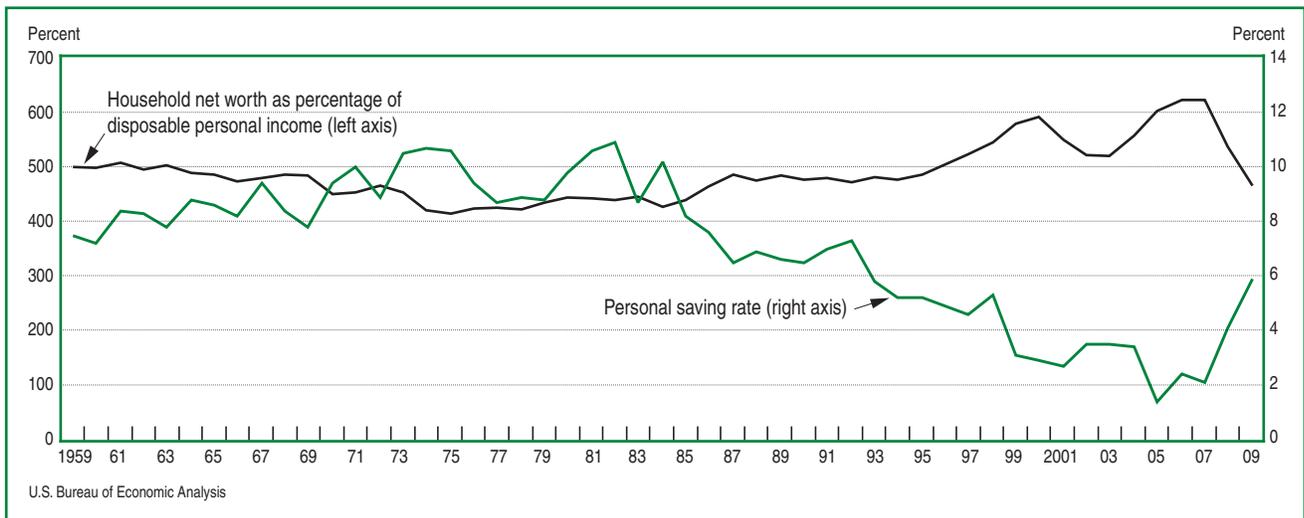
nommic accounts of the United States.<sup>36</sup> Households were net lenders to other sectors from 1960 to 1998, but beginning in 1999, they became net borrowers, with net borrowing reaching a peak of \$372.0 billion in 2005 (chart 4). They remained net borrowers through 2007. In 2008, households again became net lenders, and in 2009, net lending reached \$555.5 billion, as net saving in the integrated macroeconomic accounts rose to \$666.3 billion and as net capital formation decreased to \$110.8 billion, compared with the peak of \$526.7 billion in 2005.<sup>37</sup>

36. These accounts include some minor adjustments for capital transfers and acquisition (disposition) of nonfinancial assets and include structures owned by nonprofit institutions serving households. See “Table S.3.a Households and Nonprofit Institutions Serving Households”; www.bea.gov.

37. Net saving excludes capital transfers. Net saving in the integrated macroeconomic accounts differs by small amounts from personal saving in the NIPAs.

35. See NIPA table 7.12.

**Chart 3. Personal Saving Rate and Household Net Worth as Percentage of Disposable Personal Income**



**Chart 4. Household Net Lending or Net Borrowing**

