

# Changes in the Use of Electronic Means of Payment: 1995-2001

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his article updates the tables published in the Third Quarter 2001 *Business Review*. These tables were first published as part of an article in the March/April 2000 *Business Review* that presented data from the Federal Reserve's Survey of Consumer Finances. Loretta Mester, author of the original article, has compiled information from the 2001 survey to keep our readers up-to-date.


In "The Changing Nature of the Payments System: Should New Players Mean New Rules?" (*Business Review*, Federal Reserve Bank of Philadelphia, March/April 2000), I presented some data from the 1995 Federal Reserve Survey of Consumer Finances on the use of electronic banking. I updated these data in the *Business Review*, Third Quarter 2001, using the 1998 Federal Reserve Survey of Consumer Finances. This survey of more than 4000 households, which is designed to be representative of all households in the U.S., is redone every three years. The following exhibits update the statistics indicating how the use of various means of electronic payment have changed between 1995, 1998, and 2001.

As seen in Exhibit 1, use of electronic forms of payment, including ATMs, debit cards, automatic bill paying, and smart cards, has risen from about 77 percent of households in

1995 to over 88 percent of households in 2001. Debit card use, which doubled between 1995 and 1998, continued to increase rapidly and now stands at almost half of all households. Increases were seen in all categories by age, income, and education. Use of direct deposit and automatic bill paying also showed increases, with the percentage of households now using automatic bill paying nearly double what it was in 1995. Seventy percent of households have an ATM card, but smart card usage is low (less than 5 percent of households have a smart card that they can use for purchases). Responding to a new question in the 2001 Survey of Consumer Finances, 18 percent of households said they used some type of computer software to manage their money.

As seen in Exhibit 2, households that do business with at least one financial institution have continued to shift from paper-based methods of

conducting this business to automated methods. Though a sizable fraction of households, slightly under 75 percent, still report that one of the main ways they deal with at least one of their financial institutions is in person, this percentage continued to fall in 2001. Overall use of electronic means of doing business, either ATM, phone, fax, direct deposit and payment, other electronic transfer, and/or computer, increased between 1998 and 2001, but not as sharply as the sizable increase seen between 1995 and 1998. In 2001, nearly 85 percent of households used an electronic method as one of their main ways of conducting business, and differences by income and education have become less pronounced. There remains, however, a large difference in the popularity of ATMs across age groups: over 70 percent of those under 30 years old use ATMs as one of their main ways of conducting business, while less than 30 percent of those over 60 years old use them.

A sizable increase was seen in the percentage of households that use a computer, the Internet, or an online service to do business, yet it remains below 15 percent of all households. Youth, high income, and a college degree continue to be associated with a higher incidence of computer banking, but the computer remains a less popular means of doing business with financial institutions compared with other methods. 

# EXHIBIT 1

## Percent of U.S. Households That Use Each Instrument: 1995, 1998, and 2001<sup>a</sup>

	Soft-ware <sup>b</sup>	ATM <sup>c</sup>			Debit Card			Direct Deposit			Automatic Bill Paying			Smart Card <sup>e</sup>			Any of These		
		2001	1995	1998	2001	1995	1998	2001	1995	1998	2001	1995	1998	2001	1995	1998	2001	1995	1998
All Households	18.0%	61.2%	67.2%	69.8%	17.6%	33.8%	47.0%	46.8%	60.5%	67.3%	21.8%	36.0%	40.3%	1.2%	1.9%	2.9%	76.5%	85.5%	88.4%
By Age: Under 30 years old	17.0%	71.1%	75.6%	78.1%	24.5%	45.0%	60.6%	31.1%	45.2%	48.8%	17.9%	30.5%	32.1%	1.8%	2.6%	2.6%	75.2%	80.2%	83.0%
Between 30 & 60 years old	22.0%	67.2%	75.9%	76.8%	19.7%	38.6%	53.4%	42.9%	58.0%	64.8%	24.5%	38.6%	44.1%	1.5%	2.3%	3.3%	77.4%	87.4%	89.3%
Over 60 years old	9.0%	43.1%	41.6%	48.9%	9.6%	16.0%	24.6%	63.2%	74.8%	83.2%	18.2%	33.0%	35.9%	0.3%	0.5%	2.1%	75.2%	83.7%	89.2%
By Income <sup>d</sup> : Low income	6.1%	36.0%	45.7%	46.8%	7.1%	19.7%	29.2%	32.7%	44.3%	51.9%	9.8%	17.1%	18.2%	0.8%	1.5%	1.9%	54.5%	69.1%	73.6%
Moderate income	10.7%	60.1%	64.1%	67.4%	16.0%	31.6%	46.3%	43.1%	58.8%	63.1%	17.7%	30.5%	35.1%	0.6%	3.1%	3.0%	77.0%	87.2%	88.5%
Middle income	16.3%	69.4%	71.9%	75.2%	20.3%	36.6%	50.0%	48.3%	66.1%	65.7%	23.4%	42.8%	45.1%	1.3%	2.0%	2.4%	83.6%	89.4%	92.3%
Upper income	29.9%	76.6%	82.1%	83.7%	25.0%	43.8%	57.8%	58.3%	70.4%	80.2%	32.0%	49.3%	55.2%	1.8%	1.7%	3.7%	89.1%	94.8%	96.5%
By Education: No college degree	10.9%	52.8%	59.9%	63.7%	14.3%	29.2%	42.3%	40.4%	54.4%	61.8%	18.2%	30.2%	33.7%	0.8%	1.8%	2.4%	69.8%	80.7%	84.7%
College degree	31.8%	80.1%	81.9%	81.6%	25.2%	43.1%	56.2%	61.0%	72.6%	78.0%	30.1%	47.7%	53.2%	2.1%	2.0%	3.8%	91.5%	95.1%	95.6%

<sup>a</sup>The percentages reported are based on the population-weighted figures. (For further discussion see the Survey of Consumer Finances codebooks at [www.federalreserve.gov/pubs/oss/oss2/scfindex.html](http://www.federalreserve.gov/pubs/oss/oss2/scfindex.html).)

<sup>b</sup>The question on software asked whether the respondent or spouse/partner uses any type of computer software to help in managing their money.

<sup>c</sup>The questions on ATMs and smart cards asked whether any member of the household had an ATM card or a smart card, not whether the member used it. The other questions asked about usage.

<sup>d</sup>Low income is defined as less than 50 percent of the median household income; moderate income is 50 to 80 percent of the median; middle income is 80 to 120 percent of the median; and upper income is greater than 120 percent of the median. Median income was \$32,264 in 1994, the year to which the 1995 survey questions refer. So for the 1995 survey, low income is less than \$16,132; moderate income is \$16,132 to \$25,811; middle income is \$25,811 to \$38,717; and upper income is over \$38,717. Median income was \$37,005 in 1997, the year to which the 1998 survey questions refer. So for the 1998 survey, low income is less than \$18,503; moderate income is \$18,503 to \$29,604; middle income is \$29,604 to \$44,406; and upper income is over \$44,406. Median income was \$41,990 in 2000, the year to which the 2001 survey questions refer. So for the 2001 survey, low income is less than \$20,995; moderate income is \$20,995 to \$33,592; middle income is \$33,592 to \$50,388; and upper income is over \$50,388.

Source: 1995, 1998, and 2001 Survey of Consumer Finances, Federal Reserve System, and author's calculations.

## EXHIBIT 2

### Percent of U.S. Households with at Least One Financial Institution Using Each Method Among the Main Ways of Conducting Business with at Least One of Their Financial Institutions<sup>a</sup>

	In Person		Mail		ATM		Phone		Computer		Electronic <sup>b</sup>				
	1995	1998	2001	1995	1998	2001	1995	1998 <sup>c</sup>	2001	1995	1998	2001			
All Households	85.4%	76.3%	74.2%	56.5%	34.0%	31.6%	33.8%	25.7%	39.1%	38.5%	4.0%	14.2%	49.7%	78.2%	84.1%
By Age: Under 30 years old	76.9%	69.1%	67.8%	57.8%	32.2%	31.9%	53.0%	20.8%	39.4%	40.7%	5.2%	19.9%	62.3%	78.7%	83.8%
Between 30 and 60 years old	86.7%	78.6%	75.9%	62.0%	37.6%	35.4%	37.8%	28.1%	43.6%	41.9%	4.6%	17.3%	53.8%	81.6%	86.5%
Over 60 years old	86.6%	74.5%	73.5%	44.0%	25.9%	22.4%	16.2%	23.0%	28.2%	29.4%	1.2%	0.6%	35.0%	69.6%	78.5%
By Income <sup>d</sup> : Low income	81.2%	65.1%	65.5%	32.6%	20.3%	15.3%	19.6%	13.4%	23.4%	24.3%	1.3%	4.2%	29.8%	61.9%	71.6%
Moderate income	85.8%	77.2%	73.8%	48.6%	28.0%	25.1%	29.8%	18.7%	33.7%	34.6%	1.9%	2.3%	41.1%	76.7%	81.3%
Middle income	85.6%	79.2%	75.7%	56.8%	33.2%	37.4%	37.8%	22.8%	43.6%	40.9%	4.0%	2.9%	53.3%	81.1%	86.1%
Upper income	87.6%	81.6%	78.5%	74.3%	45.5%	40.9%	42.3%	37.8%	49.3%	47.0%	5.9%	22.5%	63.9%	87.7%	91.3%
By Education: No college degree	85.7%	76.0%	72.3%	49.4%	29.7%	26.4%	27.5%	19.7%	34.4%	34.3%	2.8%	8.9%	41.3%	73.1%	80.7%
College degree	84.6%	76.9%	77.8%	71.0%	42.0%	40.9%	46.8%	38.1%	48.0%	46.1%	5.6%	23.8%	66.9%	87.8%	90.1%

<sup>a</sup>Referring to each financial institution with which the household does business, the survey asked: How do you mainly do business with this institution? Respondents could list multiple methods, with the main method listed first. This table reports all the methods a respondent listed for each of the household's financial institutions. The percentages reported are based on the population-weighted figures. Note, the percentages do not add up to 100 percent across columns, since households could list more than one method and more than one financial institution.

<sup>b</sup>In 1995, electronic refers to ATM, phone, payroll deduction and direct deposit, electronic transfer, or computer. In 1998 and 2001, electronic refers to ATM, phone (via voice or touchtone), direct deposit, direct withdrawal/payment, other electronic transfer, computer/Internet/online service, or fax machine.

<sup>c</sup>The 1998 phone statistics have been revised since their original publication in the *Business Review*, Third Quarter 2001.

<sup>d</sup>Low income is defined as less than 50 percent of the median household income; moderate income is 50 to 80 percent of the median; middle income is 80 to 120 percent of the median; and upper income is greater than 120 percent of the median. Median income was \$32,264 in 1994, the year to which the 1995 survey questions refer. So for the 1995 survey, low income is less than \$16,132; moderate income is \$16,132 to \$25,811; middle income is \$25,811 to \$38,717; and upper income is over \$38,717. Median income was \$37,005 in 1997, the year to which the 1998 survey questions refer. So for the 1998 survey, low income is less than \$18,503; moderate income is \$18,503 to \$29,604; middle income is \$29,604 to \$44,406; and upper income is over \$44,406. Median income was \$41,990 in 2000, the year to which the 2001 survey questions refer. So for the 2001 survey, low income is less than \$20,995; moderate income is \$20,995 to \$33,592; middle income is \$33,592 to \$50,388; and upper income is over \$50,388.

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