Changes in the Use of Electronic Means of Payment: 1995-2004

Loretta J. Mester

April 14, 2006

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. This survey of more than 4,000 households, which is designed to be representative of all households in the U.S., is redone every three years. Attached are updates of the statistics indicating how the usages of various means of electronic payment have changed between 1995 and 2004.

As seen in Exhibit 1, usage of electronic forms of payment, including ATMs, debit cards, automatic bill paying, and smart cards, has risen from about 78 percent of households in 1995 to about 90 percent of households in 2004. Debit card use, which doubled between 1995 and 1998, continued to increase rapidly and now stands at nearly 60 percent of all households. Increases were seen in all categories by age, income, and education. Use of direct deposit and automatic bill paying showed somewhat smaller increases, with the percentage of households now using automatic bill paying over double what it was in 1995. Nearly 75 percent of households have an ATM card. The question on smart cards was dropped from the survey in 2004; usage remained low in 2001, with less than 3 percent of households having a smart card they could use for purchases. There was a small increase in the percentage of households that use some type of computer software to manage their money: from 18 percent in 2001 (the first year this question was asked) to about 19 percent in 2004. Respondents under 60 years old, those with higher income, and those with college degrees are more likely to use a computer for money management.

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. A sizable fraction of households, over 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 held steady between 2001 and 2004 but is down from 1995. Overall use of electronic means of doing business – either ATM, phone, fax, direct deposit and payment, other electronic transfer, and/or computer – continued to increase between 2001 and 2004, but not as sharply as the sizable rise seen between 1995 and 1998. In 2004, 89 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 79 percent of those under 30 years old use ATMs as one of their main ways of conducting business, while less than 40 percent of those over 60 years old use them. Still, the usage by those over 60 has more than doubled since 1995.

The largest increase was seen in the percentage of households that use a computer, the Internet, or an online service to do business. In 2004, over 33 percent of households used these methods, up from less than 4 percent in 1995. 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, Part 1
Percent of U.S. Households That Use Each Instrument: 1995, 1998, 2001, and 2004[a]

	ATM[b]				Debit Card				Smart Card[b]		
	1995	1998	2001	2004	1995	1998	2001	2004	1995	1998	2001
All Households	62.5%	67.4%	69.8%	74.4%	17.6%	33.8%	47.0%	59.3%	1.2%	1.9%	2.9%
By Age:											
Under 30 years old	72.3%	75.6%	78.1%	83.0%	24.4%	45.0%	60.6%	74.4%	1.8%	2.6%	2.6%
Between 30 and 60 years old	68.6%	76.1%	76.8%	82.3%	19.7%	38.6%	53.4%	67.6%	1.5%	2.3%	3.3%
Over 60 years old	44.2%	41.9%	48.9%	51.6%	9.6%	16.0%	24.6%	32.5%	0.3%	0.5%	2.1%
By Income[c]:											
Low income	38.5%	45.9%	46.8%	53.0%	7.0%	19.7%	29.2%	41.2%	0.7%	1.5%	1.9%
Moderate income	61.5%	64.4%	67.4%	73.4%	16.0%	31.6%	46.3%	57.4%	0.6%	3.1%	3.0%
Middle income	70.9%	72.0%	75.2%	78.3%	20.5%	36.6%	50.0%	64.3%	1.3%	2.0%	2.4%
Upper income	77.2%	82.3%	83.7%	86.5%	25.1%	43.8%	57.8%	69.3%	1.8%	1.7%	3.7%
By Education											
No college degree	54.7%	60.1%	63.7%	67.4%	14.3%	29.2%	42.3%	54.9%	0.8%	1.8%	2.4%
College degree	80.4%	82.1%	81.6%	86.4%	25.2%	43.1%	56.2%	67.0%	2.1%	2.0%	3.8%

[a]The percentages reported are based on the population-weighted figures using the revised Kennickell-Woodburn consistent weights for each year. (For further discussion see the Survey of Consumer Finances codebooks at www.federalreserve.gov/pubs/oss/oss2/scfindex.html.) This exhibit reports percentages for all households.

[b]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. The question on smart cards was dropped from the 2004 survey.

[c]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. Each survey refers to income in the previous year. Median income was $32,264 in 1994; $37,005 in 1997; $41,990 in 2000; and $43,318 in 2003.

Source: 1995, 1998, 2001, and 2004 Survey of Consumer Finances data as of March 31, 2006, Federal Reserve System, and author's calculations.

Exhibit 1, Part 2
Percent of U.S. Households That Use Each Instrument: 1995, 1998, 2001, and 2004[a]

	Direct Deposit				Automatic Bill Paying				Software[b]		Any of the Methods: ATM, Debit Card, Smart Card, Direct Deposit, Automatic Bill Paying, or Software			
	1995	1998	2001	2004	1995	1998	2001	2004	2001	2004	1995	1998	2001	2004
All Households	46.7%	60.5%	67.3%	71.2%	21.8%	36.0%	40.3%	47.4%	18.0%	19.3%	77.7%	85.5%	88.4%	90.4%
By Age:														
Under 30 years old	31.0%	45.2%	48.8%	54.0%	17.7%	30.5%	32.1%	36.5%	17.0%	20.4%	76.3%	80.2%	83.0%	87.3%
Between 30 and 60 years old	42.8%	58.0%	64.8%	68.2%	24.4%	38.6%	44.1%	50.3%	22.0%	21.9%	78.7%	87.5%	89.3%	90.3%
Over 60 years old	63.3%	74.8%	83.2%	87.0%	18.2%	33.0%	35.9%	46.5%	9.0%	12.8%	76.1%	83.7%	89.2%	91.9%
By Income[c]:														
Low income	32.5%	44.3%	51.9%	54.8%	9.7%	17.1%	18.2%	24.6%	6.1%	6.8%	56.7%	69.3%	73.6%	77.4%
Moderate income	42.9%	58.8%	63.1%	64.0%	17.5%	30.5%	35.1%	40.5%	10.7%	11.1%	78.4%	87.2%	88.5%	88.6%
Middle income	48.3%	66.1%	65.7%	73.2%	23.4%	42.8%	45.1%	52.8%	16.3%	17.8%	85.1%	89.4%	92.3%	95.1%
Upper income	58.3%	70.4%	80.2%	83.6%	32.1%	49.3%	55.2%	62.4%	29.9%	31.4%	89.6%	94.9%	96.5%	97.1%
By Education														
No college degree	40.3%	54.4%	61.8%	64.3%	18.1%	30.2%	33.7%	39.5%	10.9%	12.4%	71.4%	80.7%	84.7%	86.2%
College degree	61.0%	72.6%	78.0%	83.2%	30.1%	47.7%	53.2%	61.1%	31.8%	31.3%	91.8%	95.1%	95.6%	97.5%

[a]The percentages reported are based on the population-weighted figures using the revised Kennickell-Woodburn consistent weights for each year. (For further discussion see the Survey of Consumer Finances codebooks at www.federalreserve.gov/pubs/oss/oss2/scfindex.html.)

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

[c]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. Each survey refers to income in the previous year. Median income was $32,264 in 1994; $37,005 in 1997; $41,990 in 2000; and $43,318 in 2003.

Source: 1995, 1998, 2001, and 2004 Survey of Consumer Finances data as of March 31, 2006, Federal Reserve System, and author's calculations.

Loretta J. Mester
April 14, 2006

Exhibit 2, Part 1
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[a]

	In Person				Mail				ATM			
	1995	1998	2001	2004	1995	1998	2001	2004	1995	1998	2001	2004
All Households	85.5%	79.5%	77.2%	77.3%	56.5%	54.1%	50.4%	50.2%	33.8%	52.6%	56.7%	64.4%
By Age:												
Under 30 years old	77.0%	73.7%	71.5%	72.9%	58.2%	51.9%	50.5%	44.2%	53.0%	68.8%	72.6%	79.3%
Between 30 and 60 years old	86.8%	81.8%	78.6%	77.3%	62.1%	60.4%	56.6%	56.3%	37.7%	61.5%	65.0%	72.0%
Over 60 years old	86.7%	77.2%	76.8%	79.5%	44.0%	39.9%	36.0%	39.1%	16.2%	22.3%	29.8%	39.8%
By Income[b]												
Low income	81.2%	70.3%	68.2%	71.2%	32.8%	33.4%	24.7%	28.9%	19.6%	34.7%	35.6%	46.6%
Moderate income	85.9%	80.4%	76.9%	75.0%	48.5%	46.9%	42.0%	42.6%	29.6%	47.8%	50.5%	62.3%
Middle income	85.7%	81.4%	78.6%	77.7%	56.9%	56.4%	58.4%	56.0%	37.7%	54.1%	60.7%	65.7%
Upper income	87.7%	84.1%	81.8%	81.4%	74.3%	69.1%	64.9%	62.4%	42.3%	65.2%	69.6%	74.4%
By Education												
No college degree	85.8%	79.2%	75.1%	76.9%	49.4%	48.2%	43.5%	44.1%	27.4%	45.1%	50.1%	59.1%
College degree	84.8%	80.2%	81.1%	78.0%	71.2%	65.2%	63.0%	60.1%	46.7%	66.7%	68.8%	72.9%

[a]The percentages reported are based on the population-weighted figures using the revised Kennickell-Woodburn consistent weights for each year. (For further discussion see the Survey of Consumer Finances codebooks at www.federalreserve.gov/pubs/oss/oss2/scfindex.html.) 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 exhibit reports for all households with at least one financial institution all the methods a respondent listed for each of the household's financial institutions. 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. Previous versions of this chart reported for 1998 and 2001 on the main ways respondents did business with their depository financial institutions (i.e., commercial banks, trust companies, thrifts, and credit unions) rather than with any of their financial institutions.

[b]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. Each survey refers to income in the previous year. Median income was $32,264 in 1994; $37,005 in 1997; $41,990 in 2000; and $43,318 in 2003.

Source: 1995, 1998, 2001, and 2004 Survey of Consumer Finances data as of March 31, 2006, Federal Reserve System, and author's calculations.

Loretta J. Mester
April 14, 2006

Exhibit 2, Part 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[a]

	Phone				Computer				Electronic[b]			
	1995	1998	2001	2004	1995	1998	2001	2004	1995	1998	2001	2004
All Households	25.7%	49.7%	48.9%	48.8%	3.7%	6.2%	19.6%	33.6%	56.2%	81.7%	87.0%	89.2%
By Age:												
Under 30 years old	20.8%	45.4%	45.9%	43.2%	5.2%	8.3%	22.9%	42.2%	66.7%	81.0%	85.2%	89.2%
Between 30 and 60 years old	28.1%	54.3%	52.4%	51.4%	4.5%	7.6%	24.2%	39.8%	59.9%	85.1%	89.4%	90.9%
Over 60 years old	23.0%	40.6%	42.4%	45.7%	1.2%	1.6%	7.3%	15.4%	43.4%	73.9%	82.4%	85.4%
By Income[c]:												
Low income	13.5%	28.8%	29.2%	30.0%	1.3%	1.5%	4.8%	14.0%	35.3%	65.4%	73.8%	78.7%
Moderate income	18.6%	42.5%	42.8%	44.8%	1.8%	2.7%	11.2%	22.5%	48.5%	80.1%	84.2%	84.8%
Middle income	22.6%	51.7%	51.7%	50.7%	4.0%	4.3%	17.8%	32.4%	59.2%	85.2%	89.7%	92.1%
Upper income	37.9%	64.9%	61.4%	60.0%	5.9%	11.5%	32.5%	49.4%	70.8%	91.0%	94.5%	95.6%
By Education												
No college degree	19.7%	41.9%	41.7%	43.4%	2.8%	2.7%	11.3%	23.9%	47.8%	76.5%	83.2%	85.7%
College degree	38.1%	64.3%	61.9%	57.7%	5.6%	12.8%	34.8%	49.3%	73.5%	91.4%	94.0%	94.9%

[a]The percentages reported are based on the population-weighted figures using the revised Kennickell-Woodburn consistent weights for each year. (For further discussion see the Survey of Consumer Finances codebooks at www.federalreserve.gov/pubs/oss/oss2/scfindex.html.) 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 exhibit reports for all households with at least one financial institution all the methods a respondent listed for each of the household's financial institutions. 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. Previous versions of this chart reported for 1998 and 2001 on the main ways respondents did business with their depository financial institutions (i.e., commercial banks, trust companies, thrifts, and credit unions) rather than with any of their financial institutions.

[b]In 1995, electronic refers to ATM, phone, payroll deduction and direct deposit, electronic transfer, or computer. In 1998, 2001, and 2004, electronic refers to ATM, phone (via voice or touchtone), direct deposit, direct withdrawal/payment, other electronic transfer, computer/Internet/online service, or fax machine.

[c]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. Each survey refers to income in the previous year. Median income was $32,264 in 1994; $37,005 in 1997; $41,990 in 2000; and $43,318 in 2003.

Source: 1995, 1998, 2001, and 2004 Survey of Consumer Finances data as of March 31, 2006, Federal Reserve System, and author's calculations.