

GAO

Report to the Chairman, Committee on
Banking, Housing, and Urban Affairs,
U.S. Senate

April 1998

AUTOMATED TELLER MACHINES

Survey Results Indicate Banks' Surcharge Fees Have Increased



General Government Division

B-279227

April 24, 1998

The Honorable Alfonse M. D'Amato
Chairman, Committee on Banking,
Housing, and Urban Affairs
United States Senate

Dear Mr. Chairman:

This report responds to your request that we update our May 1997 report Automated Teller Machines: Banks Reported That Use of Surcharge Fees Has Increased ([GAO/GGD-97-90](#)). Automated teller machine (ATM) surcharge fees are assessed by some banks and thrifts (hereinafter referred to as banks) on noncustomers—individuals who do not hold an account at their institution. Our 1997 report provided information on ATM deployment and surcharge fees.

As agreed with your office, the objectives of this report were to summarize our survey data on changes over the past year in (1) ATM deployment by banks in the United States and (2) the number of banks that surcharge noncustomers and the amounts surcharged. We also provide similar information on ATMs owned by selected nondepository institutions (nonbanks).

To address these two objectives, we conducted a statistically representative survey of about 500 randomly selected banks throughout the United States. All the estimates presented in this report are based on responses to this survey, which had a response rate of 90 percent. In an effort to obtain more precise estimates than we were able to include in our 1997 report, we expanded our sample from about 250 banks to about 500 banks. We categorized banks as large, medium, and smaller and defined these categories as banks with assets of over \$10 billion, \$1 billion to \$10 billion, and less than \$1 billion, respectively. We collected information from all the banks responding in this year's sample as of February 1, 1998. We also collected February 1, 1997, information from the banks we surveyed this year and used it to revise our 1997 estimates, taking advantage of the larger sample to provide more precise estimates. All estimates are subject to sampling errors, which we reported if the errors are greater than plus or minus 10 percent.¹ In addition, reported changes in estimates from 1997 to 1998 are statistically significant unless otherwise noted. (See app. II for details on our objectives, scope, and methodology.)

¹Sampling errors are the maximum amount by which the estimates from a statistical sample can be expected to differ from the true population values being estimated.

We did our work between December 1997 and April 1998 in accordance with generally accepted government auditing standards.

As agreed with your office, we did not include credit unions or nonbank ATM operators in our survey. However, we gathered information comparable to that for banks from 7 of the 10 largest nonbank ATM owners. In this report, nonbank ATM owners are nondepository institutions that own ATMs—such as grocery store chains or other specialized companies.

Results in Brief

Our survey results indicated that approximately the same percentage of banks in the United States operated ATMs as of February 1, 1998, as operated them as of February 1, 1997—just over 70 percent. However, during this 1-year period, the number of ATMs that banks operated increased about 13 percent, to an estimated 132,000.² About 66 percent of this growth was in ATMs located off bank premises. Our survey results also indicated that, for the month of January, the average number of customer withdrawal transactions per ATM declined 15 percent from 1997 to 1998, while the average number of noncustomer withdrawal transactions per ATM declined 24 percent during this period.

According to our survey results, the percentage of banks operating ATMs that assessed surcharges increased from 39 percent as of February 1, 1997, to 64 percent as of February 1, 1998. Also, the estimated number of ATMs with surcharges increased by more than 50 percent during the same period. Our estimates indicated that the average surcharge fee assessed by banks, including in our calculation the ATMs without surcharges, increased from \$0.69 as of February 1, 1997, to \$1.00 as of February 1, 1998. Additionally, the estimated average surcharge fee, calculated for those ATMs with surcharges only, increased from \$1.17 to \$1.27 during this period. For ATMs with surcharges, the most typical fee as of February 1, 1998, was \$1.50, compared to \$1.00 the previous year.

Background

According to a Federal Reserve study³ and other industry sources, some banks began deploying ATMs in the early 1970s to gain an advantage over their competitors by offering customers 24-hour access to their funds. Industry sources indicated that, by the early 1980s, consumers were substantially increasing their use of ATMs. The Federal Reserve study found

²Sampling error is plus or minus 12 percent.

³Payments Primer: Traditional Payments, No. 6, Automated Teller Machine, Federal Reserve System, December 1997.

that, today, many ATMs are located at sites where consumers would most likely want to have them; these sites are frequently off the premises of banks, such as at grocery and convenience stores, shopping malls, and movie complexes. Nonbanks are also operating ATMs at such locations.

According to industry sources, the majority of ATM transactions continue to be for cash withdrawals from personal checking, savings, and other deposit accounts. However, technological advances have made an array of additional services available to ATM users. Some ATMs enable users to complete financial transactions, such as obtaining product information, making loan payments, purchasing insurance and investment products, accessing lines of credit, and making payments on credit cards.

Regional, national, and/or international ATM networks link ATMs and computer systems, allowing the customers of one network member to access their accounts through other network members' ATMs. These networks are designed to enable users to obtain ATM services over a much wider geographical area than that covered by their own institution.

Until April 1996, the two primary national networks banned the practice of surcharging noncustomers for use of their networks' ATMs. However, the bans could not be implemented in 15 states that statutorily prohibited ATM networks from enforcing them. With other states considering similar prohibitions, the two primary networks lifted their bans in April 1996. Since then, some ATM operators in states where surcharges were formerly banned by the networks have begun assessing surcharges.

ATM operators assess surcharge fees on the user's bank; the bank in turn pays the fees and then assesses them directly on the user. The national networks require that, if the surcharge fee is assessed on the user, the fee appear on the receipt at the cash machine as well as on the user's bank statement.

In addition to surcharge fees, switching and interchange fees are generated by ATM use. A switching fee is assessed by the ATM network on the user's home bank to pay for processing each of its network transactions and to defray other network operating costs, such as advertising and network security. Banks may absorb this fee or pass it on to the ATM user. An interchange fee may be assessed by ATM operators on a nonaccount holder's home bank for handling a transaction. If the home bank passes this fee on to the ATM user, the Federal Reserve's Regulation E requires the user's home bank to inform the user—typically at the time an

account is opened—that the assessment will appear on the user’s bank statement.

ATM Deployment by Banks

Our survey results indicated that approximately the same percentage of banks operated ATMs as of February 1, 1998, as operated them as of February 1, 1997. However, during this 1-year period, the estimated number of ATMs that banks operated increased about 13 percent. Our survey results also indicated that, for the month of January, the average number of withdrawal transactions per ATM decreased from 1997 to 1998.

The Percentage of Banks Operating ATMs Remained Constant, While the Number of ATMs Increased

According to our survey results, just over 70 percent of banks in the United States operated ATMs as of both February 1, 1998, and February 1, 1997. We estimated that approximately 8,010 of 10,960 banks active at the time of our survey operated ATMs as of February 1, 1998, and approximately 8,210 of 11,110 banks operated ATMs as of February 1, 1997. The percentage of large and medium banks that had at least one ATM was about 90 percent as of these dates. For smaller banks, just over 70 percent had at least one ATM as of both dates.

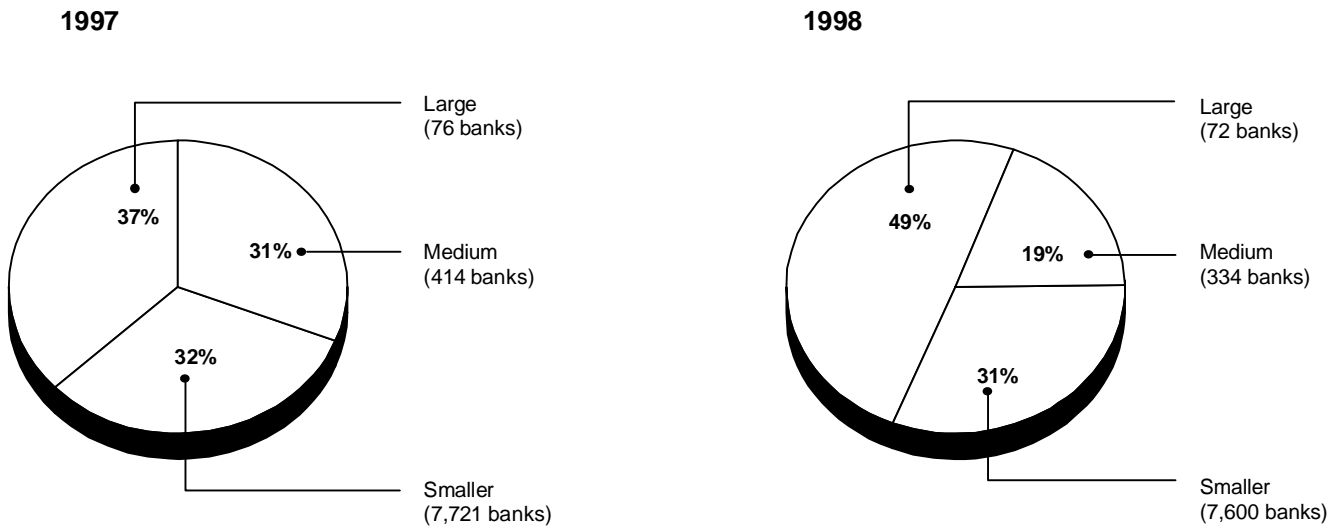
According to our survey results, banks operated an estimated 132,000⁴ ATMs in the United States as of February 1, 1998, a 13 percent increase over the estimated 117,000⁵ ATMs they operated as of February 1, 1997.⁶ Our survey results indicated that about 66 percent of this growth was in ATMs located off bank premises. Large banks operated more ATMs than either medium or smaller banks as of February 1, 1998. (See fig. 1.)

⁴Sampling error is plus or minus 12 percent.

⁵Sampling error is plus or minus 11 percent.

⁶Point estimates are subject to a sampling error that differs from the sampling error on our estimates of the change between 1997 and 1998. While the confidence intervals on the point estimates may overlap, the estimate of the change between the two years is statistically significant. (See app. II for details.)

Figure 1: Percentages of ATMs Operated by Large, Medium, and Smaller Banks as of February 1, 1997, and February 1, 1998



Note: Percentages may not add to 100 due to rounding.

Source: GAO analysis of survey results.

According to our survey results, for those large banks that operated ATMs, the median⁷ number of ATMs operated increased by about 100 from February 1, 1997, to February 1, 1998. Medium and smaller banks operated approximately the same median number of ATMs as of both these dates. (See table 1.)

Table 1: Median Number of ATMs Operated by Large, Medium, and Smaller Banks as of February 1, 1997, and February 1, 1998

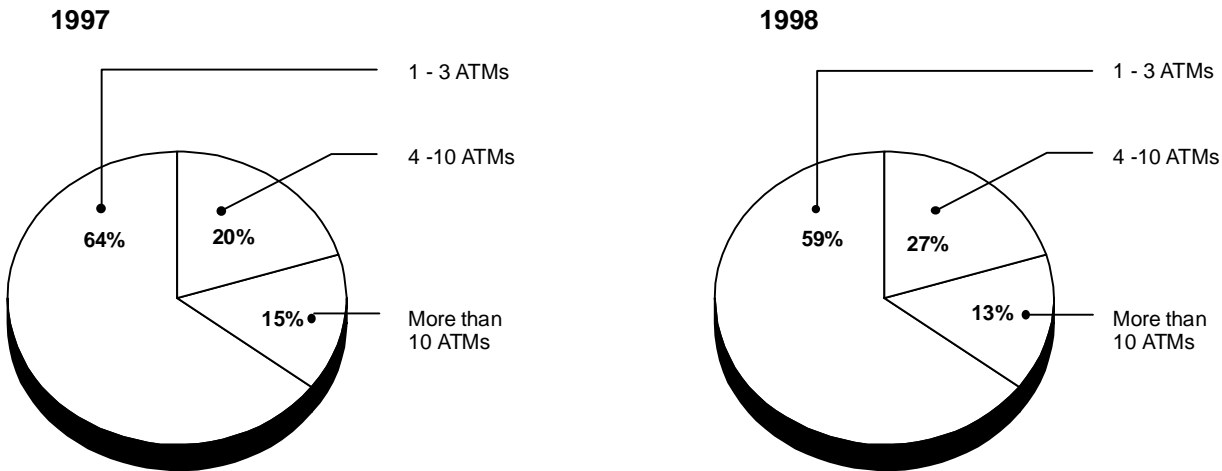
Bank size	Median number of ATMs	
	February 1, 1997	February 1, 1998
Large	345	440
Medium	45	43
Smaller	2	3

Source: GAO analysis of survey results.

⁷The median is the middle observation—that is, half the observations lie above this value and half lie below it.

As indicated in figure 2, an estimated 59 percent of banks with ATMs had three or fewer ATMs as of February 1, 1998. Our survey results indicated that these ATM operators were nearly all smaller banks.

Figure 2: Percentages of Banks That Operated ATMs, by Number of ATMs, as of February 1, 1997, and February 1, 1998



Note: Percentages do not add to 100 due to rounding.

Source: GAO analysis of survey results.

The seven nonbanks that provided us information reported that, in aggregate, the number of ATMs they deployed increased over the past year. These nonbanks reported an 11 percent increase in the number of ATMs they owned—from 9,223 ATMs to 10,277 ATMs—between February 1, 1997, and February 1, 1998.

The Average Number of Withdrawal Transactions Per ATM Decreased

Our survey results indicated that, for the month of January, the average number of customer withdrawal transactions per ATM declined 15 percent from 1997 to 1998, while the average number of noncustomer withdrawal transactions per ATM declined 24 percent during this period. (See table 2.) Overall, the seven nonbanks reported little change in withdrawal transaction volume per ATM during the same period.

Table 2: Average Customer and Noncustomer Withdrawal Transactions Per ATM for January 1997 and January 1998

Transaction type	Withdrawal transactions per ATM		
	January 1997	January 1998	Percent change
Customer withdrawal	2,551 ^a	2,163 ^b	-15% ^c
Noncustomer withdrawal	1,343	1,023	-24

^aSampling error is plus or minus 16 percent.

^bSampling error is plus or minus 12 percent.

^cPoint estimates are subject to a sampling error that differs from the sampling error on our estimates of the change between 1997 and 1998. While the confidence intervals on the point estimates may overlap, the estimate of the change between the two years is statistically significant. (See app. II for details.)

Source: GAO analysis of survey results.

More Banks Assessed Surcharges, and Fees Increased

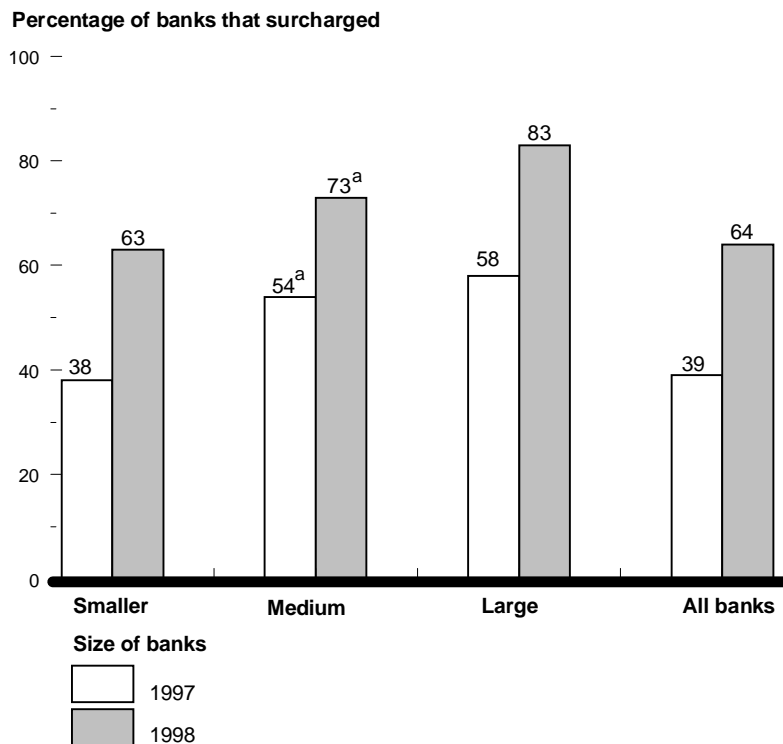
Our survey results indicated both that a greater percentage of banks assessed surcharges as of February 1, 1998, than assessed them a year before and that surcharge fees increased during this period. In particular, the percentage of ATMs that had surcharge fees of \$1.50 or more increased from 21 to 40 percent.

More Banks Surcharged

According to our survey results, almost 64 percent of banks that operated ATMs as of February 1, 1998, assessed surcharges on at least some of their ATMs, while about 39 percent of the banks that operated ATMs as of February 1, 1997, imposed surcharges. We found that large and smaller banks increased their use of surcharging during this period.⁸ (See fig. 3.)

⁸The increase from 1997 to 1998 in the percentage of medium banks that surcharged was not statistically significant.

Figure 3: Percentages of Large, Medium, and Smaller Banks That Assessed Surcharges on at Least Some of Their ATMs as of February 1, 1997, and February 1, 1998



^aSampling error is plus or minus 11 percent.

Source: GAO analysis of survey results.

The estimated number of ATMs with surcharge fees also increased. Our survey results indicated that from February 1, 1997, to February 1, 1998, the number of ATMs with surcharge fees increased by more than 50 percent—from about 69,100⁹ to about 104,100¹⁰ ATMs. This represents an increase from 59 percent to 79 percent of ATMs. The increase included newly deployed or acquired ATMs, as well as existing ATMs that previously did not have a surcharge fee. Similarly, during the same period, the seven nonbanks we contacted reported a 61 percent increase—from 5,056 to 8,120—in the number of ATMs they owned that charged users an access fee.¹¹

⁹Sampling error is plus or minus 15 percent.

¹⁰Sampling error is plus or minus 15 percent.

¹¹When referring to nonbanks, we use the generic term access fee rather than surcharge fee. Surcharge fees refer to the access fees that banks charge individuals who do not hold an account at their institution. However, nonbanks do not have deposit account holders.

ATM Surcharge Fees Increased

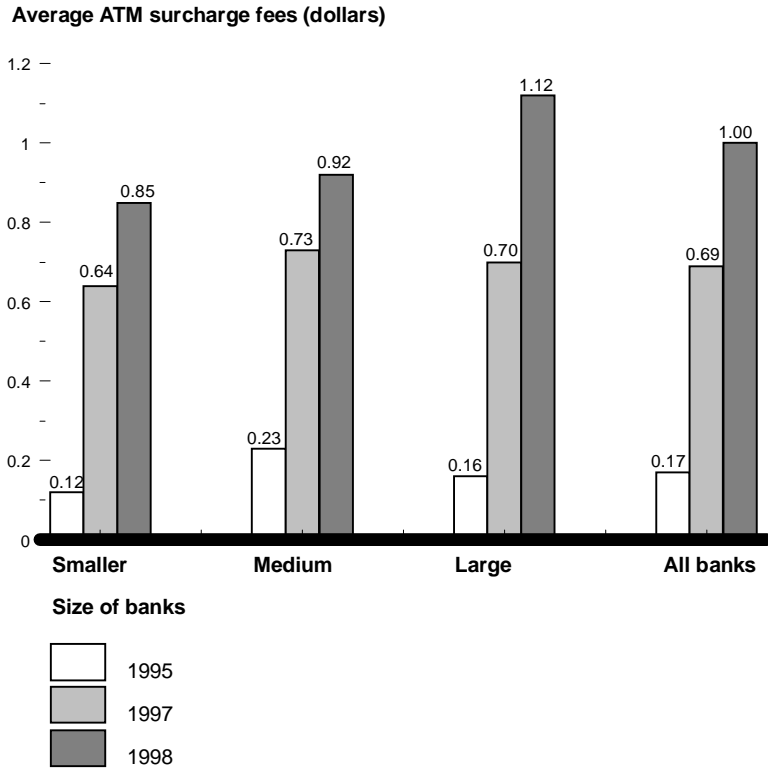
According to our 1998 survey results, the average ATM surcharge fee has increased since February 1, 1997.¹² Our estimates indicated that the average surcharge fee assessed by banks, including in our calculations the ATMs without surcharges, increased from \$0.69 as of February 1, 1997, to \$1.00 as of February 1, 1998.¹³ The average surcharge fee as of December 31, 1995, was \$0.17.¹⁴ This was before the two primary national networks lifted their ban on surcharge fees. (See fig. 4.) The maximum ATM fee reported by banks in our sample as of both dates was \$3.00.

¹²We calculated average surcharge fees on a per ATM basis rather than on a per bank basis.

¹³Actual surcharge fees tend to occur in 50-cent increments (e.g., \$1.00, \$1.50, and \$2.00). However, a commonly used measure of surcharge fees throughout the industry is a simple average. We calculated the average surcharge fee in two ways: for all ATMs, including those with no surcharge fees, and for only those ATMs with surcharges.

¹⁴Sampling error exceeds plus or minus 10 percent.

Figure 4: Average ATM Surcharge Fees Assessed by Large, Medium, and Smaller Banks, Including ATMs Without Surcharges, as of December 31, 1995; February 1, 1997; and February 1, 1998



Note 1: We collected December 1995 data during our 1997 survey. We did not collect additional 1995 data during our 1998 survey. December 1995 estimates were based on the responses of banks we surveyed in February 1997.

Note 2: Although some of the sampling errors for the data for smaller, medium, and large banks were greater than plus or minus 10 percent, all of the differences between the 1995 and 1997 data within the three size groups were statistically significant, and the differences for the smaller and large banks between 1997 and 1998 were also statistically significant.

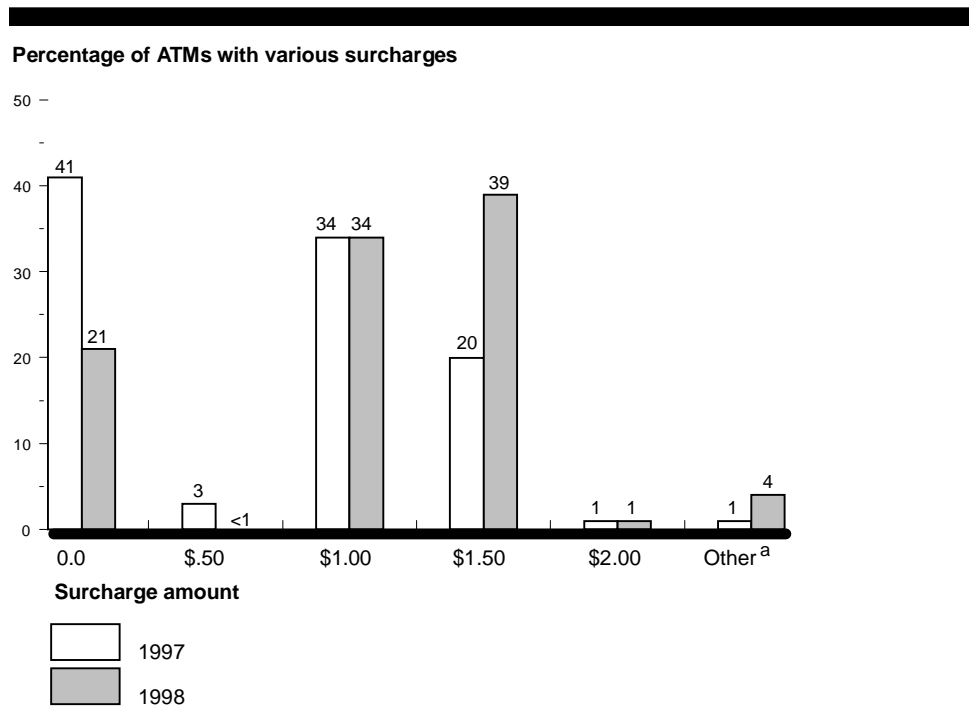
Note 3: The average ATM surcharge fees were calculated for all ATMs, including those that did not surcharge.

Source: GAO analysis of survey results.

In addition to the previously discussed average fees, the estimated average surcharge fee assessed by banks, excluding ATMs that did not surcharge, increased from \$1.17 as of February 1, 1997, to \$1.27 as of February 1, 1998.

Our survey results indicated that for the ATMs with surcharges, the most typical fee as of February 1, 1998, was \$1.50 compared to \$1.00 for the previous year. These results also indicated that the number of ATMs with surcharge fees of \$1.50 or more had increased since 1997. Specifically, an estimated 21 percent of ATMs had fees of \$1.50 or more as of February 1, 1997, and an estimated 40 percent of ATMs had such fees as of February 1, 1998. (See fig. 5.) Additionally, as shown in table 3, the percentage of ATMs with surcharge fees of \$1.50 or more increased for large banks but remained relatively constant for smaller banks.¹⁵

Figure 5: Percentages of ATMs With Various Surcharges as of February 1, 1997, and February 1, 1998



^aIncludes all other fee levels combined.

Source: GAO analysis of survey results.

¹⁵The increase in the percentage of ATMs with surcharge fees of \$1.50 or more was not statistically significant for medium banks.

Table 3: Percentages of ATMs With Various Surcharges, by Bank Size, as of February 1, 1997, and February 1, 1998

Surcharge	Large bank ATMs		Medium bank ATMs		Smaller bank ATMs	
	1997	1998	1997	1998	1997	1998
\$0.00	40%	17%	37% ^a	26%	45%	24%
0.50	3	<1	3	<1	2	1
1.00	31	24	40 ^a	42 ^a	31 ^a	47 ^a
1.50	24	58 ^a	16	26	19	17
2.00	<1	<1	3	3	1	2
All other fee levels combined	1	1	1	4	1	8

Note: Totals may not add to 100 percent because of rounding.

^aSampling errors exceed plus or minus 10 percent.

Source: GAO analysis of survey results.

Consistent with the results of our bank survey, the seven large nonbank ATM owners generally reported that they increased their access fees. The average fee, including in our calculations the ATMs without access fees, increased from \$0.48 on February 1, 1997, to \$0.81 on February 1, 1998. The maximum access fee reported by these nonbanks was \$8.00. The average fee reported, excluding ATMs that did not charge a fee, increased from \$0.87 as of February 1, 1997, to \$1.03 as of February 1, 1998.

As agreed with your office, unless you announce the contents of this report earlier, we plan no further distribution until 30 days after the date of this letter. At that time, we will send copies of this report to the Ranking Minority Member of your Committee, the Chairmen and Ranking Minority Members of other interested congressional committees, individual members, federal agencies, and the public on request.

This report was prepared under the direction of Cecile O. Trop, Assistant Director, Financial Institutions and Markets Issues. Other major contributors are listed in appendix III. Please contact either Ms. Trop on (312) 220-7600 or me on (202) 512-8678 if you have any questions about this report.

Sincerely yours,



Susan S. Westin
Associate Director
Financial Institutions
and Markets Issues

Contents

Letter		1
Appendix I Survey Instrument Used to Collect Data From a Sample of Banks		16
Appendix II Objectives, Scope, and Methodology		22
	Survey Sample	22
	Survey Sample Design	22
	Questionnaire Design	24
	Survey Administration	24
	Survey Response	24
	Calculation of Survey Estimates	25
	Sampling Error	25
	Nonsampling Error	26
	Information on ATMs Owned by Nonbanks	27
Appendix III Major Contributors to This Report		28
Tables		
	Table 1: Median Number of ATMs Operated by Large, Medium, and Smaller Banks as of February 1, 1997, and February 1, 1998	5
	Table 2: Average Customer and Noncustomer Withdrawal Transactions per ATM for January 1997 and January 1998	7
	Table 3: Percentages of ATMs With Various Surcharges, by Bank Size, as of February 1, 1997, and February 1, 1998	12
	Table II.1: Disposition of Bank Survey Sample	23
Figures		
	Figure 1: Percentages of ATMs Operated by Large, Medium, and Smaller Banks as of February 1, 1997, and February 1, 1998	5
	Figure 2: Percentages of Banks That Operated ATMs, by Number of ATMs, as of February 1, 1997, and February 1, 1998	6

Contents

Figure 3: Percentages of Large, Medium, and Smaller Banks That Assessed Surcharges on at Least Some of Their ATMs as of February 1, 1997, and February 1, 1998	8
Figure 4: Average ATM Surcharge Fees Assessed by Large, Medium, and Smaller Banks, Including ATMs Without Surcharges, as of December 31, 1995; February 1, 1997; and February 1, 1998	10
Figure 5: Percentages of ATMs With Various Surcharges as of February 1, 1997, and February 1, 1998	11

Abbreviations

ATM automated teller machine

Survey Instrument Used to Collect Data From a Sample of Banks

United States General Accounting Office

GAO Survey of Banks and Thrifts on ATM Surcharges

Introduction

GAO has been asked by the Senate Banking Committee to provide information about charges paid by noncustomers for the use of automated teller machines (ATM). As part of this review, we are collecting information on access fees (or surcharges) from a random sample of U.S. banks and thrifts. Your answers are important to ensure that we obtain a representative picture of industry practices.

GAO will take steps to safeguard the privacy of your responses. The number and identifying information on this questionnaire is included only to aid us in our follow-up efforts. Survey results will be reported in summary form only. Any discussion of individual answers or comments will omit any information that could identify the respondent.

If you have any questions or concerns about this survey, please call Kristi Peterson at (202) 512-7951. We would appreciate your response within 3 business days of receiving this questionnaire.

Instructions

- This questionnaire should be completed by the person(s) who has the most knowledge about ATM operations, and who has access to ATM transaction data.
- Please consider only ATMs operated by the institution named on the label at the bottom of this page and not any independently chartered subsidiaries or affiliates, or a holding company that owns this institution.
- Fax the completed questionnaire to (202) 512-2645.

Please provide the following information so that we may contact you with any questions about your responses:

Name of primary respondent: _____

Title: _____

Institution: _____

Department: _____

Telephone: () _____ - _____

[Affix bank name label here]

**Appendix I
Survey Instrument Used to Collect Data
From a Sample of Banks**

1. How many ATMs did your institution operate, both at on-premises and off-premises locations, as of February 1, 1997 and February 1, 1998?

Exclude ATMs that are operated by independently chartered subsidiaries or affiliates of your institution or by a holding company that owns your institution.

	Number of ATMs as of:	
	February 1, 1997 (or the closest date for which data is available--please specify that date: ___ / ___ / ___) mm dd yy	February 1, 1998 (or the closest date for which data is available--please specify that date: ___ / ___ / ___) mm dd yy
ATMs on premises (all offices and branches)	_____	_____
ATMs off premises	_____	_____

If you have any explanations of, or comments on, the data submitted in response to question 1, please provide them in the space below.

**Appendix I
Survey Instrument Used to Collect Data
From a Sample of Banks**

2. Please provide the per-transaction access fee(s), or surcharge(s), that your institution charges ATM users who do not have accounts at your bank. For each different access fee, indicate how many ATMs that fee applies to.

Exclude any transaction fees charged to customers of your institution.

If some of your ATMs do not have an access fee, enter "\$0.00" in one of the "Access fee(s)" boxes and indicate how many ATMs that applies to.

ATM Access Fees as of: February 1, 1997 (or the closest date for which data is available--please specify that date: ___ / ___ / ___) mm dd yy		
Access fee(s)	Number of ATMs with this access fee	
	On premises	Off premises
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
Total ATMs (should match question 1)	_____	_____

ATM Access Fees as of: February 1, 1998 (or the closest date for which data is available--please specify that date: ___ / ___ / ___) mm dd yy		
Access fee(s)	Number of ATMs with this access fee	
	On premises	Off premises
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
\$ _____	_____	_____
Total ATMs (should match question 1)	_____	_____

If you have any explanations of, or comments on, the data submitted in response to question 2, including factors such as the type of off-premises ATM locations that may affect access fees, please provide them in the space below, or attach additional sheets of paper.

**Appendix I
Survey Instrument Used to Collect Data
From a Sample of Banks**

3. Across all of the ATMs your institution operates, as specified in question 1, how many completed withdrawal transactions by customers and noncustomers occurred in the months of January 1997 and January 1998?

	January 1997 (or the closest 1-month period before 1/97 for which data is available-- please specify: ___ / ___) mm yy	January 1998 (or the closest 1-month period before 1/98 for which data is available-- please specify: ___ / ___) mm yy
ATM withdrawal transactions by customers	_____ , _____ , _____	_____ , _____ , _____
ATM withdrawal transactions by noncustomers	_____ , _____ , _____	_____ , _____ , _____

If you have any explanations of, or comments on, the data submitted in response to question 3, including events or factors that significantly affected the number of ATM transactions in those months, please provide them in the space below.

**Appendix I
Survey Instrument Used to Collect Data
From a Sample of Banks**

4. In the past year (since February 1, 1997), has your institution acquired or consolidated any other individually chartered banks or thrifts, through mergers or other business combinations, that resulted in the discontinuation of those charters? (Check one box.)

1. No → END OF SURVEY--PLEASE RETURN THE QUESTIONNAIRE TO GAO.
Thank you for your time and care in filling out this questionnaire.
2. Yes → Please list the former names of all of the previously chartered institutions you have acquired/consolidated since February 1, 1997, and indicate whether they were operating any ATMs as of February 1, 1997:

	Name of acquired/consolidated institution	Any ATMs as of February 1, 1997? (Check one box)		
		Yes	No	Don't know
1				
2				
3				
4				
5				

5. Please complete one copy of the following page for EACH of the institutions you named above that operated ATMs as of February 1, 1997.

**Appendix I
Survey Instrument Used to Collect Data
From a Sample of Banks**

IF YOU CHECKED "YES" FOR ANY ACQUIRED BANK IN QUESTION 4: Please complete a copy of this page for each institution with ATMs acquired since February 1, 1997.

Name of the acquired institution with ATMs: _____

If it is not possible to provide the following information for the dates requested, please report as of the closest date possible—for example, as of the date you acquired this institution. If you are reporting for another date, making estimates, or providing partial data, please explain in part C.

A. Please provide the best estimate of the number of ATMs, by location and per-transaction access fee(s), if possible, at the acquired institution as of February 1, 1997:

ATMs and Access Fees as of February 1, 1997 (or the closest date possible: ____ / ____ / ____) mm dd yy			
Access fee(s)	Number of ATMs with this access fee		
	On premises	Off premises	All locations (total)
\$ ____ . ____	_____	_____	_____
\$ ____ . ____	_____	_____	_____
\$ ____ . ____	_____	_____	_____
\$ ____ . ____	_____	_____	_____
Total ATMs	_____	_____	_____

B. Please estimate the number of completed withdrawal transactions by customers and noncustomers that occurred at the acquired institution in the month of January 1997.

(or the closest 1-month period possible: ____ / ____)
mm yy

Customer withdrawal transactions _____ , _____ , _____

Noncustomer withdrawal transactions _____ , _____ , _____

C. If you have any explanations of, or comments on, the data submitted for this institution, please attach another sheet of paper.

Objectives, Scope, and Methodology

The objectives of this report were to summarize our survey data on the changes over the past year in (1) ATM deployment by banks and (2) number of banks (including thrifts) in the United States that surcharge noncustomers and the amounts surcharged. We also provide limited information on ATMs owned by selected nondepository institutions (nonbanks).

Survey Sample

To address our objectives, we estimated the number of (1) banks that operate ATMs; (2) ATMs operated by banks; and (3) withdrawal transactions as of February 1, 1997, and February 1, 1998. We also estimated the number of banks that surcharge account holders and the amounts surcharged as of those dates. Finally, we estimated the change in these numbers between February 1, 1997, and February 1, 1998. We did not include credit unions or nonbanks in our survey.

To obtain our estimates, we conducted statistically representative surveys of banks in both February 1997 and February 1998. In February 1998 we surveyed a random sample of 501 banks and thrifts throughout the United States. Some of these 501 institutions had been sampled in our 1997 survey. We asked these banks to answer the same questions again for 1998 (and for 1997, if they had not answered them during the 1997 survey). We also asked a supplemental sample of banks, drawn for the first time in 1998, to provide data for both years. Using the additional data covering 1997 that we obtained in 1998, we were able to make more precise, revised estimates of 1997 ATM operations for this year's report. All of the estimates made in this report are representative of the entire banking industry as it existed in February 1997 and February 1998.

Survey Sample Design

We recontacted the 197 banks that were still active from the original stratified probability sample of 246 banks drawn in 1997. (The bank charters of 49 of last year's sample had become inactive, mostly through their being acquired by other institutions.) We drew a supplemental stratified random sample of 304 additional institutions, for a total of 501 institutions. The 1997 responses of the 49 inactive banks, as available, contributed only to the 1997 estimates.

We allocated proportionately more of our sample to banks in the population with greater assets because they, on average, operated more ATMs. This allowed us to cover as many of the banks operating ATMs, and the ATMs themselves, as possible. Because we sampled large banks at a

Appendix II
Objectives, Scope, and Methodology

higher rate than other banks, the estimates for large banks are more precise—that is, they have smaller sampling errors. (Sampling errors are discussed later in this appendix.) The allocation of this year’s random sample across 11 strata—defined by the total assets that banks reported in their September 1997 Federal Financial Institutions Examination Council Call Report (or the Office of Thrift Supervision’s Thrift Financial Reports)—is described in the first four columns of table II.1.

Table II.1: Disposition of Bank Survey Sample

Bank size category	Sample strata	1998 population size	1998 sample size	Sample disposition				Response rate ^c
				Ineligible ^a	Refusals	No response	Useable response ^b	
Large	Over \$10 billion	81	81	2	1	10	68	86.1%
Medium	Over \$8 billion, up to \$10 billion	16	12	0	1	2	9	75.0
	Over \$6 billion, up to \$8 billion	28	17	1	1	2	13	81.3
	Over \$4 billion, up to \$6 billion	54	24	0	1	1	22	91.7
	Over \$2 billion, up to \$4 billion	123	31	2	1	5	23	79.3
	Over \$1 billion, up to \$2 billion	205	28	2	1	1	24	92.3
Smaller	Over \$500 million, up to \$1 billion	425	33	0	3	3	27	81.8
	Over \$300 million, up to \$500 million	546	28	0	1	1	26	92.9
	Over \$150 million, up to \$300 million	1,431	52	1	0	3	48	94.1
	Over \$90 million, up to \$150 million	1,730	50	0	5	3	42	84.0
	\$90 million or less	6,374	145	0	2	4	139	95.9
Total		11,013	501	8	17	35	441	89.5%

^aNot a depository institution, no longer in business, merged, or otherwise closed.

^bUseable responses included not only completed questionnaires from banks with ATMs, but also the determination during telephone precontact that a bank had no ATMs.

^cThe response rate was calculated as the number of banks completing useable questionnaires divided by the number of eligible banks in the sample (original sample minus ineligible).

Source: GAO survey.

The samples in both years were drawn from the populations of banks identified as active institutions in the September 1996 and September 1997 Call Report databases obtained from the Federal Deposit Insurance Corporation. Although neither we nor the agencies that produced the source data have fully assessed the reliability of this database, Call Report data are widely used by researchers in academia, government, and private industry.

Questionnaire Design

We administered the same questionnaire that we used last year, after making some minor modifications and adding questions on ATM customer transactions and merger activity. Each questionnaire was to be filled out by a separate, individually chartered institution. Respondents were instructed to provide answers, to the extent possible, for the offices of the one institution named on the questionnaire only, and were instructed not to include any bank holding company parent or other subsidiaries. Because we extensively pretested the questionnaire before administering the survey last year, we asked only a small number of banks that were to be in our sample to review our new questions before we administered the revised questionnaire.

Survey Administration

During the first 2 weeks of January 1998, we contacted all sampled institutions by phone. Following a written calling protocol, we determined whether each of the 501 sampled banks was a currently active institution and, if so, whether it operated any ATMs. For banks not operating at least one ATM, this information constituted a complete response. For those banks operating ATMs, we then identified the most appropriate respondent and mailed that person a questionnaire at the end of January 1998. After making multiple calls to encourage the return of all outstanding questionnaires and following up on some questionnaires that contained missing or inconsistent data, we ended our fieldwork in the second week of March 1998.

Survey Response

We received useable responses (an indication that no ATMs were operated, or answers to at least some of the questions on the questionnaire mailed to ATM operators) from 441 sampled banks, for a response rate of approximately 90 percent. (See table II.1.) No systematic differences in the rate of survey participation across different bank size strata were detected.

Calculation of Survey Estimates

After weighting survey responses to account for selection probabilities and nonresponse, we were able to make estimates of the number of banks operating ATMs, the number of ATMs, and surcharging characteristics for the entire population of banks active as of February 1, 1998. Using 1997 survey data and retrospective reports of other banks responding for the first time this year, we were also able to update estimates for the entire population of banks as of February 1, 1997.

Although the sample design of this survey incorporates elements of a panel survey design, where individual sample elements are tracked over time, estimates of change between the two years are based on the differences between the overall estimates for each of the two years and not on changes within particular institutions. However, information about change at the individual bank level, where 1997 and 1998 data for one bank active in both years exists, helped us to more accurately determine the precision of these change estimates, as described later in this appendix.

Sampling Error

Because we reviewed a statistical sample of banks, each estimate developed from the sample (for either the 1997 or 1998 point estimate, or the change between these two estimates) has a measurable precision, or sampling error. The sampling error is the maximum amount by which the estimate obtained from a statistical sample can be expected to differ from the true population value being estimated. Sampling errors are stated at a certain confidence level—in this case, 95 percent. This means that the chances are 19 out of 20 that, if we surveyed all of the banks in the population, the true value obtained for a question on this survey would differ from the estimate obtained from our sample by less than the sampling error for that question.

The sampling errors account for the stratified sample design and are reported for all of our 1997 and 1998 estimates unless they are less than plus or minus 10 percentage points, or 10 percent of the quantity estimated. All differences cited are statistically significant unless otherwise noted. That is, any differences in ATM characteristics between subgroups of banks, or in some industry characteristic over time, can be considered present in the underlying population and not simply due to chance introduced by relying on one sample of the whole population.

Our analysis also accounted for the association between the status of individual banks in 1997 and 1998—that is, it accounted for the fact that bank characteristics, such as the number of ATMs operated, tend to change

in a predictable way for individual banks. As a result, we could more precisely estimate changes in bank characteristics than would be expected given the large sampling errors of some of the point estimates. Thus, the point estimates of a characteristic in 1997 and 1998 might have large sampling errors, while the estimate of change for that characteristic between the two years might have a relatively small sampling error.

Nonsampling Error

In addition to the reported sampling errors, the practical difficulties of conducting any survey may introduce other types of “nonsampling” errors. For example, differences in how a particular question is interpreted, the sources of information that are available to respondents, or the types of banks that do not respond can all introduce unwanted variability into the survey results. Although we did not verify respondents’ answers, we did include steps in the data collection and analysis processes to minimize nonsampling errors. Specifically, we modified our questions based on pretests and our experiences from the 1997 survey to make them more understandable and easier to answer. We also checked respondent’s answers for internal consistency and out-of-range values, and we attempted to obtain missing data. Finally, we conducted callbacks to encourage a high level of response that would reduce the effects of any nonresponse bias.

In addition, our surveys were conducted in February 1997 and February 1998, while the Call Report data that we used to draw our sample was dated 4 months earlier. Although we incorporated revised Call Report data released by the Federal Deposit Insurance Corporation in December of 1997 into our 1998 sample frame, changes to the banking industry (such as mergers resulting in the discontinuance of some bank charters and the issuance of new charters) between the dates our sample frames were defined and the dates our surveys were administered did occur. Those changes resulting in a decrease in the number of chartered banks in the population were reflected in our survey analysis by those banks we sampled and found ineligible due to recent mergers or closings. However, to the extent that newly chartered institutions had been created in the period between the definition of our sample frame and the survey, those increases in the population would not be reflected in our sample, resulting in a small but unknown amount of under coverage in our sample of the true population of banks in February 1997 and February 1998. We performed tests on two revisions of the September 1997 Call Report database to assess the magnitude of changes in listings over time.

Also, banks that were sampled for the first time in 1998 and reported that they did not operate ATMs were not asked for 1997 data. We assumed that these 64 banks did not operate ATMs in 1997, based on reports from another group of 27 banks that did not operate ATMs in 1998 but had been sampled the year before. Only 2 of those 27 banks had operated ATMs the previous year.

Information on ATMs Owned by Nonbanks

We gathered information comparable to that for banks from 7 of the 10 largest nonbank owners, excluding credit unions, to obtain an indication of nonbank practices.¹⁶ This information could not be projected to the universe of nonbank ATM owners because we did not draw a statistical sample from this universe. We were unable to draw a statistical sample because the complete data necessary for defining the universe was not available.

¹⁶The 10 largest nonbank ATM owners were identified from the top 350 ATM owners listed in *Credit Card Management: Debit Card Directory, 1998 Edition* (New York, NY: Faulkner and Gray, Inc., 1997). Seven of the 10 provided us with information on their ATM operations.

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