

Y2K READINESS DISCLOSURE

**Y2K AND THE BANKING INDUSTRY
Baseline Survey Report**

Prepared by:

The Gallup Organization
Government Division
One Church Street
Suite 900
Rockville, Maryland 20850
301.309.9439

Submitted to:

Board of Governors of the Federal Reserve System
Federal Deposit Insurance Corporation
Office of the Comptroller of the Currency
Office of Thrift Supervision

June 2, 1999

TABLE OF CONTENTS

1. Awareness of Y2K Computer Problems and Sources of Information.....	2
Overall Exposure and Awareness Levels	2
Awareness of the Impact of the Y2K Problem on the Banking Industry.....	4
Sources of Information about Y2K and the Banking Industry.....	6
Information Provided by Banks to Depositors about the Y2K Issue	8
How Respondents Received Y2K Information from their Banks.....	10
2. Public Concern about Y2K Computer Problems on Banks and their Deposits	12
General Concerns	12
Specific Concerns about Impacts of Y2K on the Banking Industry and Banking Services.....	14
Expected Duration of Y2K Impacts at Respondents' Own Banks.....	18
3. Public Confidence in Banks To Prevent or Minimize Y2K Problems.....	20
4. Actions Respondents Will Take To Minimize Y2K Problems and the Potential Impact on Banks.....	22
The Amount of Extra Cash Depositors Expect To Withdraw at the End of the Year.....	25
Technical Notes	27

The Gallup Organization (Gallup) conducted telephone interviews with a randomly selected, representative sample of 2,653 non-institutionalized adults aged 18 or older living in households with telephone service in the contiguous continental United States. The field period ran from March 1-14, 1999.

After interviewing was completed, the data were weighted to match the latest estimates of the demographic characteristics of the adult population available from the U.S. Census Bureau. A detailed description of the methodology can be found in the *Technical Notes*.

All sample surveys are subject to the potential effects of sampling error, a divergence between the survey results based on a selected sample and the results that would be obtained by attempting to interview the entire population in the same way. The chance that sampling error will affect a percentage based on survey results is mainly dependent upon the number of interviews on which the percentage is based. In 95 out of 100 cases, results based on national samples of 2,600 interviews can be expected to vary by no more than 2.2 percentage points (plus or minus the figure obtained) from the results that would be obtained if all qualified adults were interviewed in the same way. For results based on smaller national samples or subsamples (such as men or person over the age of 55), the chance of sampling error is greater and therefore larger margins of sampling error are necessary in order to be equally confident of survey conclusions.

Additional details on the design and conduct of the survey are included in the Technical Notes. Results for focus groups were provided in a separate report.¹ In the remainder of this report, we describe in detail the responses to the national survey of public attitudes and beliefs about the impact of Y2K computer problems on the banking industry.

¹ Y2K and the Banking Industry, The Gallup Organization, April 26, 1999.

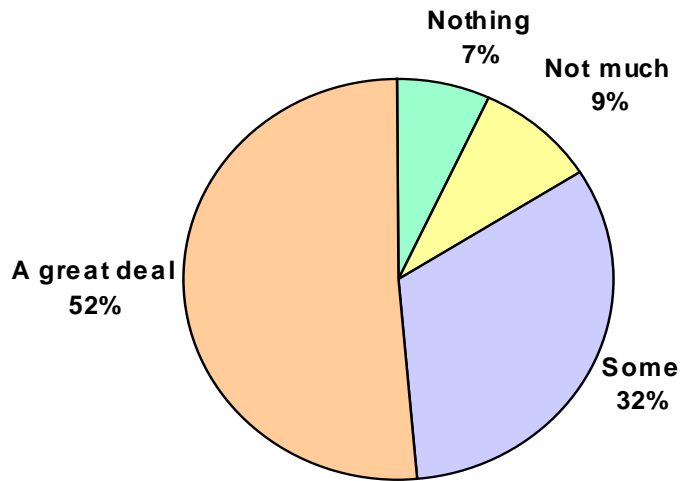
1. Awareness of Y2K Computer Problems and Sources of Information

Overall Exposure and Awareness Levels

By the first half of March 1999, most Americans were familiar with the computer systems issue known as the “Y2K problem,” the “millennium bug,” or the “century date change problem.” As shown in Figure 1, over 80 percent of US adults reported that they had seen or heard about the issue, and about one-half reported they had heard “a great deal” about it. Only 7 percent of Americans indicated they had heard nothing at all about the Y2K issue or its potential impacts on the American economy and society.

Levels of public awareness have increased somewhat since December 1998, when a national telephone survey conducted by Gallup found that 39 percent of Americans had heard “a great deal” about the Y2K problem and another 40 percent had heard something about it. The percentage of Americans who report seeing or hearing nothing about the issue has been steady at 7 to 8 percent for several months.

Figure 1. Exposure to the Y2K Issue



Awareness of the Impact of the Y2K Problem on the Banking Industry

Although general awareness of the Y2K problem among the general public was relatively high in March 1999 (and very high among some segments), exposure to specific information about the potential impact of Y2K problems on the **banking industry** was significantly lower. As shown in Figure 2, only 46 percent of U.S. adults reported seeing or hearing anything specifically about the likely effects of Y2K on banking services. Thus, the percentage who have been exposed to news about the impact of the millennium bug on banking is only about half that who report **any** level of exposure to news about the Y2K computer problem (only 7 percent reported they had heard nothing at all about it).

Across social and economic segments, the variation in exposure to information about Y2K and banking is similar to that observed for overall exposure to news and information about Y2K issues. Variation across regions of the country in seeing, reading or hearing specifically about Y2K and banking was limited to a few percentage points (not shown). However, as for general exposure, residents of suburban communities were 10 percentage points more likely to report awareness of Y2K banking issues compared to those in rural areas (see Figure 3).

Figure 2. Have You Seen, Heard or Read Anything Specifically about the Impact of the Y2K Problem on the Banking Industry?

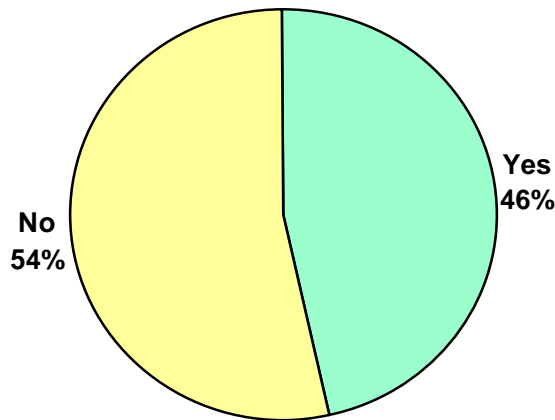
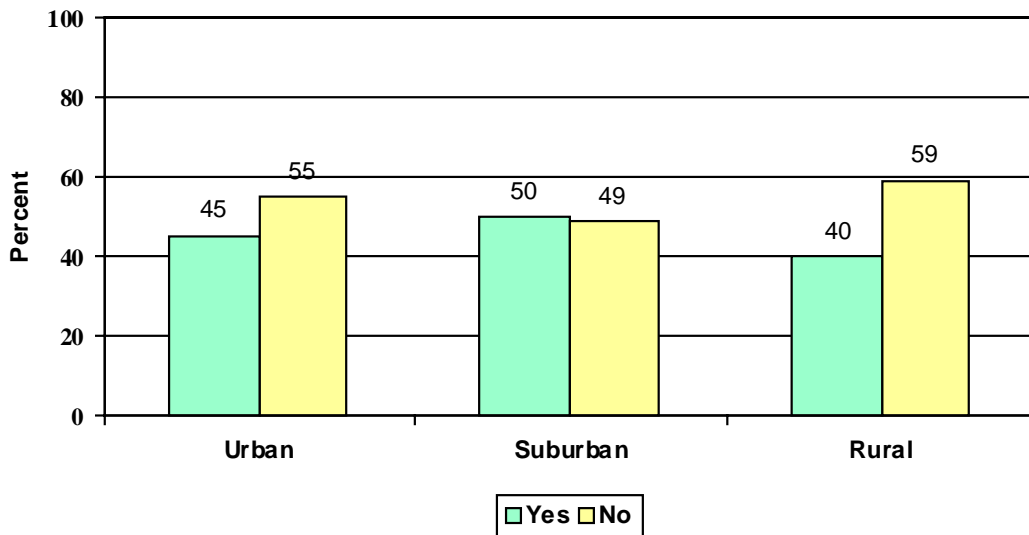


Figure 3. Awareness of Y2K Impact on Banking Industry by Urbanization



Sources of Information about Y2K and the Banking Industry

The subgroup of survey respondents (46 percent) who indicated they had seen, read or heard something *specifically about the impact of the Y2K problem on the banking industry* were asked to name the sources of that information. The question was asked in open-ended format, and interviewers coded as many responses as respondents offered.² Respondents named seven common information sources. Figure 4 displays the distribution of responses across the seven most commonly named sources (plus an “other” residual category).³

Television and newspapers were by far the most commonly cited sources of information about the impact of Y2K problems on the banking industry. Taking account of multiple responses, television was mentioned by 36 percent. Newspapers were the second most commonly mentioned source, named by 32 percent.

Considerably fewer respondents mentioned other types of information sources. Magazines provided information about Y2K and banking for less than half the percentage that mentioned television or newspapers. Family members, friends, and coworkers were mentioned by only 12 percent. Web pages on the Internet were mentioned by only 7 percent of respondents to this item. Lowest of all information sources coded, radio broadcasts were mentioned by only 5 percent of these respondents. A total of 7 percent of respondents named a broad variety of other separate sources (e.g., stock brokers, insurance representatives, school courses, etc.), but none of these were named by more than a fraction of 1 percent of respondents and so are not separately identified.

² No respondent offered more than four sources of information. The average was slightly over two sources named.

³ Because multiple responses were coded, the distribution of **responses** in Figure 4 is thus somewhat different from the distributions in all previous figures in this report. Our objective in Figure 4 is to show the relative propensity of the public to obtain messages from different types of sources. Thus, respondents who named more than one type of information source are counted once for each **different** source. A respondent who mentioned television and the Internet are counted twice in the distribution of **responses** in Figure 4. However, respondents who named the **same type of source** more than once (e.g., two newspapers or three television programs) were only counted once for a specific type of source. So a respondent who named two magazines and three radio programs would have **two** responses counted, one for magazines and one for radio.

Figure 4. Source of Information about Y2K Impact on Banking

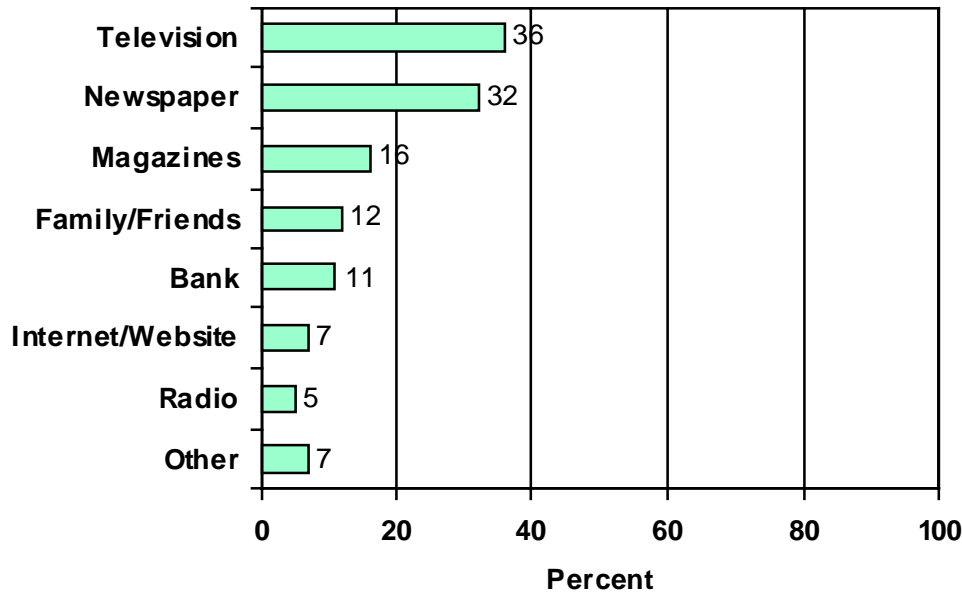
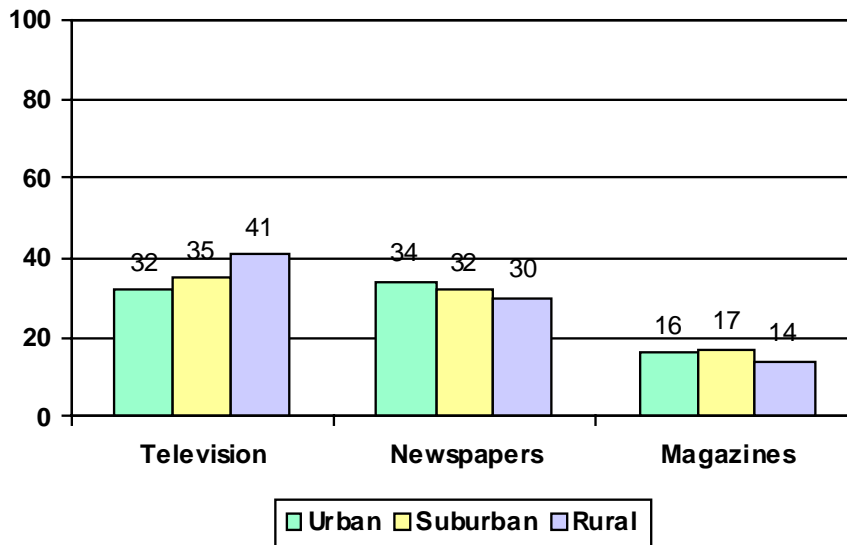


Figure 5. Use of TV, Newspapers and Magazines for Information about Y2K Impact on Banking by Urbanization



Information Provided by Banks to Depositors about the Y2K Issue

Federal financial regulatory agencies have been giving guidance to the banking industry about developing and implementing strategies for communicating with customers about the Y2K computer problems and what steps are being taken to minimize the impact on the quality and continuity of banking services. Federal financial regulatory agencies' guidance suggests appropriate content, format and delivery systems for information about what each bank is doing to accomplish the following goals:

- Develop and implement plans for analyzing, correcting and testing its own computing systems,
- Evaluate interactions with computing systems of its business partners and other organizations,
- Develop contingency plans to handle unforeseen business disruptions, and to
- Reassure customers that deposit insurance provided by FDIC will remain in full force throughout the century date change.

Federal financial regulatory agencies also serve an important validation function by visiting regulated institutions to evaluate their progress toward meeting Y2K preparedness goals.

Among the top priorities is ensuring that bank customers have the information they need to make prudent decisions about managing their funds on deposit in regulated banks. In particular, federal financial regulatory agencies are concerned that bank customers receive specific information from their banks on their year 2000 readiness efforts.

Exaggerated fears of losing access to funds for a prolonged time period could lead depositors to withdraw substantial funds from banks during the final days of 1999. To encourage prudent behavior, federal financial regulatory agencies recommend that each regulated bank plan and implement a broad consumer awareness program about the bank's readiness for the century date change. The March 1999 survey attempted to assess how well bank customers are being kept apprised of Y2K readiness by the banks where they keep deposits and obtain other services.

Respondents were asked the general question, "Have you received any information about the Y2K computer problem from your bank?" As shown in Figure 6, only about one-quarter of survey respondents recalled receiving information about Y2K directly from their own banks, a level considerably below what would be expected based on data from banks who have already begun implementing customer awareness communications efforts.⁴

⁴ In this section, those who received information from their banks were identified by combining responses to two survey questions. Respondents were counted as having received information from their bank if they volunteered "from their bank" in response to a question as to where they got information about the Y2K problem in banking discussed in the prior section (see Figure 4), or if they responded "yes" to the question "Have you received any information about the Y2K computer problem from your bank?". Combining responses is necessary because those who volunteered that they had received Y2K information from their bank in the first question were not asked the second question. The combined categories are thus equivalent to asking all bank account holders whether they had received Y2K information from their banks.

Figure 6. Have You Received Information about Y2K from Your Bank?

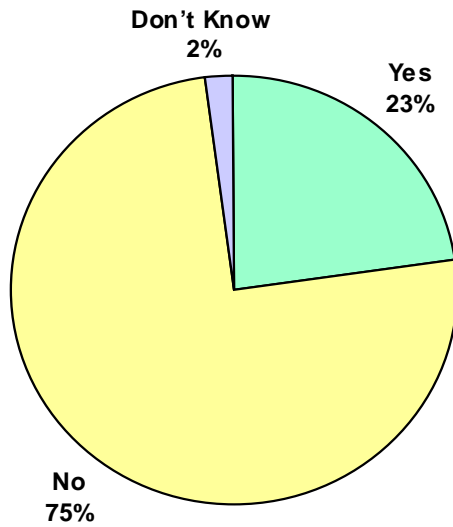
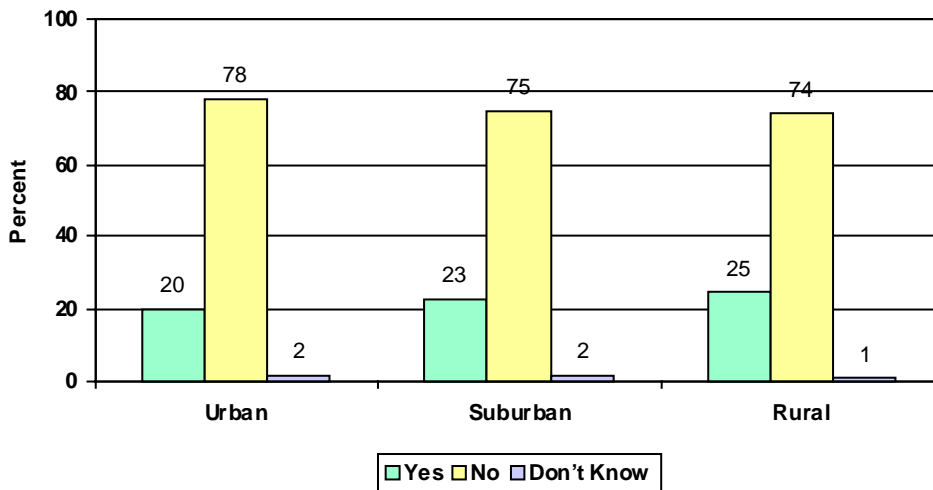


Figure 7. Received Information about Y2K from Bank
by Urbanization

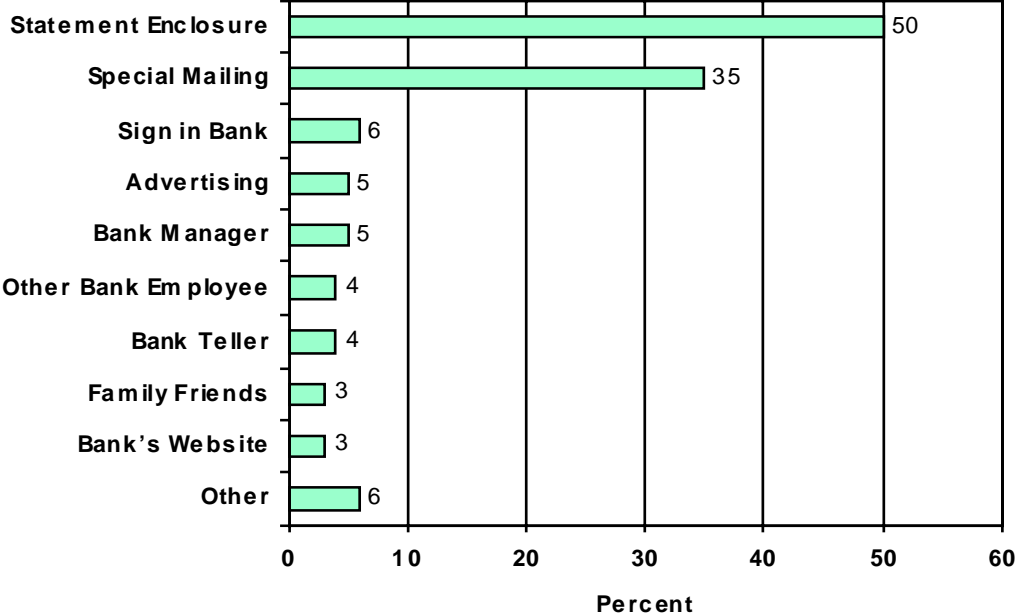


How Respondents Received Y2K Information from their Banks

Those who indicated that they had received Y2K information directly from their banks were asked the open-ended question, “How exactly did you receive the information from your bank?” Interviewers probed for and coded up to two responses.

Figure 8 indicates that fully half of these respondents recalled receiving the information in an enclosure with their regular bank statement through the mail. In addition, 35 percent of these respondents said they had received a special mailing (i.e., not with their regular account statement) from their bank. Seven other ways of receiving information (plus a residual “other” category) were mentioned by respondents, including bank signs, advertising materials, conversations with bank managers, tellers or other employees, family and friends, or their bank’s website. However, all of these modes were mentioned by well under 10 percent of these respondents. Since only 25 percent of the sample was asked this question, this indicates that only about 2 percent to 4 percent of all respondents are receiving Y2K information from their banks via any one of these sources.

Figure 8. How Did Respondent Receive Y2K Information from Bank?



2. Public Concern about Y2K Computer Problems on Banks and their Deposits

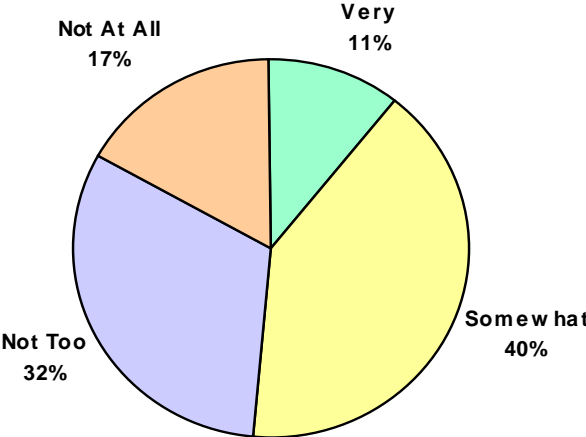
General Concerns about the Banking Industry

Reasoning that respondents' actions to protect themselves from the consequences of Y2K banking problems would be driven by both their knowledge of **and** their levels of concern about the impact of banking service disruptions, the March 1999 survey investigated respondents' state of concern about the problem on several levels. First, respondents were asked the general question, "Overall, how concerned are you about the Y2K computer issue? Would you say you are very concerned, somewhat concerned, not too concerned, or not at all concerned?"

In general, the U.S. population is evenly divided in their levels of concern. Figure 9 indicates that a total of 51 percent are either "very concerned" (11 percent) or "somewhat concerned" (40 percent), and that 49 percent are either "not too concerned" (32 percent) or "not at all concerned" (17 percent).

In addition, survey data suggests that those with more exposure to Y2K issues (more information) are more likely to be planning to take rational and prudent precautions and less likely to be planning to take drastic steps to prepare for Y2K. By providing more of the right kinds of information to depositors, it appears that banks and federal financial regulatory agencies can increase informed decision making, without simultaneously causing higher levels of concern, and, as a consequence, higher rates of more drastic steps to protect access to their money.

Figure 9. Level of Concern About Y2K Computer Issue



Specific Concerns about Impacts of Y2K on the Banking Industry and Banking Services

To probe further about the public's concerns about disruptions to banking services, the March 1999 survey included a series of questions to determine which of seven hypothetical events or responses might result from the impact of Y2K problems on bank computer systems. Six of the items asked respondents how likely they thought it was that specific problems would affect banks' ability to provide normal services or would threaten either access to or the security of deposits. A seventh question asked respondents how likely they thought it was that the general public would react to the problem with panic behavior. The hypothetical events listed below were read to respondents in random order:⁵

- People will panic and pull all of their money out of the bank before the end of the year.
- ATMs will not work.
- People will temporarily lose access to cash.
- Banks will lose track of people's money.
- People will get access to other people's bank accounts.
- The entire banking system will shut down.
- Checks will not be cleared properly and will bounce.

After each one was read, respondents were asked whether they thought each event would occur using the following scale:

- Definitely will happen
- Probably will happen
- You are uncertain
- Probably will not happen
- Definitely will not happen.

Figure 10 displays stacked bar charts showing the percentage of respondents who chose each of the response options for each of the seven hypothetical events. In Figure 10, the events are listed from top to bottom in accordance with the percentage who indicated that the event "definitely would happen."

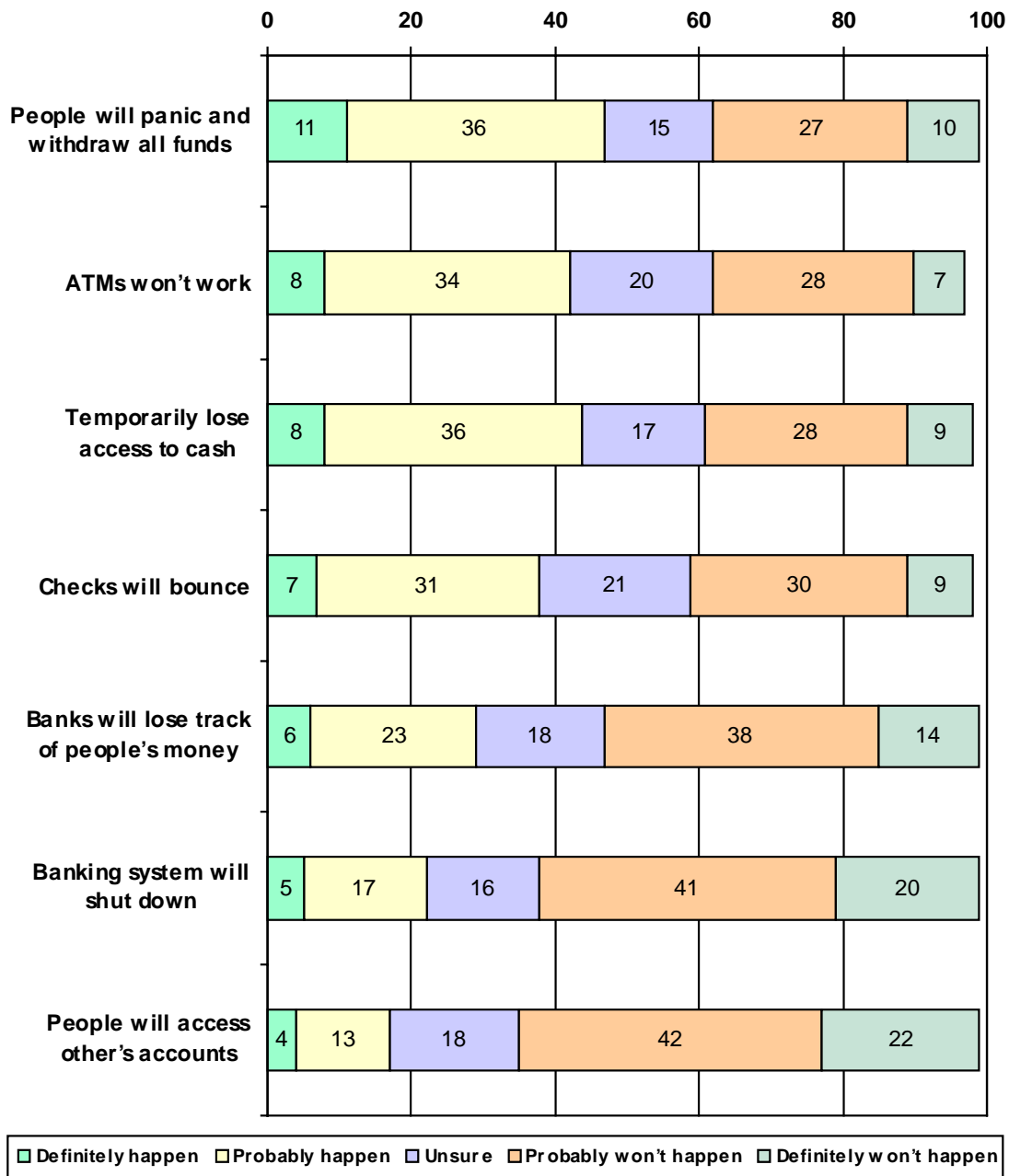
There is considerable variation across the seven items in the percent of respondents who feel each event is more likely to occur or is more unlikely to occur. The percent who are uncertain varies only between 15 percent and 21 percent. However, whereas some 47 percent of respondents believe that panic withdrawals by the public definitely or probably will happen, only 17 percent believe it is likely that bank problems will allow people to have access to the bank accounts of others.

In general, the U.S. public is not inclined to make strong, confident predictions ("definitely will happen") for any of the seven hypothetical events (levels are below 10 percent for all but the panic withdrawal scenario). However, it is clear that Americans have considerable concern that some of the potential negative consequences might occur.

With respect to public response to Y2K threats, nearly half (47 percent) consider it likely that people will panic and withdraw **all** their funds prior to year's end, compared to 37 percent who consider it unlikely.

⁵ The Computer Assisted Telephone Interviewing (CATI) software automatically randomized the order of the hypothetical events read to each respondent. This approach helps to avoid measurement error due to response position preferences and the impact of response to one item on the response to subsequent items.

Figure 10. Perceived Likelihood of Seven Hypothetical Events Caused by the Impact of the Y2K Problem on Banking Services



More than 40 percent consider it somewhat likely that ATMs will fail and that people will temporarily lose access to their deposits. Some 38 percent consider it likely that check processing will be affected by Y2K problems, leading some checks to bounce against account balances that are not accurately updated.

Fewer than 30 percent of respondents consider it at least probable that banks will lose track of people's money, although over half of respondents (52 percent) consider this to be unlikely. Barely one respondent in five believes that the entire banking system will be forced to shut down by computer problems, while 61 percent of the public considers this to be unlikely, and 20 percent are quite certain that it will not happen. Seventeen percent believe it likely that security and control over account access will be compromised by the Y2K problem, but 64 percent of respondents hold the opposite view.

In summary, as has been shown in other surveys, it appears that the public is more inclined to expect particular types of disruption of bank services to occur (ATM problems, temporary inaccessibility of cash accounts), but are not much inclined to expect major problems (the collapse of the entire system, or failure of access security over individual accounts).

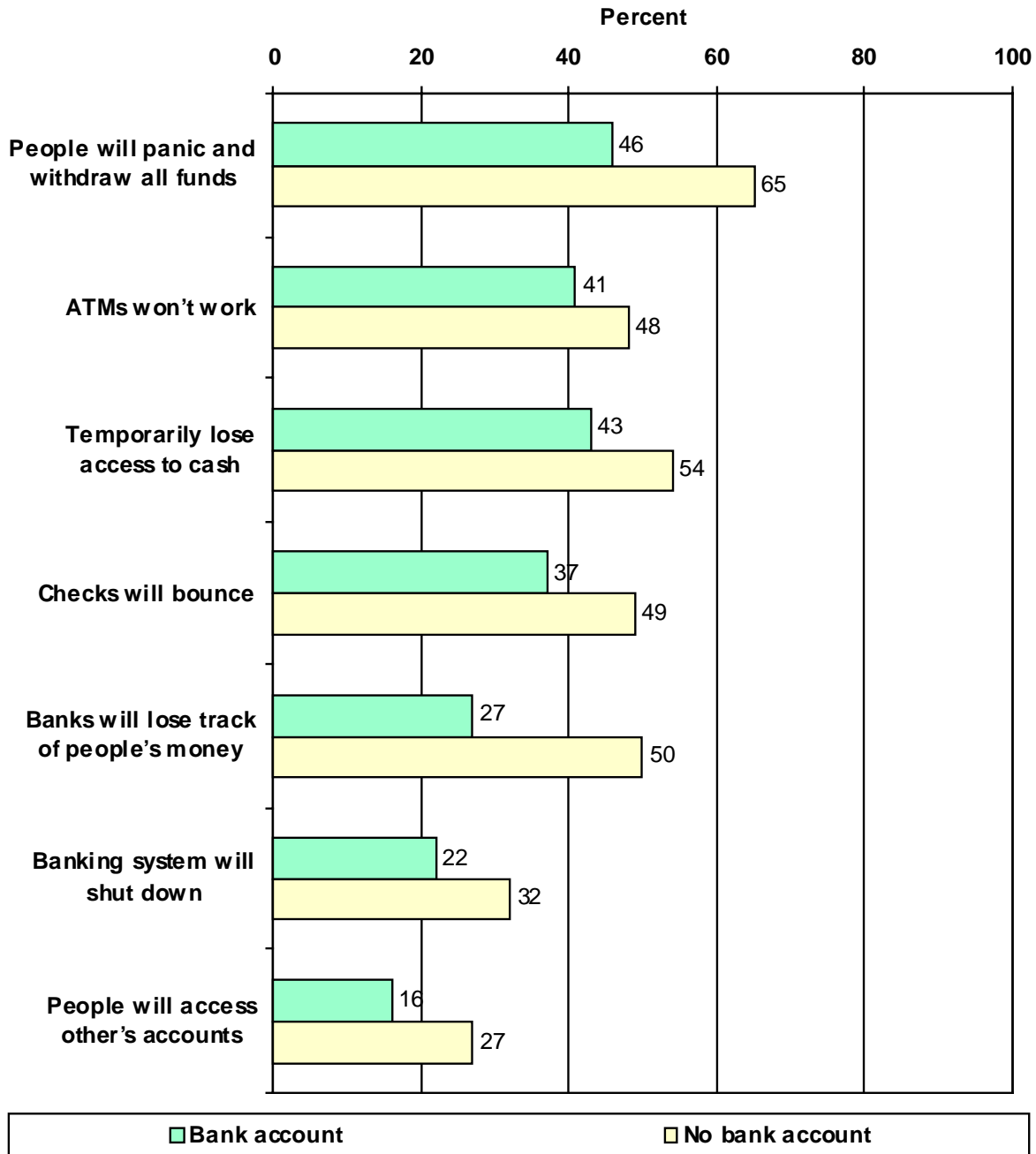
Moreover, these data, together with statements made by a number of focus group participants, suggest that *the public may believe that the most likely cause of banking disruption may be the behavior of depositors who attempt to withdraw all their funds from banks prior to January 1, 2000*. This concern may be among the most important public perceptions that may be addressed by a public information campaign during 1999.

Figure 11 displays the percentage of respondents who believe each of the seven hypothetical events will definitely or probably happen – separately for **respondents with and without bank accounts**.⁶ We note that in all instances, non-depositors are considerably more likely to believe that the seven negative consequences of the Y2K problem will happen. We therefore believe that assessing public attitudes and beliefs based on the population of **actual depositors** will provide federal financial regulatory agencies with a more realistic perspective on the extent of public concern that may need to be addressed for the balance of 1999.

⁶ In the March 1999 survey, 92 percent of respondents indicated they had a bank account, and 8 percent reported they had no bank accounts.

Figure 11. Percent Who Expect Hypothetical Events to Occur by Banking Status

(Bars show percent who believe each event definitely or probably will happen.)



Expected Duration of Y2K Impacts at Respondents' Own Banks

Many surveys of attitudes and beliefs about public figures and institutions indicate that members of the public differentiate sharply between general concepts and their personal circumstances. For example, public ratings on Members of Congress frequently show disapproval with Members in general, but conversely indicate that individuals are much more satisfied with the performance of their own Representatives than with Congress as a whole. Similarly, survey ratings of public schools in the U.S. are typically much more negative than those accorded schools in respondents' own state, city or neighborhood. Consequently, it is important to determine whether public expectations of Y2K problems affecting the banking industry and services are similar when the focus is the banking system in general or respondents' own banking institutions.

As a measure of specific concern about their banks' Y2K readiness, respondents who reported having bank accounts (92 percent of all respondents) were asked, "If Y2K computer problems were to occur at your bank, how long do you think they would last? Would you say for only a few days around January 1,2000; for several weeks, for several months to a year, or for more than a year?"

Figure 12 shows that half of respondents expected that, **if** Y2K problems occur, they will last for only a few days at the beginning of the year. An additional 31 percent of respondents indicated their belief that the problems could continue for a few weeks. Only 10 percent of respondents believed that any Y2K problems would extend for several months to a year, and a scant 2 percent responded that the problems would endure for more than one year. (The 5 percent of respondents who did not know how to answer the question are not shown in Figure 15.) At least at their own banks, respondents are **not** bracing themselves for a long ordeal of disruptions to banking services.

In general, there were few deviations from this pattern across the demographic, social and economic groups in the sample. Respondents in the youngest age group (18-25) were more likely to believe that Y2K disruptions would continue for several months to a year (19 percent compared to 10 percent overall). Those without a high school degree also were less likely to believe that the Y2K problems would be short-lived, but were also much more likely to indicate they did not know the answer.

Figure 13 shows that respondents with greater exposure to the Y2K issue are more likely to believe that any problems will be overcome quickly at their own banks. Those with least exposure to information about Y2K issues are slightly more likely to believe the problems will persist for longer periods, and also are more likely to say they do not know what to expect about the duration of the problem at their banks.

In general, these results suggest that most depositors do not expect their own banks to suffer from long-term effects of the millennium bug. We believe that this fact accounts for the pattern of responses about the coping behaviors that respondents expect they will take in response to the threat of Y2K disruptions in banking services – discussed in the next section.

Figure 12. Expected Duration of Y2K Problems At Respondent's Own Bank

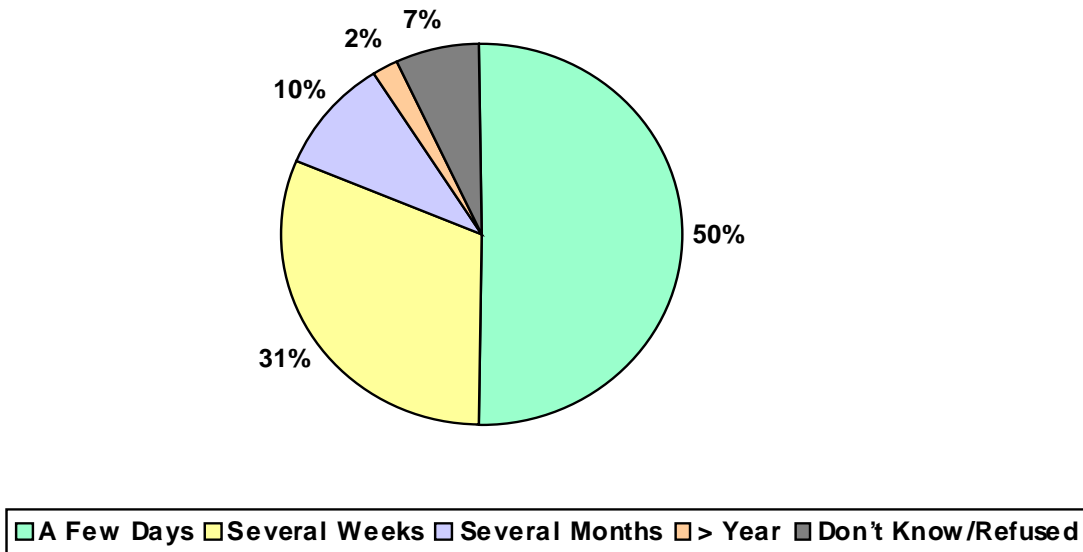
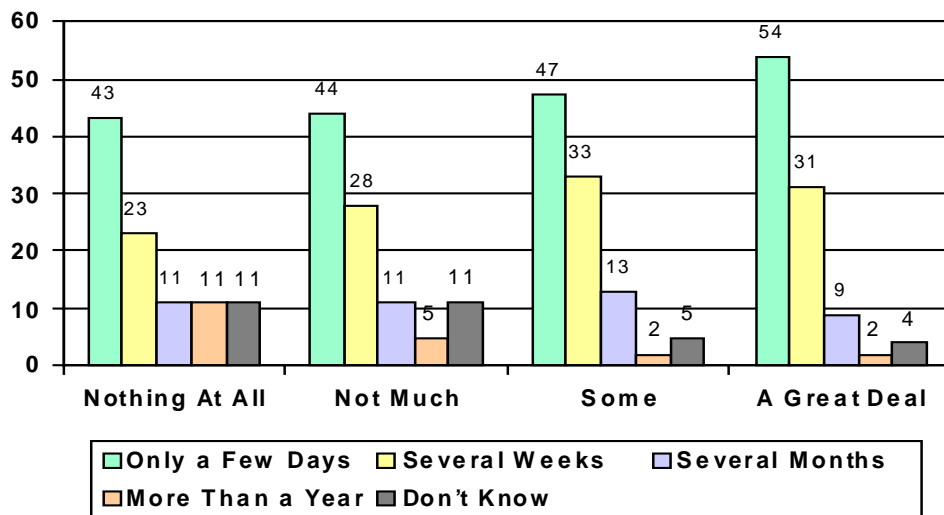


Figure 13. Expected Duration of Y2K Problems at Respondent's Own Bank by Exposure to Y2K



3. Public Confidence in Banks To Prevent or Minimize Y2K Problems

At the time of the March 1999 survey, about nine months remained for banks to repair or replace and test their systems for Y2K readiness, and to develop a comprehensive set of business contingency plans to ensure the smoothest possible transition into 2000.

To a large degree, public coping behavior in the face of the Y2K threat to banking services will depend upon the level of confidence they have in their own banking institutions to complete and test all system changes by the end of the year. To assess this attitude, respondents were asked the following question:

“Now, please think about your own bank; that is, the bank where you have the most money. How confident are you that your bank will solve the Y2K computer problem before the year ends? Do you think your bank will:

- Definitely solve the problem in time
- Probably solve the problem in time
- Uncertain
- Probably will not solve the problem in time, or
- Definitely will not solve the problem in time.”

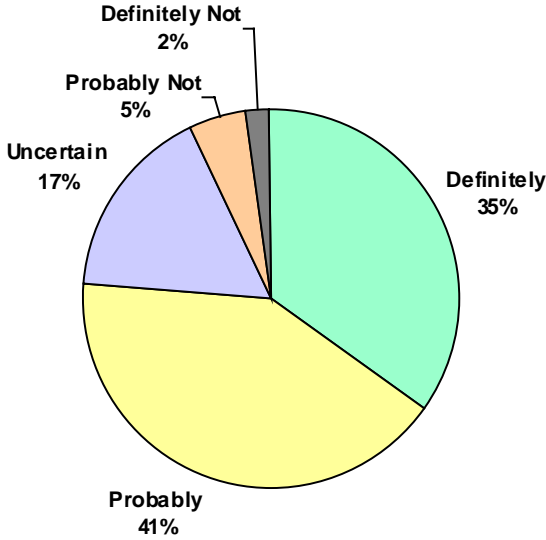
As shown in Figure 14, over three-fourths of the sample (76 percent) indicated some level of confidence that their bank would solve the Y2K problem before the end of the year. Over one-third of respondents (35 percent) believe that their banks will definitely meet the deadline for system correction, and an additional 41 percent indicated that it was probable that their bank would finish work in time.

Some 17 percent of respondents were uncertain about whether their banks would solve systems problems by the end of the year. However, only about 7 percent of all bank depositors felt it was unlikely that their banks would complete necessary changes – with only 2 percent indicating that their banks would definitely not be ready.

These data, along with many other distributions documented in this report, suggest that only about one-fourth to one-fifth of the public believes that they will personally be at significant financial risk as the year 2000 begins. These individuals are in the greatest need of information about how their banks are progressing and about the views of qualified experts on the real risks that they will experience any significant disruption in their ability to gain access to and manage their money.

On the other hand, the results in Figure 14 point out that only about one-third of Americans have reached a level of high confidence in how their banks are progressing. Some level of uncertainty remains for nearly two of three bank depositors. Public information campaigns for the remainder of 1999 should be designed to aim at both sectors of society – those who are optimistic that the potential problems will be surmounted, but are still somewhat uncertain, and those who are more fundamentally under-informed about where the banking system stands in its progress toward building-level and system-wide readiness for the century date change.

**Figure 14. Level of Confidence in Respondent's Own Bank
To Solve Y2K Problems In Time**



4. Actions Respondents Will Take To Minimize Y2K Problems and the Potential Impact on Banks

A major part of Y2K readiness for the banking industry is developing comprehensive contingency plans to cope with unforeseen events. Experts in Y2K planning have focused considerable attention on the extent to which Y2K problems will be made more difficult than merely computing system problems because these systems are so closely intertwined with human expectations and behavior patterns. It is therefore conceivable that the worst aspects of transition into the year 2000 may arise because people decide to alter their typical behavior in ways that place extraordinary stress on information and communications systems that are somewhat less robust than normal because of the many changes made to achieve Y2K compliance.

Fortunately, recognition of this possibility is growing rapidly. The first quarter of 1999 saw the publication of more and more frequent feature articles across all media (including mass communications) suggesting that public panic behavior about Y2K problems is a considerably greater threat to social and economic systems than that posed by the possibility that some systems will not be fully remediated by December 31, 1999.

To improve the federal financial regulatory agencies' understanding of the prospects that Y2K problems will be exacerbated by human behavior, the March 1999 survey asked respondents about their likely responses to the impact of Y2K problems on banking services. Respondents⁷ were asked to indicate how likely they were to do each of the following nine things:

- Confirm your bank balances before the end of the year.
- Withdraw all your money from the bank.
- Withdraw some extra cash.
- Temporarily stop your direct deposit or direct payments.
- Transfer all your money to a bank that says it has solved its Y2K problem.
- Pull your funds out of other financial accounts, such as mutual funds, CDs, stocks or bonds.
- Discuss with your bank its Y2K readiness.
- Keep better track of your banking transactions, including withdrawal and deposit slips.
- Maintain your usual banking routine.

The nine possible behaviors were read to each respondent in random order to prevent response effects. For each item, respondents were asked how likely they were to act in the way specified using the following response categories:

- Definitely will do
- Probably will do
- Unsure
- Probably will not do
- Definitely will not do.

Note that not all of the nine listed actions (e.g., stopping direct deposits/payments, or withdrawing funds from "other" accounts) were applicable to all respondents.

⁷ This series of questions was asked only of the 92 percent of the sample that indicated they had bank accounts.

Figure 15 shows the response patterns provided by respondents to the nine hypothetical actions.⁸ Very wide variation is evident in whether respondents would be likely to adopt these actions. Items are presented in order of the percent who reported they would “definitely will do” the step described.

The top four items on the chart – things that respondents are most likely to do – are generally regarded as prudent steps for preparing for the end of year transition and would be highly unlikely to represent external, customer-based disruptions for banking institutions. The bottom four bars of the chart – things that respondents are least likely to do – are the listed items that represent the greatest threat to orderly operation of the banking industry. The middle item – withdrawing some extra cash before the end of the year – is a step that some analysts are suggesting as a precaution against inconvenience should minor problems emerge.

Eighty-six percent of respondents expect to confirm their account balances before year’s end, with 57 percent indicating they would definitely take this step and only a combined 9 percent indicating that it was unlikely that they would do it. Seventy-eight percent said they will keep better track of bank transactions, with nearly twice as many indicating “definitely” as “probably.” Only 15 percent of depositors felt it unlikely they would take this precaution. Eighty-two percent of respondents expected to continue their usual banking routines at year end – with responses evenly split between those who reported “definite” and “probable” intentions. Fifty-nine percent thought it likely that they would discuss Y2K readiness with bank staff, again with the percentages evenly split with respect to the firmness of intent.

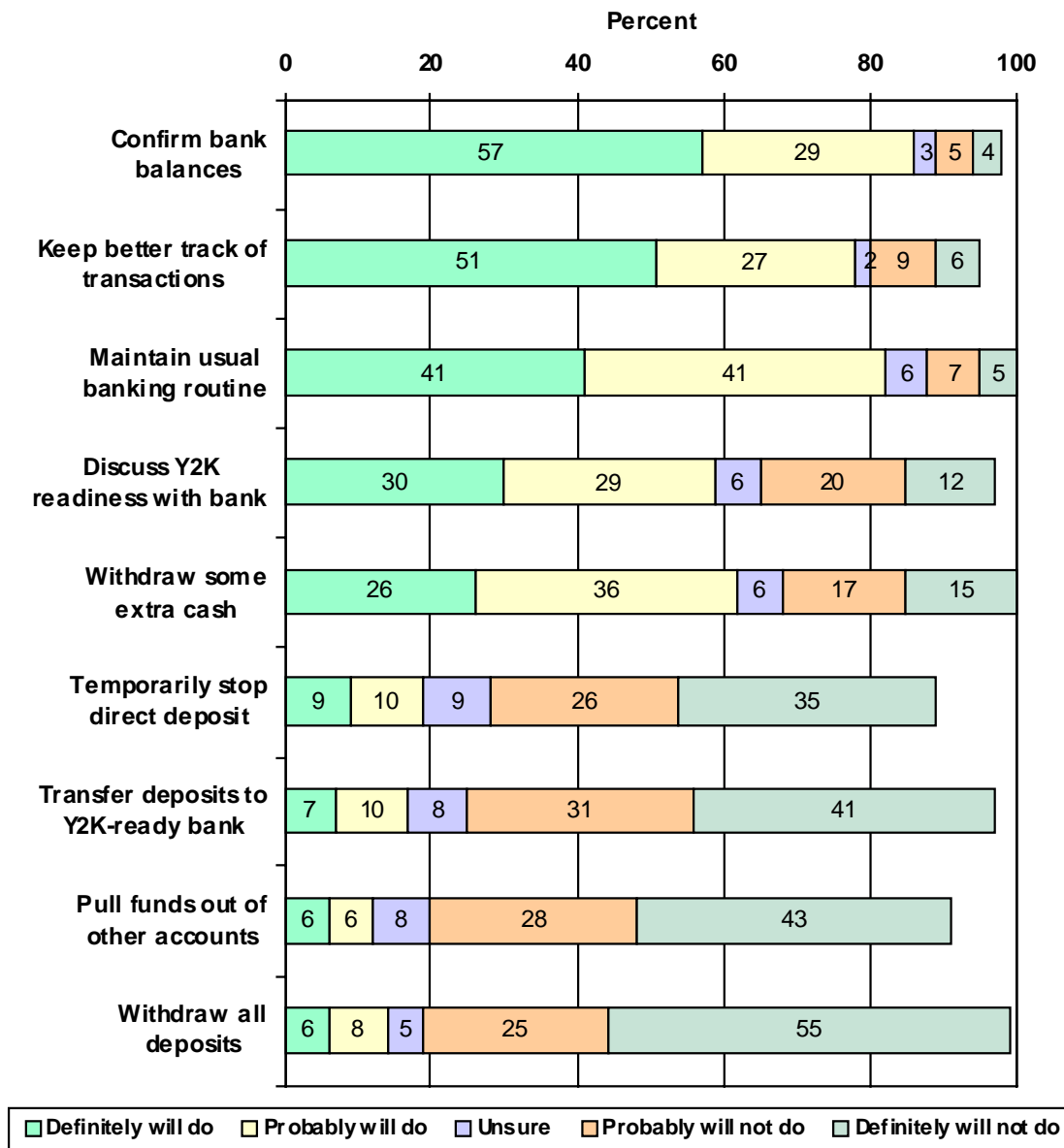
Respondents were divided on the question of whether or not to withdraw some extra cash from their bank accounts before the end of the year. Twenty-six percent reported that they would definitely withdraw some extra cash and an additional 36 percent thought it probable that they would do so. However, approximately one-third of respondents considered it unlikely that they would need extra cash over the transition into 2000, with 17 percent reporting they probably would not withdraw extra cash and an additional 15 percent indicating they definitely would not make additional withdrawals. Six percent were unsure about whether to take this step. The distribution of responses for this survey question indicates that, as of March of 1999, a majority of depositors (59 percent) remain uncertain about whether or not they will withdraw extra cash just prior to the century date change.

Far fewer respondents believed it likely that they would take any more aggressive steps to ensure against banking problems due to Y2K. For each of the four remaining items in Figure 15 (stopping direct deposits and payments, transferring funds to a Y2K-ready bank, pulling funds out of other financial accounts, and withdrawing all of their bank deposits), fewer than 20 percent reported it was at all likely that they would take those steps. Fewer than 10 percent thought they would definitely take any of those actions. Fully 55 percent claimed that they definitely would **not** withdraw all of their funds from bank accounts.

The data presented in Figure 15 indicate that the public is strongly inclined to take the steps that Federal financial regulatory agency experts and many responsible media analysts are advising them to do – take the trouble to pay closer attention to balances and transactions so that any errors are quickly caught and corrected – but do not take unnecessary, drastic actions to prepare for a catastrophe that has little or no chance of occurring. At the same time, some uncertainty remains about what the public will actually do as year end arrives. Although few respondents report they are “unsure” about their likely behavior, substantial percentages still describe their likely behavior in terms of “probable” rather than “definite” actions. This suggests that their perspectives and consequent behaviors might be subject to change as a result of the continuing flow of news and analysis about the Y2K problem from the banking industry.

⁸ Less than one percent of the cases had missing data (i.e., “don’t know” or refusals). However, because some actions were not applicable to some respondents (e.g., those who do not use direct deposit or direct payment arrangements), some of the stacked bars do not sum to 100 percent.

Figure 15. Respondents' Likelihood of Taking Specified Actions in Response to Possible Y2K Problems with Banking Services



The Amount of Extra Cash Depositors Expect To Withdraw at the End of the Year

In the March 1999 survey, project researchers believed that asking respondents to report the actual amounts they planned to withdraw would be considered a sensitive and invasive question that would generate a large percentage of refusals. Instead, survey respondents who reported an intention of making extra cash withdrawals⁹ were asked the question with the following wording:

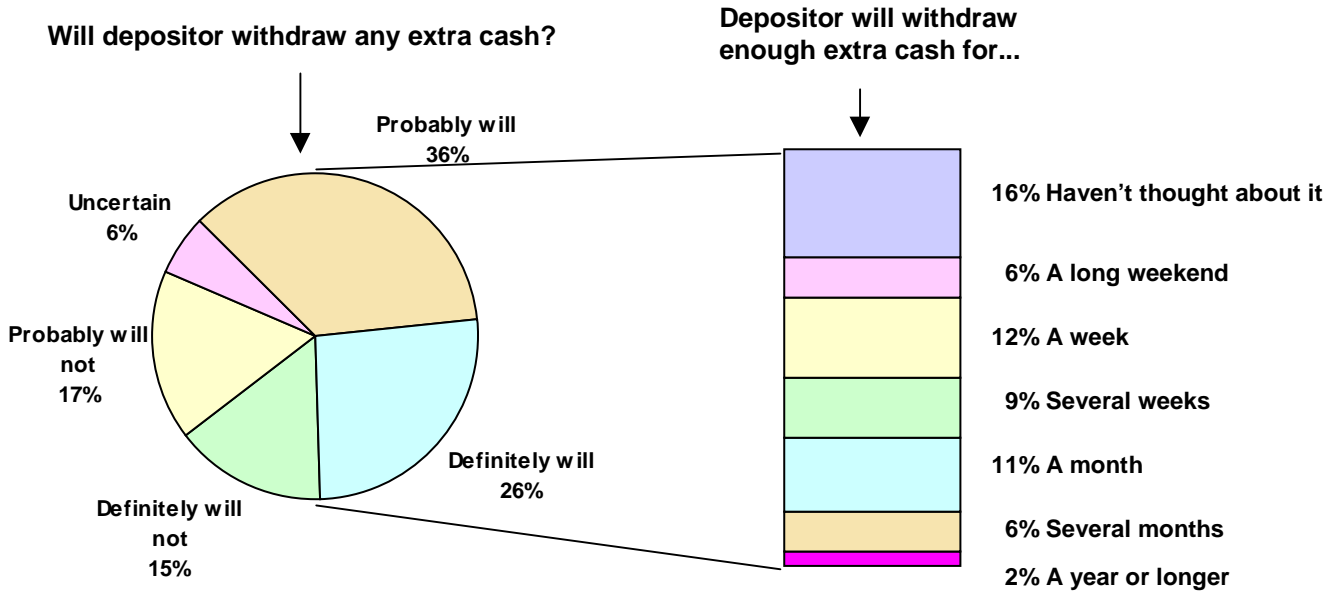
“You indicated you might withdraw some extra cash. How much extra cash would you withdraw? Would you say enough for:

- a long weekend
- a week
- several weeks
- a month
- several months
- a year or longer,
- or haven't you thought about this?

Figure 16 shows the distribution of responses about the amount of money that may be withdrawn by the 62 percent of respondents who said they would "definitely" or "probably" withdraw some extra cash. Within this group, responses were highly varied. First, about 16 percent indicated that they had not thought about the amount of extra cash they would withdraw. Six percent reported they would take out enough for a long weekend, 12 percent said they would withdraw enough to last one week, 9 percent indicated they would take out several weeks worth of cash, and 11 percent planned to withdraw enough for one month's expenses. In addition, 6 percent felt they would need enough for several months, and 2 percent planned to withdraw enough for a year or longer. (Note: percentages in the column graph of Figure 16 sum to the 62 percent who said they would definitely or probably withdraw some extra cash.)

⁹ Recall that 62 percent of bank account holders reported that they would definitely or probably withdraw some extra cash. Since 92 percent of respondents were account holders, the question about the planned amount of extra cash was asked of about 56 percent of the total population represented by the sample.

Figure 16: How Much Extra Cash Respondents Plan to Withdraw



Bar shows breakdown of the 62% who reported they "definitely" or "probably" would withdraw some extra cash.

Technical Notes

This section of the report describes the methodology used in conducting the survey and producing estimates based on the survey results. It covers the sample selection, nonresponse, weighting procedures, and calculation of standard errors.

Gallup conducted telephone interviews with a national sample of 2,653 non-institutionalized adults in telephone households in the United States. Data collection was conducted between March 1-14, 1999.

All sample survey estimates are subject to a variety of sources of error. For example, with any randomly selected sample, the sample statistics may deviate from the corresponding population figures because of random sampling error. In addition, the sample results may be distorted by the effects of noncoverage of some portion of the population, by the impact of nonresponse on the survey results, and by errors introduced in the measurement process. In this survey, more than 8 percent of the household population were omitted by the sample design; most of these omissions involve households without telephones. Another potentially serious source of error in the results is nonresponse. In general, the bias in means and proportions due to nonresponse is a product of the nonresponse rate and the average difference between the respondents and nonrespondents. The rate of nonresponse to this survey (about 69 percent) leaves room for potential nonresponse biases. Below, we provide more detailed information about the sample selection procedure (and its omissions), nonresponse, the weighting procedure (which attempted to offset the effects of noncoverage and nonresponse), and the calculation of standard errors. The standard errors estimate the impact of random sampling error on the results.

Sample Selection

The sample was selected in two stages. In the first stage, a systematic national sample of random telephone numbers was generated. In the second stage, we attempted to contact these numbers and select a single eligible person for the interview.

The first-stage sample was selected using a list-assisted design by Gallup's regular vendor for telephone samples, Survey Sampling, Inc. (SSI). In a list-assisted, random-digit dial (RDD) sample, a sample of telephone "banks" is selected from the population of active banks and then a randomly generated suffix is appended to complete the telephone number. A bank is a group of 100 consecutive numbers that share their first eight digits—that is, their area code, exchange, and the first two numbers of their four-digit suffixes. For example, all the possible telephone numbers beginning 301-838-57__ form a single bank. Prior to selection, the banks are classified according to the number of residential listings they contain. In the method developed by Casady and Lepkowski (1993),¹⁰ numbers from the stratum of banks containing no residential listings ("zero" banks) are under-sampled to reduce the number of calls to unassigned or non-working numbers. However, it is more common simply to omit banks that include few residential listings. The omission of these banks sharply increases the proportion of working residential numbers in the sample (from approximately 25 percent to more than 50 percent, depending on the exact rule for dropping banks). Evaluations of the bias associated with the omission of such banks indicates that it is small (Brick, Waksberg, Kulp, & Starer, 1995; Giesbrecht, 1997)¹¹. As a result, both major vendors of telephone samples (SSI and Genesys) routinely offer samples based on all banks with three or more residential listings.

The sample for this study was selected using a "truncated" design that omitted banks with two or fewer residential listings. According to Giesbrecht (1997), this procedure omits about 2.4 percent of all households and about 2.6 percent

¹⁰ Casady, R. & Lepkowski, J. (1993). Stratified telephone sample designs. *Survey Methodology*, 19, 103-113.

¹¹ Brick, J.M., Waksberg, J., Kulp, D.W., & Starer, A. W. (1995). Bias in list-assisted telephone samples. *Public Opinion Quarterly*, 59, 218-235.

Giesbrecht, L. H. (1997). Coverage bias in various list-assisted RDD sample designs. Paper presented at the 52nd Annual conference of the American Association for Public Opinion Research, Norfolk, Virginia, May 16, 1997.

of telephone households.¹² The remaining banks were sorted by county, and a systematic sample of random numbers was generated. Before turning over the sample to Gallup, SSI ran the sample numbers through an auto-dialing procedure that detected (and eliminated) some of the unassigned numbers. Typically, about 12 to 14 percent of all numbers are eliminated in this step, further increasing the proportion of working residential numbers in the sample. No other numbers were excluded from the sample (for example, numbers that had already been selected by SSI for some prior study were *not* excluded). The sample SSI provided to Gallup included 13,310 numbers. This figure assumed that 57.5 percent of the sample numbers would be working residential numbers, that 98 percent of these residences would include at least one eligible adult, and that interviews would be completed with 40 percent of the eligible households within the two-week data collection period.

Gallup then attempted to contact persons in households linked to the sample telephone numbers. When a person answered, telephone interviewers verified that the number was linked to a residence and attempted to select an eligible adult (at least 18 years old). This second stage of sampling was carried out using the “last birthday” method (in which the interviewer asks to speak with the eligible person in the household who most recently had a birthday).

Nonresponse

Table 1 below shows the final dispositions for the sample. A total of 4,036 of the sample numbers turned out to be unassigned or business numbers. In addition, Gallup interviewers were unable to reach anyone at 1,531 of the numbers to determine their residential status because of repeated busy signals or no answers. Within the remaining numbers classified as residential, the interviewers screened 2,785 numbers (to find out whether the household included an eligible adult) and completed 2,653 interviews. Overall, we estimate the response rate to be 31 percent.

We estimated the response rate using the definition recommended by the Council of American Survey Research Organizations (CASRO). Under this definition, the numerator for the response rate is the number of completed interviews (2,653) and the denominator is the estimated number of eligibles (in this case, eligible households) in the sample. We estimate that 65.7 percent of the sample numbers were working residential numbers ($= 7,743 \text{ residential numbers} / 7,743 + 1,987 \text{ business numbers} + 2,049 \text{ unassigned numbers}$). In addition, we estimate that 98.7 percent of these residences included one or more eligible members ($2,749 \text{ eligible} / 2,785 \text{ screened}$). Overall, then, we estimate that the sample numbers were linked to 8,636 eligible households ($13,310 \times .657 \times .987$); this yields a response rate of 30.7 percent ($2,653 / 8,636$).

¹² Data from the Current Population Survey indicate that about 94 percent of all households in the United States have a telephone.

Table 1. Disposition of Sample Cases

Disposition	Frequency
All Sample Numbers	13,310
Business Numbers	1,987
Unassigned Numbers	2,049
No Answer/Busy	1,531
Answering Machine (Residential)	262
Other Residential Numbers	7,481
Contacted Residential Numbers	7,481
Not Screened	4,696
Refusal/Breakoff	3,393
Other (Language problems, etc.)	495
Callback	808
Screened	2,785
Ineligible	36
Complete	2,653
Callback	28
Breakoff	68

Weighting

Weights are applied to survey data for a variety of reasons. Often samples are selected with unequal probabilities, and the weights compensate for these differences in selection probabilities. In addition, the weights may attempt to adjust for the effects of nonresponse and under-coverage.

The weights for this study were developed in two steps. In the first, we calculated a base weight (W1) that reflected the respondent's selection probability:

$$W1_j = (1/k) * (e_j / t_j)$$

in which k represents the constant selection probability for the sample numbers; e_j the number of eligible adults at that household; and t_j the number of telephone lines linked to the respondent's household. To reduce the variability in the base weights, we set the value of t_j to 3 for those cases (n=58) who reported more than three telephone lines. Similarly, we set the value of e_j to 4 for those (n=47) who reported that their households included more than four eligible adults. Because SSI does not routinely provide selection probabilities for the telephone numbers, we used the ratio between the number of completed interviews and the 1997 Current Population Survey (CPS) estimate of the number of households in the United States in place of k (that is, we set k equal to 2,653 / 101,083,771).

Then, to reduce the impact of nonresponse and the omission of households without telephones, we adjusted the base weights. The adjustment procedure brought the sample data into line with the 1997 CPS estimates of the size of the adult

population for 48 population subgroups. The 48 adjustment cells were formed by crossing region (Northeast, Midwest, South, and West), sex (male and female), age category (18 to 39 vs. 40 or older), and three race-education groupings (low education vs. high education, non-Hispanic white vs. all other, high education). For the purpose of forming adjustment cells, we classified all those with high school education or less into the low education group and all those with more than a high school diploma into the high education group. We had originally hoped to cross the education category with race (distinguishing non-Hispanic whites from all others), but the resulting 64-cell scheme produced some very small cell sizes (and some very large adjustment factors). As a result, we ignored the race variable within the low education group.

The final weight (W2) for respondent j within adjustment cell i was the base weight (W1) times an adjustment factor derived from the 1997 CPS data:

$$W_{2ij} = W_{1ij} * T_i / (\sum W_{1ij})$$

in which T_i is the CPS estimate of the size of the population in cell j and the summation in the denominator is across all of the respondents in cell j. We calculated adjusted weights using both the full 64-cell scheme and the collapsed scheme involving 48 cells. We then estimated 24 proportions and their standard errors from the sample data, using both sets of adjusted weights. For 21 of the 24, the weight based on all 64 cells yielded estimates with larger standard errors than the weight based on 48 cells. For this reason, we included the 48-cell adjusted weight in the final data set.

Standard Error Estimates

Although the first-stage sample of telephone numbers was a simple random sample, the selection of individual respondents within households with multiple eligible members (and the presence of multiple telephone lines in some of the sample households) produced a final sample with unequal selection probabilities. In addition, the adjustment of the weights to CPS totals increased the variability to the weights. In preparing standard error estimates for statistics derived from the survey data, we used SUDAAN to accurately reflect the impact of these design features on the variance of the sample estimates. SUDAAN is a standard software package for estimating standard errors for statistics derived from data from complex samples. For the purpose of estimating standard errors, we treated the sample as though it were stratified by region and selected with unequal probabilities within each region. (Although the sample was not actually stratified, treating the regions as strata allowed us to capture some of the gains in precision from adjusting the weights to CPS totals.) The standard errors in the tables (provided to the Federal financial regulatory agencies as a separate deliverable) were produced using SUDAAN.