Study of consumer Interest in Cheque Imaging

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EXECUTIVE SUMMARY

ISSUE:

The purpose of this research paper is to examine if there is market demand from retail customers to view pictures of their paid checks through alternative delivery mechanisms.

CONCLUSION:

Our research communicated that retail banking customers are interested in receiving check photos through alternative delivery mechanisms. They are willing to pay a fee of $2.00 or less for this service.

SUMMARY:

Alternative delivery mechanisms include all non traditional means of banking such as ATM machines, banking by telephone, and computer banking. Our research revealed that retail banking customers are interested in receiving check photos through alternative delivery mechanisms. Delivery of this requires digitizing check pictures to transform them to electronic information. Consumers are willing to pay a fee of $1.99 or less for copies of digitized check images.

Although 69.2% of those surveyed indicated that they were interested in viewing check images, many do not currently utilize alternative banking delivery mechanisms other than ATMs. Thus, the transition to computer banking for the retail market may be a slow process. Furthermore, the use of the telephone for this process requires the availability of a facsimile machine to send the image to the customer. ATMs would be the predominant delivery choice to view check images.

We believe that the emphasis on ATMs in this study is because of their convenience. Consumers value convenience. Given the expedience and availability of ATMs, many would prefer to complete virtually all of their banking transactions without even entering the branch. We recommend duplicating this research in the commercial marketplace, where customers needs may be significantly different.

BACKGROUND AND BUSINESS and/or ACADEMIC PERSPECTIVE

When you perform a banking transaction today, chances are you need not even leave your house. Are banks placing branches in the home? Not quite, but traditional bank substitutes are so good, it is difficult to know the difference. These substitutes comprise alternative banking delivery mechanisms; examples of these include executing transactions

via your touch-tone phone and utilizing your home personal computer. You can perform almost all banking transactions through these mechanisms, with the exception of withdrawing cash. For that activity, visit the closest Automated Teller Machine (ATM), which may be as near as the lobby of your building.

There are several products currently available using alternative delivery mechanisms. Alternative delivery mechanisms include all non traditional means of banking such as ATM machines, banking by telephone, and computer banking. The product which will be studied in our research paper is the ability to view pictures of paid checks. In order to provide pictures of paid checks through these alternative delivery mechanisms, the paper checks must be converted to digital form. This method involves digitizing paper. Digitizing is the process of converting paper information into electronic information. This procedure is performed by electronically scanning paper and turning it into a series of 'ones' and 'zeros.'

Motivation/Justification for the Research:

Convenience, market forces, and speed are just some of the many reasons that over half of all banking transactions do not take place in a traditional branch. Consumers want instant access, in many different forms. However, there are opportunities to "modernize" banking transactions even further. One of these is the ability to view through alternative banking delivery mechanisms, images (pictures), of checks and deposits made by customers to a bank.

The devices by which consumers can pay for items have increased considerably over the past 30 years. These payment methods include credit cards, debit cards, and "Stored Value Cards." However, even with the advent of a variety of new payment tools, traditional payment methods, such as checks and cash have consistently been increasing each year. This trend of increasing check volume is expected to continue until the year 2021, despite the efforts of the Federal Government to convert all of their payments to electronic form by 1999, (Novack, p. 140).

If these paper transactions do remain a part of the payments system, there remains a potential need to view images (pictures), of paid items. Government regulations require these pictures to be maintained for a period of five to seven years from the date of payment. Conventionally, banks have relied on the pictures taken during processing which have been stored on microfilm for retrieval. When a customer inquires about an item that was paid, a customer service representative will obtain the appropriate film cartridge and take a photocopy of the item to be sent to the customer. This is extremely labor-intensive, as many banks process millions of items per day. As technology has advanced, many banks now rely on digitized images of items to meet this need. Not only do digitized images provide a better quality picture, but they can be stored and retrieved in a more efficient manner. It is the only technologically feasible by which pictures of paid items can be delivered through alternative banking delivery mechanisms.

Digitized image technology is expensive. Do customers want to access these items through alternative banking delivery mechanisms, or are they content utilizing the traditional means by which to obtain proof of payment? If the consumer market demands that all banking products be available through alternative delivery mechanisms, and if they are willing to pay for them, banks must make strategic decisions to stay competitive. Banks must either invest in the proper technology to provide customers what they demand, or risk losing the customer.

Business Perspective- Applied Research:

The information obtained in this study can assist banks in determining a strategic direction to take with regard to check images for the retail marketplace. The retail banking customer has very different needs than the corporate customer. A separate study in which the corporate marketplace is investigated may reveal important and distinct information.

Business Perspective- SWOT ANALYSIS:

A SWOT Analysis is an effective tool which can be used to examine the issues which will directly affect the success of alternative delivery mechanisms. In our opinion, the SWOT analysis is as follows:

Strengths:

Customer access to information 24 hours per day.
- Timely access to information.
- The ability to offer a customer more than one method of retrieving information.
- Sophisticated technology systems will help to make a banking institute "future-proof."
- Diversity helps capture different types of markets.
- The ability to cut internal costs due to advanced technology.
- Increased efficiency due to automation.
- Increased accuracy of banking transactions. Weaknesses:
- High price of service.
- Continual altering of customer wants and needs.
- * Hostile feelings of employees due to possible pending lay-offs due to automation.
- Multiple options for the customer.
- Initial investment in technology will be expensive. Opportunities:
- The ability to obtain a larger customer base.
- Global expansion. This is an enormous market which will be a great opportunity in the future.
- The ability to take advantage of the growing popularity of Internet banking. Threats:
- Continual changing technology.
- Uncertainty of the banking industry.
- Competition from "lower price" operations.
- Possible failure of product due to non-acceptance of customer.
- General competitiveness of the banking industry.

After reviewing this internal analysis, an aggressive strategy as well as a diversification strategy is recommended. In other words, according to the SWOT analysis, the retail banking industry should diversity by adding this new technology. The results of the focus groups and survey influence this decision.

FINDINGS FROM SECONDARY SOURCES

There were no secondary research sources that explored the topic of products available through alternative banking delivery mechanisms. Furthermore, none of our research unveiled an examination of how traditional banking products will integrate into the changing world of banking. This was a primary reason we chose our topic; the lack of available research for technology which could be vital to future strategies of retail banks.

One of our literature sources assisted us in designing and implementing focus groups. The other existing research focused primarily on statistical information regarding the user of checks or the alternative banking mechanisms available today.

RESEARCH PURPOSE:

This is a descriptive type of study researching information on what products customers are seeking through alternative banking delivery mechanisms. Specifically, do retail customers want to have access to check images, (pictures) through alternative delivery mechanisms? If yes, are they willing to pay a premium for this service?

RESEARCH QUESTIONS AND HYPOTHESIS

Hypothesis:

Our hypothesis is as follows:
Retail consumers want access to traditional banking products through alternative delivery mechanisms. This study focuses on the capability to view pictures of paid checks utilizing alternative banking delivery mechanisms. Customers will pay a fee for check images in the amount of $1.00 to $2.00 per check image.

Research Questions:

Major:
Do customers want to view their checks which have paid utilizing alternative banking delivery mechanisms? This includes:

- viewing paid checks through the home computer
- viewing paid checks at an ATM machine
- viewing paid checks by way of a facsimile machine after being requested by touch tone telephone.

Sub questions:

1. What alternative delivery mechanisms do people utilize for banking functions?

2. What delivery mechanisms would customers utilize to view paid checks?

METHODOLOGY:

Type of survey or other technique:

The results of two separate focus groups and a survey were the sources of our information. One focus group consisted of women, the other of men. Our survey consisted of a convenience sample. One hundred and ten questionnaires were completed and collected. These were utilized in our statistical analysis.

Information to be gathered:

Through the focus groups and surveys, we accumulated critical information to answer our research questions and hypotheses. This information included:

- Demographics
- General Banking Tendencies
- Banking tendencies specific to check photos

Sampling Plan:

Two focus groups were held to assist in understanding the retail market and to validate the questions asked on our survey. By ^Ófine tuning^Ô our questionnaire before distribution, we felt confident that the survey would yield the appropriate information to answer our research questions and hypothesis. The hypothesis was tested quantitatively based on results from the consumer survey utilizing the SAS statistics program. The population for this study consisted of adults with checking accounts.

Reasons for this methodology and its limitations:

This study was cross-sectional because the time frame in which to conduct the research is limited. A "snapshot" of one point in time was utilized. Ideally, a longitudinal study that examined banking tendencies over a length of time might have added some benefit to understanding the changing nature of banking.

Once again, due to time constraints, a convenience sample was utilized. We distributed the survey as people were available to complete it, (i.e.: friends, family, public locations). Due to the economic and professional diversity of these completing the survey, this methodology was less of a limit than originally thought.

ANALYSIS

Approach:

The hypothesis was tested quantitatively based on results from the consumer survey. The final questionnaire was three

pages long and contained 21 questions. These 21 questions were coded into ninety-six numeric data fields. The data was entered into an Excel spreadsheet which was then converted for input into SAS. A SAS program was written for use in analyzing the data collected.

What follows is our analysis of the data. A significance level of .05 was selected as our criteria. This yielded a 95% confidence level in the results.

General Results:

From the 110 respondents, thirty-eight (34.5%) were male and seventy two (65.6%) were female. The largest percentage of respondents were twenty-six to thirty-five years of age (52.7). The frequency distribution by age followed a classical bell curve:

- Seventy of the respondents were married (64.2%)
- Thirty-eight were single (34.9%)
- One (0.9%) was divorced
- One hundred and two people (92.7%) responded to the income question.

The income breakdown was as follows:

- Forty-four respondents (43.1%) had a household income of over $100,000/ year
- Sixteen (15.7%) had a household income of $60,001 to $100,000/ year
- Sixteen (15.7%) had a household income of $35,0001 to $60,000/ year
- Eighteen (17.6%0 had a household income of $15,001 to $35,000/ year
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- Eight (7.8%) had a household income of less than $15,000/ year

Both the marital status and income distributions are not representative of the general population. We believe this is attributed to our convenience sample.

We found it interesting that every participant answered the education question. Fifty three (48.2%) completed at least a four year college degree. Overall, the frequency of the education question appears to follow the classic bell curve. However, the number of survey participants who had a post graduate degree was high at 29 (26.4%). Several of the surveys were gathered at Golden Gate University (17). Moreover, a substantial number of the surveys were distributed in what is perceived to be a high-income, high-education geographic location.

Question number nine of the survey asked whether or not the respondent had a relationship with a bank or credit union. One hundred and nine (99.1%) did have a relationship with a bank. The most common banking service utilized was a checking account. One hundred and seven (97.3%) have a checking account. This was followed closely by savings accounts; ninety three people (84.5%) have a savings account. Based on the results of our focus group, many employers encourage "direct deposit" of paychecks. As an incentive, banks may offer free checking accounts to those individuals.

Results of Hypothesis Testing:

Once again, our hypothesis is as follows: Utilizing alternative banking delivery mechanisms, bank must make available alternatives to traditional banking products to attract new customers and to maintain their existing customer base. Check images are an example of this traditional banking product. Customers will pay a fee for check images in the amount of $1.00 to $3.00 per check image.

Null hypothesis #1 states : customers do not want or need the option of accessing the traditional banking product of check pictures through alternative banking delivery mechanisms. This null hypothesis was tested in number 19 of our survey. Seventy four respondents (69.2%) stated that they would be interested in photos of their paid checks verses 33 (30.8%) of the respondents who said no. Therefore, we reject the null hypothesis and accept our hypotheses.

Null hypothesis #2: Customers will not pay a fee for the check pictures delivered through alternative banking delivery mechanisms. This was tested in question 20 of our survey. Sixty eight respondents (85%) were willing to pay a fee of less than $1.00 for the check photo service. However, only 5 respondents (6.3%) were willing to pay $2.00 to $2.99 for the service. Therefore, we accept the null hypothesis and reject our hypothesis.

The main research question was addressed in question 19 of the survey. Do customers want to view their checks which have paid utilizing alternative banking delivery mechanisms? This includes:

- viewing paid checks through the home computer
- viewing paid checks at an ATM machine
- viewing paid checks by way of a facsimile machine after being requested by touch tone phone

Seventy four (69.2%) of the respondents answered "yes" to this question.

The first subquestion of this paper regarding alternative delivery mechanisms used by people for their banking functions is answered by question number 11 of the survey. One hundred of the respondents (91.7%) use ATM machines, sixty seven (60.9%) of the respondents visit their branch, fifty four (15.6%) use the computer. Four (3.7%) of the survey respondents listed the category ^Óother^Ô for their banking transactions.

The second subquestion inquires what delivery mechanisms customers would like to utilize to view checks which have paid. If available, 10% of those surveyed would request check photos through ATM machines, 16.4% would request check photos through their personal computer, and 6.4% of the requests would be made via telephone.

The second part of the second question regarding how much a customer would be willing to pay for this service was answered by question number 20 of the survey. Forty two (52.5%) would pay less than $1.00, twenty six (32.5%) would pay between $1.00 and $1.99, five (6.3%) would pay between $2.00 and $2.99; the remaining respondents were willing to pay more for this service or did not respond to the survey question.

Supplemental Analysis & Findings:

We conducted Chi-Square tests to determine the relationship between the respondents who were interested in check images through alternative delivery mechanisms and five characteristics of the respondents. The Chi-Square test table representing the males and females who were interested in receiving check photo copies through alternative mechanisms did not reveal any significant findings. The Chi-Square value is .566, DF = 1, and Probability is .452. We would accept a Probability value of .05 or less in order to assure a 95% confidence level in our results. Therefore, we ascertain that there is no direct correlation between gender and interest in check photos.

The next Chi-Square test conducted concluded that there is no correlation between age and interest in check photos. The Chi-Square value is 6.198 (extremely high), DF =4, and Probability is .185. Again, we would accept a Probability value of .05 or less in order to assure a 95% confidence level in our results.

Next, a Chi-Square test was conducted to test the relationship between income and interest in check photos. The Chi-Square value is 2.574, DF = 4, and Probability is .631. We would accept a probability value of .05 or less in order to assure a 95% confidence level in our results, Therefore, we ascertain that there is no direct correlation between income and interest in check photos.

Another Chi-Square test was conducted to determine potential correlation between education and interest in check photos. The Chi-Square value is 13.488 (extremely high), DF = 3, and Probability is .004. We would accept Probability value of .05 or less in order to assure a 95% confidence level in our results. Therefore, we ascertain that there is a correlation between education and interest in check photos. This may be due to the fact that people who are more educated are less afraid of new technology.

Lastly, a Chi-Square test was performed to study the relationship between the number of times copies of checks were requested in the past twelve months and interest in check imaging. The Chi-Square value is 5.946, SF = 4, and Probability is .203. We would accept a probability value of .05 or less in order to assure a 95% confidence level in our

results. Therefore, we ascertain that there is no direct correlation between the number of times during the past twelve months that check copies have been requested and interest in check imaging.

NOTE: On four of the five Chi-Square tests performed, a warning was listed. This warning states that the Chi-Square test is not valid due to the high percentage of cells with expected values less than five. This is most likely dye to the small sample size for this research project. Further survey testing could be added to these results to assure better accuracy.

We were interested in whether or not the fees consumers have paid in the past for copies of their paid checks would determine the fees they would be willing to pay in the future for check imaging. Therefore, we conducted a Chi-Square analysis of Question 18 and Question 20 of the survey. The Chi-Square value is 11.545, DF = 15, and Probability is .713. We would accept a probability value of .05 or less in order to assure a 95% confidence level in our results. Therefore, we ascertain that there is no direct correlation between fees paid in the past and willingness to pay fees in the future.

Next, we performed several General Linear Models Procedures to test for correlation between interest in check imaging and gender, and, income, and education. The dependent variable used was question number 19 of the survey. On all tests performed, we found no significant correlation between interest in check imaging and the independent variables listed above.

CONCLUSIONS & RECOMMENDATION

Retail banking consumers are interested in receiving check photos through alternative delivery mechanisms. They are willing to pay a fee of $1.99 or less for copies of digitized check images. The ability to provide check pictures through alternative delivery mechanisms requires that the pictures be digitized. This is expensive technology. The perception of our focus group was that new technology reduces costs for the bank, thus these reduced costs should be passed to the consumer. This is not necessarily the case with image technology.

It would be interesting to duplicate this research study with corporate banking customers. We suspect that response may differ significantly.

Some additional interesting information was gathered during the two focus group sessions. Although personal computers are quickly becoming more common, it is important to remember that a large percentage of U.S. households still do not have or use a personal computer for non-academic purposes. Moreover, the rapidly growing Internet user base is still a low percentage of this population. Approximately 14% of the U.S. population has even tried the Internet. "According to an Intelliquest survey, the number of adults on-line in the United States totaled approximately 47 million at the end of 1996, representing a 34% increase in growth in the on-line population from January of 1996." However, the transition to computer banking for the retail market may still be a slow process.

Convenience is key. This is evident by the number of ATM users in our survey. When ATM machines were initially introduced to the consumer, they were not popular. Slowly over time, however, they have become the foremost vehicle by which to perform banking transactions. Much of this is due to the varied transactions available at ATM machines today. Consumers value convenience. Given the convenience of ATM^Òs many would prefer to complete virtually all of their banking transactions without even entering the branch. Banking by telephone also offers many opportunities, however, check images must be faxed if requested through a telephone. Many retail consumers do not have the facility to accept such a transmission. As personal computer use becomes more popular, banking by telephone may also become more popular. It will be interesting to see what the future holds.
