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# **USE OF REINTERVIEW TECHNIQUES FOR QUALITY ASSURANCE: The Measurement of Response Bias in the Collection of December 1987 Quarterly Grain Stocks Data Using CATI**

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USE OF REINTERVIEW TECHNIQUES FOR QUALITY ASSURANCE: THE MEASUREMENT OF RESPONSE BIAS IN THE COLLECTION OF DECEMBER 1987 QUARTERLY GRAIN STOCKS DATA USING CATI. by Brad Pafford. Research and Applications Division, National Agricultural Statistics Service, U.S. Department of Agriculture, Washington, D.C. 20250. March 1989. NASS Research Report No. SRB 89-08.

#### ABSTRACT

Reinterview survey procedures were used to recontact approximately 1,000 December 1987 Agricultural Survey respondents who were initially interviewed using the Computer Assisted Telephone Interviewing (CATI) system. The purpose of the reinterview program is to measure bias in the reporting of Agricultural Survey items such as grain stocks, hogs, major crops and operation screening questions, as well as to uncover why errors are occurring. This paper reports measures of bias in grain stocks and identifies reasons for biased reporting. Significant under-reporting was uncovered in almost all stocks items in the three reinterview states in the study - Minnesota, Indiana, and Ohio. A large portion of the bias, 46% in corn stocks reporting, could be classified as having occurred because of "definitional" errors, while a much smaller portion of the total bias was due to "estimating/rounding" reasons. The under-reporting of corn stocks on a per-sample basis was 34% larger when someone other than the operator, partner, or manager was interviewed on CATI. Finally, as the size of the farm operation increased so did corn stocks bias.

KEYWORDS: Bias, definitional errors, and respondent

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\* This paper was prepared for limited distribution to the research \*  
\* community outside the U.S. Department of Agriculture. The views \*  
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#### ACKNOWLEDGMENTS

The author is deeply indebted to many people for the successful completion of this project. First, I would like to thank my immediate colleagues, Gretchen McClung and Vic Tolomeo for the many hours we prepared together for the survey, as well as in working with the data. Thanks also to Ron Fecso and George Hanuschak. There were many hands-in-the-pot from the Survey Management Branch. Thanks so much to this group who were extremely cooperative in getting this rather new type of data collection effort underway. Finally, special thanks go to the Minnesota, Indiana, and Ohio field offices and their enumerators who cooperated under otherwise heavy workloads.





Finally, corn stocks bias was estimated by size of farm operation. The results showed that as the size of farm increases so does the corn stocks bias. The collection of stocks data from large farms needs to be done in the best possible manner as a few large farms can significantly bias stocks reporting. Interviews probably need to be face-to-face and contacts made with the farm operator(s). However, without measures of bias in face-to-face interviews a specific recommendation of this kind cannot be made.

Recommendations call for expanding the reinterview study to a larger number of states, and to other modes of data collection such as non-CATI telephone and personal interviews. Then a data series on the bias can be established to provide the ASB with direct measures of quality of the AS data. A procedure is recommended on how the ASB might use the bias estimates over time. Finally, alternative CATI questionnaire designs and improved enumerator training should be evaluated to eliminate some of the major contributors to the bias.



1. Die folgenden Aussagen sind wahr oder falsch? Begründen Sie Ihre Antwort!  
a) Die Funktion  $f: \mathbb{R} \rightarrow \mathbb{R}$  ist durch  $f(x) = x^2 + 1$  für alle  $x \in \mathbb{R}$  definiert. Dann gilt  $f'(x) = 2x$  für alle  $x \in \mathbb{R}$ .  
b) Die Funktion  $f: \mathbb{R} \rightarrow \mathbb{R}$  ist durch  $f(x) = |x|$  für alle  $x \in \mathbb{R}$  definiert. Dann gilt  $f'(x) = 1$  für alle  $x > 0$  und  $f'(x) = -1$  für alle  $x < 0$ .  
c) Die Funktion  $f: \mathbb{R} \rightarrow \mathbb{R}$  ist durch  $f(x) = \sin(x)$  für alle  $x \in \mathbb{R}$  definiert. Dann gilt  $f'(x) = \cos(x)$  für alle  $x \in \mathbb{R}$ .  
d) Die Funktion  $f: \mathbb{R} \rightarrow \mathbb{R}$  ist durch  $f(x) = e^x$  für alle  $x \in \mathbb{R}$  definiert. Dann gilt  $f'(x) = e^x$  für alle  $x \in \mathbb{R}$ .  
e) Die Funktion  $f: \mathbb{R} \rightarrow \mathbb{R}$  ist durch  $f(x) = \ln(x)$  für alle  $x > 0$  definiert. Dann gilt  $f'(x) = 1/x$  für alle  $x > 0$ .

2. Gegeben sei die Funktion  $f: \mathbb{R} \rightarrow \mathbb{R}$  durch  $f(x) = x^3 - 3x^2 + 2x - 1$  für alle  $x \in \mathbb{R}$ .  
a) Berechnen Sie die Ableitung  $f'(x)$  für alle  $x \in \mathbb{R}$ .  
b) Bestimmen Sie die Nullstellen von  $f'(x)$ .  
c) Untersuchen Sie die Funktion  $f$  auf Monotonie.  
d) Berechnen Sie die Werte von  $f$  an den Wendepunkten.

3. Gegeben sei die Funktion  $f: \mathbb{R} \rightarrow \mathbb{R}$  durch  $f(x) = \sin(x)$  für alle  $x \in \mathbb{R}$ .  
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1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes the need for transparency and accountability in financial reporting.

2. The second part of the document outlines the various methods and techniques used to collect and analyze data. It includes a detailed description of the experimental procedures and the tools used for data collection.

Category	Sub-category	Value
Financial Data	Revenue	120000
	Expenses	85000
	Profit	35000
	Net Income	30000
Operational Data	Production	50000
	Inventory	15000
	Waste	5000
	Quality Control	10000

### 3. Results and Discussion

The results of the study show a significant increase in revenue and profit over the period analyzed. This is primarily due to the implementation of new marketing strategies and the expansion of the product line. The data also indicates that operational costs have been effectively managed, leading to a higher profit margin.

Further analysis of the data reveals that the most significant factor contributing to the increase in revenue is the introduction of new products. This suggests that innovation and product diversification are key drivers of growth. Additionally, the study highlights the importance of maintaining high-quality standards to ensure customer satisfaction and loyalty.

### 4. Conclusion and Recommendations

In conclusion, the study demonstrates that a combination of strategic marketing, product innovation, and efficient operational management can lead to sustained growth and profitability. The findings suggest that future research should focus on identifying additional ways to optimize operations and expand the market reach. It is recommended that the company continue to invest in research and development to stay competitive in a dynamic market.

The data presented in this report is based on a comprehensive analysis of the company's financial and operational records. It provides a clear and concise overview of the company's performance and offers valuable insights into its strengths and areas for improvement.

THE FIRST PART OF THE BOOK IS A HISTORY OF THE UNITED STATES FROM 1776 TO 1865. IT IS A HISTORY OF THE UNITED STATES FROM 1776 TO 1865. IT IS A HISTORY OF THE UNITED STATES FROM 1776 TO 1865.

CHAPTER I

THE FOUNDING OF THE UNITED STATES

THE UNITED STATES OF AMERICA WAS FOUNDED IN 1776. IT WAS A NEW NATION, A NEW PEOPLE, A NEW WAY OF LIFE. IT WAS A NEW NATION, A NEW PEOPLE, A NEW WAY OF LIFE.

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Table 2. Estimates of bias in the CATI collected data - December 1987 reinterview study.

Survey Item/State	<u>(CATI - Reconciled)</u>		<u>(SAS - Reconciled)</u>	
	000 bu.	% of CATI	000 bu.	% of SAS
<b>Corn Stocks</b>				
Minnesota	-60,987	-10.5 *	-64,860	-11.4 *
Indiana	-48,289	-16.1 *	-46,974	-16.0 *
Ohio	-22,609	-12.0 *	-22,277	-11.8 *
<b>Total</b>	<b>-131,885</b>	<b>-12.3 *</b>	<b>-134,111</b>	<b>-12.8 *</b>
<b>Soybean Stocks</b>				
Minnesota	-13,082	-14.7 *	-13,082	-14.7 *
Indiana	-3,012	-5.9	-3,012	-5.9
Ohio	-5,393	-13.6 *	-5,640	-14.2 *
<b>Total</b>	<b>-21,487</b>	<b>-12.0 *</b>	<b>-21,734</b>	<b>-12.1 *</b>
<b>All Wheat Stocks</b>				
Minnesota	-17,853	-24.9 *	-17,853	-22.7 *
Indiana	-2,513	-195.0	-2,513	-198.6
Ohio	6	0.2	-253	-7.5
<b>Total</b>	<b>-20,360</b>	<b>-26.5 *</b>	<b>-20,619</b>	<b>-24.8 *</b>
<b>Storage Capacity</b>				
Minnesota	64,186	4.7	71,495	5.5
Indiana	55,379	9.1	-10,998	-2.0
Ohio	-4,273	-1.1	-5,619	-1.4
<b>Total</b>	<b>115,292</b>	<b>4.9</b>	<b>54,878</b>	<b>2.4</b>

\* - Indicates significance at the  $\alpha=.05$  level.

## Reasons for Discrepancies

Appendix C, Tables 1-4, gives the distribution of reasons the reinterview respondents gave for differences in the CATI and reinterview responses. These differences are grouped into the categories of estimation/rounding, definitional, and other reasons. Estimation/rounding occurred when the respondent felt that one or more of the responses were estimated, or differences were too small to be bothered with, which included rounding problems. The second classification is termed definitional. Here, the respondent gave specific mention to reasons that are directly attributable to a lack of understanding of what should have been included and excluded in the stocks. These cover a large spectrum ranging from confusion with government storage to confusion with stocks sold but still on the operation. The final category was the "other" class. These responses were neither definitional nor estimation related. They included responses such as "doesn't give out information over the phone," "doesn't know why there is a difference," and "mistake in addition."

These categories help to draw attention to the percent of "definitional" differences that are perhaps fixable, compared with "other" and "estimating/rounding" differences that are perhaps not fixable. By fixable it is meant that a change in such things as survey procedures, questionnaire design, and training would decrease the error. The percentage of errors in corn stocks classified as definitional in nature ranged from 32.3% to 43.8% in the three states (Appendix C, Table 1). In soybean stocks, definitional problems occurred in a range of 15.8% to 36.7% in the three states (Appendix C, Table 2). Therefore, when differences existed there were often specific reasons for it, and not just rounding (however, I am sure rounding exists for every response to some extent). It will be shown in the next few sections that definitional reasons contribute extensively to the bias levels uncovered in this study.

A quick inspection of Tables 1-4 in Appendix C also reveals the sheer variety of reasons for definitional differences. This points to the difficulty NASS will have in designing a survey form, properly training enumerators, and/or developing survey procedures to accurately collect these data.

The other two classes of errors, estimating/rounding and other, account for approximately 60% to 70% of the reasons for discrepancies. Tables 1-4 in Appendix C reveal that the percentage of differences classified as estimating/rounding ranged between 30% and 50%, while the range was 17% to 35% for differences classified in the "other" category. These errors probably will be difficult to eliminate.

As mentioned, it is important to look at more than just these distributions. We must see which contribute most to the overall bias. This question will be addressed shortly.

## Change in Respondent

Table 3 presents the distribution of respondents reporting for the CATI interview and the reinterview. Individual operator-individual operator, for example, means that there was only one operator for the farm who was the respondent in both the CATI interview and again in the reinterview. This occurred in approximately 74% of the interview-reinterviews. In general, the spouse reported for the operator in his/her absence in the reinterview.

Also shown in Table 3 are three categories of respondent combinations. These are used in the next sections when bias is estimated for different subgroups of the reinterview sample. When the operator, manager or partner responded in the reinterview and were also the CATI respondent, they were placed in the "operator-operator" category. Estimated bias for this group represents the bias in operator reporting. When the operator, partner, or manager was the reinterview respondent but someone else was the CATI respondent they were placed in the "other-operator" group. Bias estimates for this group represent the bias in non-operator reporting. The "other combinations" group represents every other combination of reporting. Measures of bias from the "other combinations" group are not as clean as for the first two groups, because the operator(s) were not contacted in the reinterview. For this reason, the paper does not discuss this respondent category in detail.

Table 3. Frequency distribution of respondents reporting in the CATI interview and reinterview for all three reinterview states combined.

<u>CATI-Reinterview</u>	<u>Freq.</u>	<u>% of Total</u>
Operator-Operator	749 (80.5%)	
Individual operator-individual operator	684	73.6
Partner-same partner	51	5.5
Partner-different partner	12	1.3
Manager-manager	2	0.2
Other-Operator	59 (6.3%)	
Spouse-individual operator	49	5.3
Other-individual operator	10	1.1
Spouse-partner	0	0.0
Other-partner	0	0.0
Other Combinations	122 (13.2%)	
Individual operator-spouse	62	6.7
Individual operator-other	28	3.0
Spouse-spouse	20	2.2
Partner-spouse	2	0.2
Spouse-other	4	0.4
Other-same other	4	0.4
All Other Combinations	2	0.2
<u>Total</u>	<u>930</u>	<u>100.0</u>

## Change in Respondent and Reason for Difference as they Affect Stocks Reporting

This section presents estimated stocks bias by reason for discrepancy and respondent. Also, discussed are relationships between respondent, reason for discrepancy, and stocks bias.

The analysis is given in two parts. First, Tables 4A thru 4C compare the distribution of responses in two corn stocks relative bias categories ("less than 25% change" and "more than 25% change") with the three respondent categories ("operator-operator," "other-operator," and "other combinations"), and with the three reasons for differences categories ("other," "definitional," or "estimating").

The second part of the analysis is to estimate the bias by expansion of the data for these same categories. With this second approach we can answer questions about what the impact is on the bias due to such things as definitional problems or respondents other than the operator reporting. These results appear in Tables 5 and 6.

First, in Table 4A we see that 66.5% of the "operator-operator" respondents had relative biases that were less than 25% in absolute value. Compare this with the "other-operator" group where there were only 38.9% with relative biases in this range. This unequal distribution is significant ( $p=.03$ ). That is, we are more likely to see a larger relative bias when the CATI respondent is not a farm operator (i.e., the operator, manager, or partner).

In Table 4B we see that definitional problems are associated with large relative biases, while estimating problems are associated with small relative biases ( $p<.01$ ). This can be seen by the fact that 59.1% of definitional problems are associated with relative biases of 25% or more in absolute value, compared with only 5.9% of estimating/rounding errors associated with relative biases of 25% or more in absolute value. Definitional problems are something to be concerned with because they probably contribute a lot to the overall bias.

Finally, in Table 4C we see that reasons for differences are reported in the same percentage for each respondent group ( $p=.86$ ). That is, the "operator-operator," "other-operator," and "other combinations" groups report definitional, other and estimating problems in the same ratio (within sampling error).





1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the integrity of the financial system and for the ability to detect and prevent fraud. The text also notes that clear and concise reporting is crucial for decision-making by management and other stakeholders.

2. The second part of the document focuses on the role of internal controls in ensuring the reliability of financial information. It describes how a well-designed internal control system can help to minimize the risk of errors and misstatements, and how it can provide a reasonable assurance that the financial statements are free from material misstatement.

3. The third part of the document discusses the importance of transparency and disclosure in financial reporting. It highlights that providing timely and accurate information to investors and other users of financial statements is a key responsibility of management. The text also notes that transparency is essential for building trust and confidence in the financial system, and for ensuring that capital markets are efficient and well-informed.

4. The fourth part of the document discusses the role of external audits in providing independent assurance on the financial statements. It explains that external audits are conducted by independent auditors who are not affiliated with the company being audited. This independence is essential for the credibility of the audit opinion and for the confidence of investors and other users of financial statements.

5. The fifth part of the document discusses the importance of ethical behavior in financial reporting. It emphasizes that honesty and integrity are fundamental to the financial system, and that unethical behavior can lead to a loss of trust and confidence. The text also notes that ethical behavior is essential for the long-term success of the company and for the stability of the financial system.

This ratio was 45.4% for soybean stocks. "Other" reasons contribute the bulk of remaining bias (43.3% and 40.5%). Estimating reasons contribute a minimal 10.7% and 14.1% of the bias in corn and soybean stocks, respectively.

We also see from Tables 5 and 6 that operators and non-operators contribute to the under-reporting of stocks. For example, approximately 100 million additional bushels of corn stocks were uncovered in the reconciliation from operators (the "operator-operator" group), and approximately 10 million bushels from non-operators (the "other-operator" group).

Also interesting was that 50% of the "operator-operator" corn stocks bias was due to definitional problems (50,074 divided by 100,371) and only 8% to estimating problems, while the percentages were 31% and 63% for the "other-operator" group. In other words, definitional problems caused errors for the farm operators, while non-operator errors seemed to be mostly estimating in nature. The farm operators said the non-operators were estimating, while the operators said they themselves were confused on what to include or exclude in stocks reporting.

The final point of interest in tables 5 and 6 is that non-operators (the "other-operator" respondent group) contribute more bias on a unit or per respondent level than do operators (the "operator-operator" respondent group). This can be seen by simply dividing the total bias by the number of respondents in that category. For example, a bias in corn stocks of approximately 138,600 bushels per sample exists for the "operator-operator" group ( $100,371/724=138,600$ ) compared with 185,800 bushels per sample for the "other-operator" respondent group. This is an increase of 34%. For soybean stocks, this percentage increase was 15%. The importance of this comparison is to draw further attention to problem of contacting anyone other than the farm operator(s).

#### Bias by Size of Farm Operation

Table 7 presents estimates of bias in corn stocks reporting by size of operation. Size of operation is defined by land-in-farm acreage.

Table 7. Corn stocks bias estimates by size of operation (land-in-farm acreage) for all states in the December 1987 Reinterview Study.

Land-in-Farm Classification (Acres)	Corn Stocks Bias (000 bu.)	Response (n)
0 - 99	-5,843	182
100 - 249	-5,842	262
250 - 499	-13,415	238
500 - 999	-43,575	138
1,000 +	-63,210	73
Total	-131,885	893

in diesem Zusammenhang ist jedoch zu betonen, dass die hierin enthaltenen Angaben nicht als verbindliche Zusagen der Bundesregierung zu verstehen sind.

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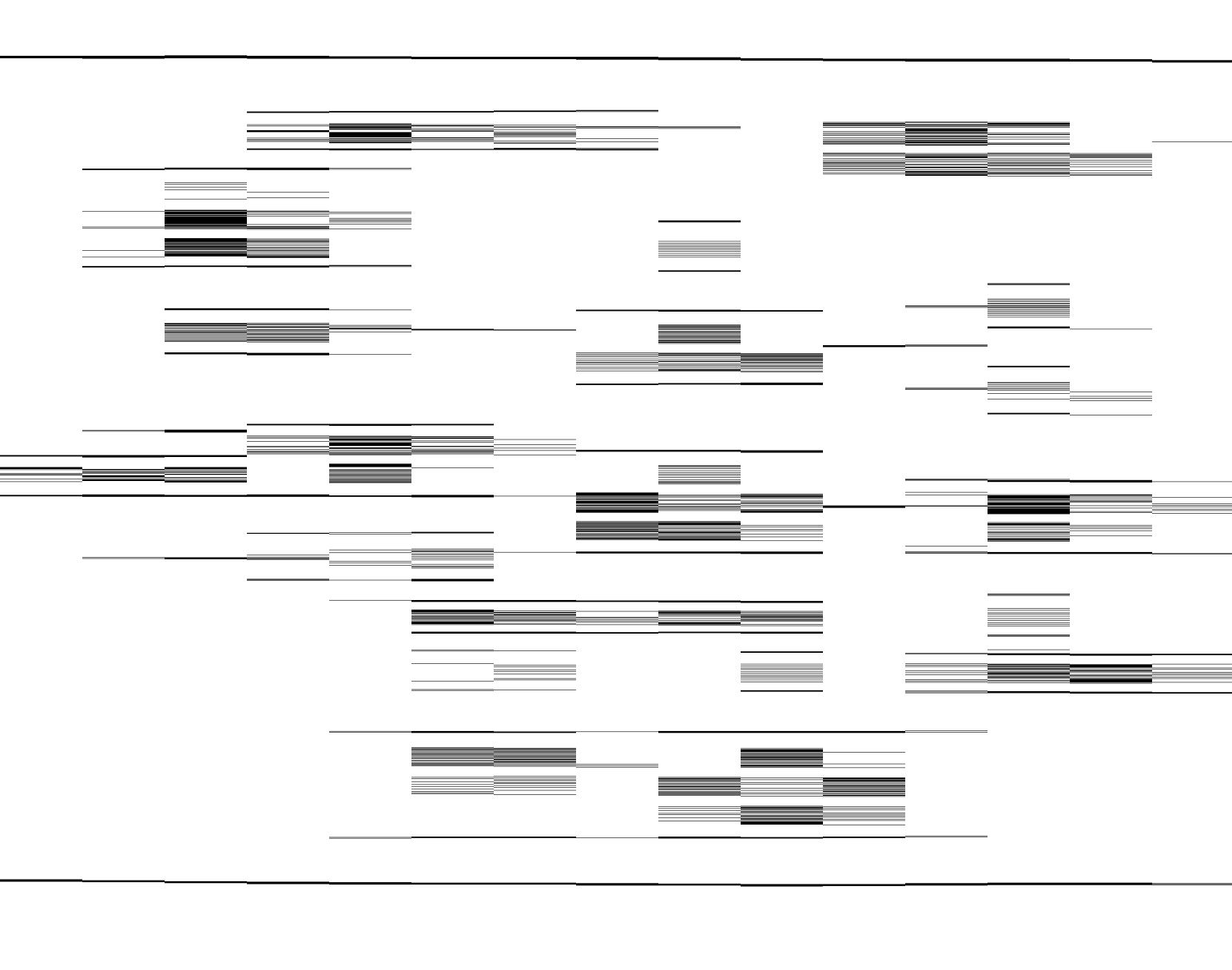
Das Grundstück befindet sich in der Gemeinde ...

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on the land & forest question. Combining along with the flow diagram of Figure 1, we see that even a bias is unimportant in years when there is a need to reduce the maintenance activity to maintain the raw bias levels. If they do not do, then the maintenance activity could be discontinued for a period of time. If they do not, then there is not whether the biomass are constant or variable. If constant, periodic measures of bias would be needed to maintain this constant bias. If the bias is variable, periodic measures of biomass are needed on a yearly basis.

If a bias is not present in the forest year, one follows down a different path of Figure 1, however, similar concepts exist. Figure 1 provides answers then to the question, "how long do we need to do maintenance?" an also provides a coherent and sound policy for the resolution of biomass in the all problem.

If we wish to consider minimizing the important bias producing factors in stock reporting, the study suggests several steps to consider. The most controllable sources of bias resulting systems come from the definitional type errors. These were found to contribute around 50% of the total bias. The ability to eliminate collecting/keeping errors will be reduced unless the respondents is restricted to the form operation. Even then, they cannot be totally eliminated. The main reason is that maintaining/keeping errors contribute less than 1% of the bias. The "other" errors are also probably difficult to control. Some are due to the use of the telephone, such as "can't hear well on the phone" and "don't know the time on the phone to not answer." Some may be indirectly related to the use of the phone, such as "couldn't hear/see reached this the first time," and "misunderstanding between numerator and denominator." Finally, some "other" type errors will occur in any telephone application.

For the definitional type errors, a more detailed schema method may need to be developed with CATI. Questions could appear on the CATI screen that specifically ask the respondent if, for example, he/she has included names on all land operations. Another error source would be if they included data stored on their computer belonging to someone else. This could be eliminated with the more important sources for biomass are addressed with the respondents during the interview. The more names and variety of definitional problems would have involving every source for different languages.

A second procedure to reduce the definitional type errors in through improved telephone training and careful selection of selected telephone respondents (they must be qualified). It is reasonable to suspect that some definitional problems are the result of unrepresentative lack of understanding.

The respondents was also shown to be an important contributor to errors in this case bias. NASA's operational procedures do not specifically say the specific(s) must be considered, however, some characteristics of the bias they are. It is the relatively non-representative nature that are more of a problem. The fluctuation in the level of other-than-operable respondents like ability to follow can be reduced. For example, a change in the time-temperature temperature from 25 to 35 to 45 may increase the level of bias by a factor of 10 (making the more accurate bias per sample estimate) for the additional 5% of the total population that were not operation considered. NASA should begin to consider

research into modeling this source of error into its survey indications. This factor could be used to adjust survey indications conditioned on the percent of non-operator reporting.

Finally, the results of this study show that stocks reporting bias increases as the size of the farm operation increases. Because of this and because relatively few operations make up this large operation group, there is probably a need to improve the way these data are collected. One approach may be to conduct face-to-face interviews of farm operator(s) for these large stocks operations, similar to the way livestock extreme operators (EO's) are handled. However, without measures of bias in face-to-face interviews this cannot be a specific recommendation.

### RECOMMENDATIONS

Based on the results of this study the following are recommended:

1. Continue reinterviews for the December AS to develop a data series on the bias. The number of states should be increased above three, and include those states which have the majority of the U.S. on-farm stocks.
2. Reinterviews should also be conducted for other modes of data collection, such as for mail, personal and non-CATI telephone interviews. The level of bias and response errors may not be the same in these modes of data collection as that found with CATI. However, if national CATI is implemented in the next few years, the use of other modes of data collection will diminish for the Agricultural Survey. If this occurs, then the resources required to test other modes of data collection may be better spent elsewhere.
3. Design a new stocks section for the Agricultural Survey questionnaire to eliminate bias caused by definitional problems. This should begin immediately. One alternative is to choose two or three of the largest definitional errors and include these questions in the stocks section. The largest definitional errors are defined as those with the largest bias.
4. CATI enumerator training procedures should be evaluated to see if errors can be reduced through improved training.
5. The Agricultural Statistics Board should use the data series on the bias in stocks reporting in formulating its official statistics. Use of a bias decision tree such as the one in figure 1 should also be used by the Board for recommending future data collection efforts of this type.

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1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and accountability in the financial process.

2. The second section outlines the procedures for handling discrepancies. It states that any variance between the recorded amounts and the actual bank statements must be investigated immediately. The responsible personnel should identify the source of the error and take corrective action to prevent recurrence.

3. The third part of the document details the monthly reconciliation process. It requires that all accounts be reconciled by the 15th of the following month. This process involves comparing the company's internal records with the bank's records to ensure they match. Any differences should be noted and explained.

4. The fourth section discusses the role of the internal audit department. It is responsible for conducting regular audits of the financial records to ensure compliance with internal policies and external regulations. The audit findings should be reported to the management and used to improve the financial control system.

5. The fifth part of the document describes the approval process for all financial transactions. It requires that every payment or expenditure be authorized by a designated official. This process helps to prevent unauthorized spending and ensures that all transactions are for legitimate business purposes.

6. The sixth section outlines the requirements for the financial reporting system. It states that the company must prepare financial statements in accordance with the applicable accounting standards. These statements should be reviewed and approved by the board of directors before being presented to the shareholders.

7. The seventh part of the document discusses the importance of maintaining up-to-date financial records. It emphasizes that the records should be organized and stored in a secure manner. This ensures that the information is readily available for review and analysis.

8. The eighth section outlines the procedures for handling financial emergencies. It states that in the event of a sudden cash shortage or other financial crisis, the management should follow a pre-established plan to address the situation. This may involve seeking external financing or restructuring the company's operations.

9. The ninth part of the document discusses the role of the financial controller. It is responsible for overseeing the day-to-day financial operations of the company. This includes monitoring the cash flow, managing the accounts payable and receivable, and ensuring that all financial transactions are properly recorded.

10. The tenth and final section of the document discusses the importance of financial transparency. It states that the company should provide clear and concise financial information to all stakeholders. This helps to build trust and confidence in the company's financial performance.

**SECTION 2 — ACRES OPERATED**

1

**Acres**

1. How many total acres of land were in this operation on December 1? .....

900

**Include:** Farmstead, all cropland, woodland, pastureland, wasteland, government program land, all land owned, rented or managed.

**Exclude:** Land rented to others and all grazing land used on an AUM (*fee per head*) basis.

2. Of the total acres in this operation, how many acres would be considered cropland (*Include land in hay and cropland in government programs*)? .....

802

Continue On Next Page

**SECTION 8 - CROPS**

87

The purpose of the next questions is to obtain information about crops for the 1967 crop year.

Now to describe this section:

- == REPORT FOR ALL THE CROPS YOU REPORT, INCLUDING YOUR OTHER CROPS.
- == If located in the schedule, check your best estimate of acres and total production.
- == PRODUCE IS ONLY IN THIS SECTION AND IN AN APPROPRIATE OTHER SECTION WITH YOU.
- == TOTAL PRODUCTION SHOULD BE THE SAME AS OTHERS.

1. The following information is required for each reporting unit you:

**WHEAT (except durum wheat and hard red)**

Acres planted for all purposes .....

Acres harvested and to be harvested for home .....

Total acres and bush harvested .....

**BARLEY**

Acres planted for all purposes (.....) .....

Acres harvested and to be harvested for home .....

Total production .....

**MILKWEEDS**

Acres planted (.....) .....

**HAY CROPS**

Report only the hay crop regardless of whether it consists of different kinds, dry weight for dry weight and mixed for mixed.

**ALFALFA HAY AND ALFALFA MIXTURES**

Acres but the dry hay include alfalfa and other crops .....

All other hay include other hays but the dry hay, clover, timothy, alfalfa and grass mixtures, orchard grass, timothy, sorghum, sorghum mixtures, sudan, sudan grass, milo, etc. (see also other hay)

Acres but the dry hay include alfalfa and other crops .....

**TORADO**

Acres harvested (.....) .....

2. For the following wheat grades, please report production for the 1967 crop year.

WINTER WHEAT acres seeded and to be seeded for all purposes .....

SECTION 8 - CROPS

WHEAT	1	1967	1968
MILKWEEDS	2	1967	1968
BARLEY	3	1967	1968
TORADO	4	1967	1968

**SECTION 4 — GRAINS AND SOYBEANS IN STORAGE**

Please account for whole grains and soybeans on hand or stored December 1 on the total acres operated, whether for feed, seed, or sale. They may have belonged to you or someone else, or been stored under a government program (loan, farmer owned reserved, or CCC).

	<b>NO</b>	<b>YES</b>	
1. On December 1, was any whole grain corn on hand or stored on the total acres operated? .....	<input type="checkbox"/>	<input type="checkbox"/>	How many bu?..... <input style="width: 100px;" type="text" value="121"/>
Were any soybeans on hand or stored on these acres? .....	<input type="checkbox"/>	<input type="checkbox"/>	How many bu? .....
			<input style="width: 100px;" type="text" value="125"/>
What about wheat, including all types? (winter, durum and spring) .....	<input type="checkbox"/>	<input type="checkbox"/>	How many bu?.....
			<input style="width: 100px;" type="text" value="126"/>

**UNHARVESTED CORN AND SOYBEANS**

2. On December 1, did you have any corn or soybeans still in the field that you intend to harvest for grain or beans?

YES     NO - Go to Item 4 below.

3. Was this unharvested production included with corn and soybeans in storage?

YES = 1 - Enter code in Code Box 460, then go to Item 4 below.

NO = 3 - Enter code in Code Box 460, then continue.

..... enter code

Corn ..... Acres remaining to be harvested..... ac

AND

Expected yield per acre..... bu/ac

Soybeans ..... Acres remaining to be harvested..... ac

AND

Expected yield per acre..... bu/ac

**GRAIN STORAGE CAPACITY**

4. On December 1, what was the TOTAL STORAGE CAPACITY of all the bins, cribs, sheds, and other structures normally used to store whole grains or oilseeds on the total acres operated? .....

.....bushels

Continue On Next Page

Stocks:	1 - Has	141
Incomp.	2 - Unk	
	3 - No	
Comp.	4	

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THE UNIVERSITY OF CHICAGO

PHILOSOPHY DEPARTMENT

PHILOSOPHY 101

LECTURE NOTES

PLATO'S THEORY OF FORMS

THE DIVISION OF LABOR

THE CITY AND THE SOUL



1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes the need for transparency and accountability in financial reporting.

2. The second part of the document outlines the various methods and techniques used to collect and analyze data. It includes a detailed description of the experimental procedures and the statistical tools employed.

3. The third part of the document presents the results of the study, showing the trends and patterns observed in the data. It includes several tables and graphs to illustrate the findings.

4. The fourth part of the document discusses the implications of the results and provides recommendations for future research. It also includes a conclusion summarizing the key points of the study.

The data shows a significant increase in the number of transactions over the period studied. This increase is attributed to the implementation of the new system, which has improved the efficiency of the process. The results also indicate that the system has led to a reduction in errors and a faster turnaround time for processing transactions.

The study was conducted over a period of six months, during which time a total of 1,200 transactions were recorded. The data was collected from various departments and analyzed using a combination of manual and automated methods. The results were then compared against the baseline data to assess the impact of the new system.

The findings of the study are consistent with the hypothesis that the new system will lead to improved performance. The data shows that the system has successfully reduced the number of errors and increased the speed of processing. These results are a clear indication of the effectiveness of the new system and provide a strong basis for its continued use and expansion.

The study also identified several areas for further research. It is recommended that future studies should focus on the long-term impact of the system and the potential for further improvements. Additionally, it would be beneficial to explore the use of the system in other departments and to investigate the impact of the system on the overall organizational performance.

The data shows a clear trend of improvement in the number of transactions processed over time. This trend is supported by the statistical analysis, which shows a significant positive correlation between the time period and the number of transactions.



ANNEX I

Description of the product	Reference	Date of approval	Status
<p>1. <b>Product Name:</b> [Faded text]</p> <p>2. <b>Manufacturer:</b> [Faded text]</p> <p>3. <b>Active Substances:</b> [Faded text]</p> <p>4. <b>Indications:</b> [Faded text]</p> <p>5. <b>Contraindications:</b> [Faded text]</p> <p>6. <b>Side Effects:</b> [Faded text]</p> <p>7. <b>Precautions:</b> [Faded text]</p> <p>8. <b>Pharmaceutical Form:</b> [Faded text]</p> <p>9. <b>Strength:</b> [Faded text]</p> <p>10. <b>Shelf Life:</b> [Faded text]</p>	[Faded text]	[Faded text]	[Faded text]
[Faded text]	[Faded text]	[Faded text]	[Faded text]





Date	Description	Debit	Credit	Balance	Remarks
1/1/2020	Opening Balance			1000.00	
1/5/2020	Bank of America	50.00		950.00	ATM Withdrawal
1/10/2020	Wells Fargo	25.00		925.00	ATM Withdrawal
1/15/2020	Chase	75.00		850.00	ATM Withdrawal
1/20/2020	Bank of America	100.00		750.00	ATM Withdrawal
1/25/2020	Wells Fargo	50.00		700.00	ATM Withdrawal
1/30/2020	Chase	25.00		675.00	ATM Withdrawal
2/5/2020	Bank of America	150.00		525.00	ATM Withdrawal
2/10/2020	Wells Fargo	75.00		450.00	ATM Withdrawal
2/15/2020	Chase	125.00		325.00	ATM Withdrawal
2/20/2020	Bank of America	100.00		225.00	ATM Withdrawal
2/25/2020	Wells Fargo	50.00		175.00	ATM Withdrawal
2/30/2020	Chase	25.00		150.00	ATM Withdrawal
3/5/2020	Bank of America	150.00		0.00	ATM Withdrawal
3/10/2020	Wells Fargo	75.00		(75.00)	ATM Withdrawal
3/15/2020	Chase	125.00		(200.00)	ATM Withdrawal
3/20/2020	Bank of America	100.00		(300.00)	ATM Withdrawal
3/25/2020	Wells Fargo	50.00		(350.00)	ATM Withdrawal
3/30/2020	Chase	25.00		(375.00)	ATM Withdrawal
4/5/2020	Bank of America	150.00		(525.00)	ATM Withdrawal
4/10/2020	Wells Fargo	75.00		(600.00)	ATM Withdrawal
4/15/2020	Chase	125.00		(725.00)	ATM Withdrawal
4/20/2020	Bank of America	100.00		(825.00)	ATM Withdrawal
4/25/2020	Wells Fargo	50.00		(875.00)	ATM Withdrawal
4/30/2020	Chase	25.00		(900.00)	ATM Withdrawal
5/5/2020	Bank of America	150.00		(1050.00)	ATM Withdrawal
5/10/2020	Wells Fargo	75.00		(1125.00)	ATM Withdrawal
5/15/2020	Chase	125.00		(1250.00)	ATM Withdrawal
5/20/2020	Bank of America	100.00		(1350.00)	ATM Withdrawal
5/25/2020	Wells Fargo	50.00		(1400.00)	ATM Withdrawal
5/30/2020	Chase	25.00		(1425.00)	ATM Withdrawal
6/5/2020	Bank of America	150.00		(1575.00)	ATM Withdrawal
6/10/2020	Wells Fargo	75.00		(1650.00)	ATM Withdrawal
6/15/2020	Chase	125.00		(1775.00)	ATM Withdrawal
6/20/2020	Bank of America	100.00		(1875.00)	ATM Withdrawal
6/25/2020	Wells Fargo	50.00		(1925.00)	ATM Withdrawal
6/30/2020	Chase	25.00		(1950.00)	ATM Withdrawal
7/5/2020	Bank of America	150.00		(2100.00)	ATM Withdrawal
7/10/2020	Wells Fargo	75.00		(2175.00)	ATM Withdrawal
7/15/2020	Chase	125.00		(2300.00)	ATM Withdrawal
7/20/2020	Bank of America	100.00		(2400.00)	ATM Withdrawal
7/25/2020	Wells Fargo	50.00		(2450.00)	ATM Withdrawal
7/30/2020	Chase	25.00		(2475.00)	ATM Withdrawal
8/5/2020	Bank of America	150.00		(2625.00)	ATM Withdrawal
8/10/2020	Wells Fargo	75.00		(2700.00)	ATM Withdrawal
8/15/2020	Chase	125.00		(2825.00)	ATM Withdrawal
8/20/2020	Bank of America	100.00		(2925.00)	ATM Withdrawal
8/25/2020	Wells Fargo	50.00		(2975.00)	ATM Withdrawal
8/30/2020	Chase	25.00		(3000.00)	ATM Withdrawal
9/5/2020	Bank of America	150.00		(3150.00)	ATM Withdrawal
9/10/2020	Wells Fargo	75.00		(3225.00)	ATM Withdrawal
9/15/2020	Chase	125.00		(3350.00)	ATM Withdrawal
9/20/2020	Bank of America	100.00		(3450.00)	ATM Withdrawal
9/25/2020	Wells Fargo	50.00		(3500.00)	ATM Withdrawal
9/30/2020	Chase	25.00		(3525.00)	ATM Withdrawal
10/5/2020	Bank of America	150.00		(3675.00)	ATM Withdrawal
10/10/2020	Wells Fargo	75.00		(3750.00)	ATM Withdrawal
10/15/2020	Chase	125.00		(3875.00)	ATM Withdrawal
10/20/2020	Bank of America	100.00		(3975.00)	ATM Withdrawal
10/25/2020	Wells Fargo	50.00		(4025.00)	ATM Withdrawal
10/30/2020	Chase	25.00		(4050.00)	ATM Withdrawal
11/5/2020	Bank of America	150.00		(4200.00)	ATM Withdrawal
11/10/2020	Wells Fargo	75.00		(4275.00)	ATM Withdrawal
11/15/2020	Chase	125.00		(4400.00)	ATM Withdrawal
11/20/2020	Bank of America	100.00		(4500.00)	ATM Withdrawal
11/25/2020	Wells Fargo	50.00		(4550.00)	ATM Withdrawal
11/30/2020	Chase	25.00		(4575.00)	ATM Withdrawal
12/5/2020	Bank of America	150.00		(4725.00)	ATM Withdrawal
12/10/2020	Wells Fargo	75.00		(4800.00)	ATM Withdrawal
12/15/2020	Chase	125.00		(4925.00)	ATM Withdrawal
12/20/2020	Bank of America	100.00		(5025.00)	ATM Withdrawal
12/25/2020	Wells Fargo	50.00		(5075.00)	ATM Withdrawal
12/30/2020	Chase	25.00		(5100.00)	ATM Withdrawal



[The following text is a highly degraded and illegible document, likely a classified report or memorandum. It is characterized by extreme noise, including vertical lines, horizontal streaks, and large blacked-out redaction areas. The text is organized into several columns and rows, but the content is completely unreadable due to the level of corruption.]

No.	Date	Particulars	Debit	Credit
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No.	Date	Particulars	Debit	Credit	Balance
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100	1950	...			

No.	Date	Particulars	Debit	Credit	Balance
1	1998	...	...	...	...
2	1998	...	...	...	...
3	1998	...	...	...	...
4	1998	...	...	...	...
5	1998	...	...	...	...
6	1998	...	...	...	...
7	1998	...	...	...	...
8	1998	...	...	...	...
9	1998	...	...	...	...
10	1998	...	...	...	...
11	1998	...	...	...	...
12	1998	...	...	...	...
13	1998	...	...	...	...
14	1998	...	...	...	...
15	1998	...	...	...	...
16	1998	...	...	...	...
17	1998	...	...	...	...
18	1998	...	...	...	...
19	1998	...	...	...	...
20	1998	...	...	...	...
21	1998	...	...	...	...
22	1998	...	...	...	...
23	1998	...	...	...	...
24	1998	...	...	...	...
25	1998	...	...	...	...
26	1998	...	...	...	...
27	1998	...	...	...	...
28	1998	...	...	...	...
29	1998	...	...	...	...
30	1998	...	...	...	...
31	1998	...	...	...	...
32	1998	...	...	...	...
33	1998	...	...	...	...
34	1998	...	...	...	...
35	1998	...	...	...	...
36	1998	...	...	...	...
37	1998	...	...	...	...
38	1998	...	...	...	...
39	1998	...	...	...	...
40	1998	...	...	...	...
41	1998	...	...	...	...
42	1998	...	...	...	...
43	1998	...	...	...	...
44	1998	...	...	...	...
45	1998	...	...	...	...
46	1998	...	...	...	...
47	1998	...	...	...	...
48	1998	...	...	...	...
49	1998	...	...	...	...
50	1998	...	...	...	...
51	1998	...	...	...	...
52	1998	...	...	...	...
53	1998	...	...	...	...
54	1998	...	...	...	...
55	1998	...	...	...	...
56	1998	...	...	...	...
57	1998	...	...	...	...
58	1998	...	...	...	...
59	1998	...	...	...	...
60	1998	...	...	...	...
61	1998	...	...	...	...
62	1998	...	...	...	...
63	1998	...	...	...	...
64	1998	...	...	...	...
65	1998	...	...	...	...
66	1998	...	...	...	...
67	1998	...	...	...	...
68	1998	...	...	...	...
69	1998	...	...	...	...
70	1998	...	...	...	...
71	1998	...	...	...	...
72	1998	...	...	...	...
73	1998	...	...	...	...
74	1998	...	...	...	...
75	1998	...	...	...	...
76	1998	...	...	...	...
77	1998	...	...	...	...
78	1998	...	...	...	...
79	1998	...	...	...	...
80	1998	...	...	...	...
81	1998	...	...	...	...
82	1998	...	...	...	...
83	1998	...	...	...	...
84	1998	...	...	...	...
85	1998	...	...	...	...
86	1998	...	...	...	...
87	1998	...	...	...	...
88	1998	...	...	...	...
89	1998	...	...	...	...
90	1998	...	...	...	...
91	1998	...	...	...	...
92	1998	...	...	...	...
93	1998	...	...	...	...
94	1998	...	...	...	...
95	1998	...	...	...	...
96	1998	...	...	...	...
97	1998	...	...	...	...
98	1998	...	...	...	...
99	1998	...	...	...	...
100	1998	...	...	...	...



Date	Description	Amount
2023-01-01	Opening Balance	1000.00
2023-01-05	Deposit	500.00
2023-01-10	Withdrawal	200.00
2023-01-15	Deposit	300.00
2023-01-20	Withdrawal	150.00
2023-01-25	Deposit	400.00
2023-01-30	Withdrawal	100.00
2023-02-01	Balance Forward	1850.00
2023-02-05	Deposit	600.00
2023-02-10	Withdrawal	300.00
2023-02-15	Deposit	500.00
2023-02-20	Withdrawal	250.00
2023-02-25	Deposit	450.00
2023-02-28	Balance Forward	2850.00
2023-03-01	Deposit	700.00
2023-03-05	Withdrawal	400.00
2023-03-10	Deposit	600.00
2023-03-15	Withdrawal	350.00
2023-03-20	Deposit	550.00
2023-03-25	Withdrawal	200.00
2023-03-30	Balance Forward	3950.00
2023-04-01	Deposit	800.00
2023-04-05	Withdrawal	500.00
2023-04-10	Deposit	700.00
2023-04-15	Withdrawal	450.00
2023-04-20	Deposit	650.00
2023-04-25	Withdrawal	300.00
2023-04-30	Balance Forward	5050.00
2023-05-01	Deposit	900.00
2023-05-05	Withdrawal	600.00
2023-05-10	Deposit	800.00
2023-05-15	Withdrawal	550.00
2023-05-20	Deposit	750.00
2023-05-25	Withdrawal	400.00
2023-05-30	Balance Forward	6350.00
2023-06-01	Deposit	1000.00
2023-06-05	Withdrawal	700.00
2023-06-10	Deposit	900.00
2023-06-15	Withdrawal	650.00
2023-06-20	Deposit	850.00
2023-06-25	Withdrawal	500.00
2023-06-30	Balance Forward	7850.00
2023-07-01	Deposit	1100.00
2023-07-05	Withdrawal	800.00
2023-07-10	Deposit	1000.00
2023-07-15	Withdrawal	750.00
2023-07-20	Deposit	950.00
2023-07-25	Withdrawal	600.00
2023-07-30	Balance Forward	9550.00
2023-08-01	Deposit	1200.00
2023-08-05	Withdrawal	900.00
2023-08-10	Deposit	1100.00
2023-08-15	Withdrawal	850.00
2023-08-20	Deposit	1050.00
2023-08-25	Withdrawal	700.00
2023-08-30	Balance Forward	11450.00
2023-09-01	Deposit	1300.00
2023-09-05	Withdrawal	1000.00
2023-09-10	Deposit	1200.00
2023-09-15	Withdrawal	950.00
2023-09-20	Deposit	1150.00
2023-09-25	Withdrawal	800.00
2023-09-30	Balance Forward	13650.00
2023-10-01	Deposit	1400.00
2023-10-05	Withdrawal	1100.00
2023-10-10	Deposit	1300.00
2023-10-15	Withdrawal	1050.00
2023-10-20	Deposit	1250.00
2023-10-25	Withdrawal	900.00
2023-10-30	Balance Forward	16050.00
2023-11-01	Deposit	1500.00
2023-11-05	Withdrawal	1200.00
2023-11-10	Deposit	1400.00
2023-11-15	Withdrawal	1150.00
2023-11-20	Deposit	1350.00
2023-11-25	Withdrawal	1000.00
2023-11-30	Balance Forward	18550.00
2023-12-01	Deposit	1600.00
2023-12-05	Withdrawal	1300.00
2023-12-10	Deposit	1500.00
2023-12-15	Withdrawal	1250.00
2023-12-20	Deposit	1450.00
2023-12-25	Withdrawal	1100.00
2023-12-30	Balance Forward	22250.00
2024-01-01	Closing Balance	22250.00



## APPENDIX B

### Estimation of Bias - CATI Minus Reconciled Response

Let,  $Y_{ij}$  be the  $ij$ -th observation for the CATI sample, where  $i = 1, 2, \dots, L$ ;  $j = 1, 2, \dots, n_i$ ;  $i$  = the stratum identification, and  $j$  is the element within stratum identification.

Let,  $V_{ij}$  be the  $ij$ -th observation for the reinterview sample, where  $i = 1, 2, \dots, L$ ;  $j = 1, 2, \dots, n_i$ ;  $i$  = the stratum identification, and  $j$  is the element within stratum identification.

Then, let  $T_{ij}$  be the truth measure,

$$T_{ij} = o_{ij} p_{ij} Y_{ij} + q_{ij} r_{ij} V_{ij} + c_{ij} ,$$

where,

$$o_{ij} = \begin{cases} 1 & \text{if operate in the CATI interview} \\ 0 & \text{otherwise (out-of-business),} \end{cases}$$

$$q_{ij} = \begin{cases} 1 & \text{if operate in the Reinterview} \\ 0 & \text{otherwise (out-of-business),} \end{cases}$$

$$p_{ij} = \begin{cases} 1 & \text{if the CATI response was correct,} \\ 0.5 & \text{if said "both estimates - unsure which is more correct"} \\ 0 & \text{otherwise} \end{cases}$$

$$r_{ij} = \begin{cases} 1 & \text{if the reinterview response was correct, and not equal} \\ & \text{to the CATI response,} \\ 0.5 & \text{if said "both estimates - unsure which is more correct"} \\ 0 & \text{otherwise} \end{cases}$$

$$c_{ij} = \begin{cases} \text{compromise value if one was reported} \\ 0 & \text{otherwise} \end{cases}$$

Then, the bias is,  $B_{ij} = Y_{ij} - T_{ij}$ , and estimated by

$$\hat{B} = \sum_{i=1}^L \sum_{j=1}^{n_i} w_{ij} z_{ij} B_{ij} ,$$



where,  $w_{ij}$  is the weight for the  $ij$ -th observation (one divided by the sampling fraction, adjusted for subsampling), and  $z_{ij}$  is the list adjustment factor. More specifically:

$$z_{ij} = \begin{cases} 1 & \text{if LAF=1 in the SAS file and no difference uncovered with} \\ & \text{the operation description in the reinterview,} \\ 1 & \text{if LAF not equal 1 in the SAS file, yet information found} \\ & \text{in the reinterview that would require LAF=1,} \\ 0 < z_{ij} < 1 & \text{if } 0 < \text{LAF} < 1 \text{ in the SAS file and no difference uncovered} \\ & \text{with the operation description in the reinterview,} \\ 0 < z_{ij} < 1 & \text{if a difference uncovered with the operation} \\ & \text{description found in reinterview which would require} \\ & \text{the LAF to be between 0 and 1,} \\ 0 & \text{if LAF=0 in the SAS file and no difference uncovered with} \\ & \text{the operation description in the reinterview, or} \\ 0 & \text{if LAF not equal to zero in SAS, yet the operation is} \\ & \text{out of business or other information available to set} \\ & \text{LAF=0.} \end{cases}$$

The estimated variance of  $B$  is,

$$\hat{V}(B) = \sum_{i=1}^L (n_i - 1)^{-1} n_i (1 - f_i) \sum_{j=1}^{n_i} (d_{ij} - d_{i.})^2 ,$$

where

$$d_{ij} = w_{ij} z_{ij} B_{ij} ,$$

$$d_{i.} = n_i^{-1} \sum_{j=1}^{n_i} d_{ij} ,$$

$f_i$  is the sampling rate for the  $i$ -th stratum,  $n_i$  is the number of responses in stratum  $i$ , and  $z_{ij}$  and  $w_{ij}$  defined as before.

### Estimation of Bias - SAS Edited Minus Reconciled Response

Let,  $Y_{ij}$  be the  $ij$ -th observation for the SAS edited response, and  $V_{ij}$  be the  $ij$ -th observation for reinterview response, where  $i = 1, 2, \dots, L$ ;  $j = 1, 2, \dots, n_i$ ;  $i$  = the stratum identification, and  $j$  is the element within stratum identification.

As before, let  $T_{ij}$  be the truth measure,

$$T_{ij} = o_{ij} p_{ij} Y_{ij} + q_{ij} r_{ij} V_{ij} + C_{ij},$$

where,  $o_{ij}$ ,  $q_{ij}$ ,  $p_{ij}$ ,  $r_{ij}$ ,  $C_{ij}$  are defined as before.

Again, the bias is,  $B_{ij} = Y_{ij} - T_{ij}$ , and estimated by  $\hat{B}$ , with variance estimated by  $V(\hat{B})$ .

### Domain Estimates of the Bias - CATI Minus Reconciled Response

Let,  $Y_{ij}$ ,  $T_{ij}$ ,  $B_{ij}$ ,  $z_{ij}$ , and  $w_{ij}$  be given as above. Now, let,

$$B_{ij}' = \begin{cases} B_{ij} & \text{if the unit is in the } k\text{-th domain} \\ 0 & \text{otherwise.} \end{cases}$$

Then the population total for the  $k$ -th domain of the  $B_{ij}'$  is estimated by

$$\hat{B}_k = \sum_{i=1}^L \sum_{j=1}^{n_i} w_{ij} z_{ij} B_{ij}'$$

The estimated variance of  $\hat{B}_k$  is,

$$\hat{V}(\hat{B}_k) = \sum_{i=1}^L (n_i - 1)^{-1} n_i (1 - f_i) \sum_{j=1}^{n_i} (d_{ij}' - d_{i.}')^2,$$

where

$$d_{ij}' = w_{ij} z_{ij} B_{ij}',$$

$$d_{i.}' = n_i^{-1} \sum_{j=1}^{n_i} d_{ij}'$$



1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the integrity of the financial system and for the ability to detect and prevent fraud. The text outlines the various types of records that should be maintained, including receipts, invoices, and bank statements, and provides detailed instructions on how to organize and store these documents. It also discusses the importance of regular audits and the role of internal controls in ensuring the accuracy of the records.

2. The second part of the document focuses on the importance of transparency and accountability in financial reporting. It highlights the need for clear and concise communication of financial information to stakeholders, including investors, creditors, and the public. The text provides guidance on how to prepare financial statements that are both accurate and easy to understand, and discusses the role of independent auditors in verifying the accuracy of the information. It also emphasizes the importance of disclosing any potential conflicts of interest and the need for a strong corporate governance structure.

3. The third part of the document discusses the importance of risk management in financial institutions. It identifies the various risks that these institutions face, including credit risk, market risk, and operational risk, and provides strategies for identifying, measuring, and mitigating these risks. The text emphasizes the need for a comprehensive risk management framework that is integrated into the overall business strategy and supported by strong internal controls. It also discusses the importance of regular risk assessments and the role of senior management in overseeing the risk management process.

4. The fourth part of the document discusses the importance of compliance with applicable laws and regulations. It highlights the need for financial institutions to stay up-to-date on the latest regulatory requirements and to implement effective compliance programs. The text provides guidance on how to develop and maintain a compliance program that is both effective and efficient, and discusses the role of compliance officers in ensuring that the institution is in full compliance with all applicable laws and regulations. It also emphasizes the importance of regular training and education for all employees on compliance issues.

5. The fifth part of the document discusses the importance of maintaining a strong relationship with the public and other stakeholders. It highlights the need for financial institutions to be transparent and to engage in open and honest communication with the public. The text provides guidance on how to develop and maintain a strong public relations program that is both effective and efficient, and discusses the role of public relations officers in ensuring that the institution is in full compliance with all applicable laws and regulations. It also emphasizes the importance of regular communication and the need for a strong corporate governance structure.

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100	100	100	100

Table 2. Reasons for differences in the CATI and reinterview responses for soybean stocks (responses with positive bias) - December 1987 reinterview study.

Reason	Minnesota		Indiana		Ohio	
	Freq.	%	Freq.	%	Freq.	%
<b>ESTIMATED/ROUNDING ERROR</b>	21	42.9	14	36.8	19	50.0
Rounding error	2		1		2	
Estimated	9		5		8	
From actual records	5		3		-	
Both estimated - don't know which is more correct	3		-		3	
Both estimated- 2nd response is more correct	1		4		6	
Difference of only small amount	1		1		-	
<b>DEFINITIONAL</b>	18	36.7	12	31.5	6	15.8
Original respondent reported indiv. land not partnership land	1		-		-	
Confusion with storage on acres oper. vs. where he lives	2		-		1	
Original interviewer asked for Dales land, not for farm	-		1		-	
Included some Indiv. land with Partnership land	-		1		-	
Forgot to include	2		-		-	
Failed to report reserve corn	-		1		-	
Failed to include grain belonging to someone else	1		1		-	
Confused with reporting that that stored in town	4		4		1	
Confusion with reporting landlord grain on farm	-		1		1	
This operation originally coded out of business	2		-		-	
Confusion with reporting rented land	-		1		-	
Didn't ask/forgot to include last year's crop	2		1		-	
Forgot to include grain purchased for feed/seed	1		-		3	
Didn't include storage used by another	1		1		-	
Reference date problem	2		-		-	
<b>OTHER</b>	10	20.4	12	31.6	13	34.2
Doesn't give out information over the phone	-		1		-	
Spouse didn't know	2		-		1	

Reason	Minnesota		Indiana		Ohio	
	Freq.	%	Freq.	%	Freq.	%
OTHER (cont'd)						
Partner that reported only familiar with livestock	-		-		1	
Don't know why there's a diff.	1		1		1	
Thought he/she reported this the first time	2		-		2	
Can't hear well on phone	-		3		-	
Misunderstanding between enum. and respondent	-		1		-	
Fatigued/tired/hurried when called on phone	-		1		-	
No explanation given	3		1		2	
Forgot to ask	-		-		2	
Didn't take the time on telephone to add correctly	-		2		1	
Compromise values given	-		2		3	
Not able to reconcile difference	2		-		-	
TOTAL	49	100	38	100	38	100

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for transparency and accountability, particularly in the context of public administration and government operations. This section outlines the various methods and systems used to collect, store, and analyze data, ensuring that information is readily accessible and reliable.

2. The second part of the document focuses on the challenges and solutions associated with data management. It identifies common issues such as data redundancy, inconsistency, and security risks, and provides practical strategies to address these concerns. The text highlights the need for robust security protocols and regular data audits to protect sensitive information and maintain the integrity of the data systems.

3. The third part of the document explores the role of technology in modern data management. It discusses the integration of cloud computing, artificial intelligence, and big data analytics to enhance data processing capabilities and improve decision-making. The text also addresses the importance of training and education in ensuring that staff are equipped with the necessary skills to effectively utilize these advanced technologies.

4. The fourth part of the document discusses the legal and ethical considerations surrounding data management. It covers topics such as data privacy, consent, and the right to be forgotten, emphasizing the need for compliance with relevant regulations and standards. The text also touches upon the ethical implications of data collection and analysis, particularly in the context of surveillance and targeted advertising.

5. The fifth part of the document provides a summary of the key findings and recommendations. It reiterates the importance of a proactive approach to data management and the need for continuous improvement and innovation in the field. The text concludes by encouraging stakeholders to embrace a data-driven culture and to work together to overcome the challenges and realize the full potential of data in the digital age.



Reason	Minnesota		Indiana		Ohio	
	Freq.	%	Freq.	%	Freq.	%
DEFINITIONAL (cont'd)						
Forgot to about oats storage	4		-		-	
Didn't think about bins being filled to the top	-		1		-	
Confusion with including bins & cribs no longer used	-		-		6	
Do not have any storage	-		1		-	
Confusion with listed capacity versus usable capacity	-		1		-	
Failed to include grain belonging to someone else	1		1		-	
Confused with reporting that that stored in town	-		1		-	
Confusion with reporting rented land	1		1		-	
Included rented storage on other farms not his	1		-		-	
Not all bins included	11		7		3	
Rented bins not included	-		-		1	
Storage is silage not whole grain	-		-		1	
Didn't ask about ear corn/ only reported shelled corn	-		1		-	
Confusion with reporting high moisture corn	2		1		-	
Forgot to include grain purchased for feed/seed	-		1		-	
Didn't include ear corn	-		1		-	
Didn't include storage used by another	1		-		-	
Included silos used to store silage	1		-		-	
Only included stocks of one partner-the one interviewed	1		-		-	
Reported that in use, not total capacity	2		-		-	
Confusion with storage on acres operated versus where lives	1		1		-	
This operation originally coded as out-of-business	1		-		-	
Included cribs no longer usable	1		-		-	
OTHER						
No explanation given	2	20.0	4	32.1	3	29.5
Wrong bushels given	-		-		1	
Misunderstanding between enum. and respondent	1		-		-	
Mistake in addition	2		3		2	
Figured the correct value after the telephoner called	1		-		-	
Don't know why there's a diff.	5		2		2	



