TRENDS AND APPLICATIONS

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Accuracy of Information Maintained by US Credit Bureaus: Frequency of Errors and Effects on Consumers' Credit Scores

A representative sample of 1,000 US consumers reviewed their credit reports from the three major US credit bureaus with help from university research associates. Twenty-six percent of study participants claimed to find at least one potentially material error and filed formal disputes with the relevant bureau(s). For 78% of the 263 consumers who filed disputes (20% of participants overall) at least one bureau altered the credit report accordingly. Thirty-three percent of disputants (8.7% of participants) experienced a resulting increase of 10+ points in one or more of their FICO® scores; 21% of disputants (5.5% of study participants) had one or more scores cross a threshold that would typically result in more favorable terms of credit. Our findings suggest that credit-bureau data are accurate enough to facilitate efficient lending and creditors' management of accounts, but individual consumers need to be vigilant to protect themselves against potentially costly errors in their files.

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Information provided by US credit reporting agencies (CRAs, or credit bureaus) has been used for decades in extending and pricing credit. Additionally, credit scores are used for pricing automobile and homeowners insurance, issuing service contracts, determining whether persons are hired and whether individuals are accepted as tenants in rental property. Almost a half-century ago, Karst (1966) anticipated challenges that credit bureaus, lawmakers, and users of credit-bureau information would face as computer technology enabled the collection, maintenance, and disclosure of individuals' credit histories on a grand scale. He recognized the inexorable trend to computerized assessments of individuals' creditworthiness, the need to educate consumers about the nature and uses of such data, and the importance of systems for protecting against and correcting inaccuracies.

Credit bureaus indisputably offer efficient mechanisms for collecting and dispensing information about individuals' past use of credit, current obligations, and payment history. Today, major credit bureaus in the United States each maintain credit histories on over two hundred million consumers. From more than 30,000 data furnishers (credit card companies, mortgage servicers, debt collectors, etc.) they process, on average, two billion individual account updates, two million new public record items, and 3.3 million changes of address monthly. With so many transactions, the possibilities for error accumulate and there is risk that errors can significantly distort assessments of individuals' credit risk.

Alarming reports have appeared of alleged inaccuracies in credit-bureau data. From a survey of 154 adults, the United States Public Interest Research Group (USPIRG) concluded that "79% of the credit reports surveyed contained either serious errors or other mistakes" and one-fourth of the reports "contained serious errors that could result in the denial

of credit" (National Association of State PIRGs 2004). In testimony before Congress, a consumer advocacy group asserted that inaccuracies in credit reports could cause at least eight million Americans to be mis-categorized as subprime risks, and pay tens of thousands of dollars in excess interest payments over the term of a 30-year mortgage loan (Brobeck 2003). Unfortunately, these studies are based on very limited and possibly biased samples and are prone to other methodological flaws. A 2003 study by the US Government Accountability Office (GAO) reviewed the studies available at that time and concluded that "the lack of comprehensive information regarding the accuracy of consumer credit reports inhibits any meaningful discussion of what more could or should be done to improve credit reporting accuracy. Available studies suggest that accuracy could be a problem, but no study has been performed that is representative of the universe of credit reports."[1]

Accurate credit-bureau data lead to better assessments of credit risk and proper pricing of credit; inaccurate data can deprive individuals and businesses of economic opportunity. With carefully executed research we address the following questions to shed light on this important topic:

1. How frequently do errors occur in credit-bureau data?
2. What are the consequences of inaccuracies for individual consumers? Do they affect availability and cost of credit?
3. Can businesses properly rely on such data for their lending decisions?
4. What reporting-related issues need further attention by researchers, the credit reporting industry, regulators, and legislators?

RESEARCH METHODOLOGY

Our research methodology was tested and refined in two pilot studies (Smith et al. 2006, 2008; Federal Trade Commission 2006, 2008, 2012). It involves the engagement of consumers in detailed reviews of their credit reports, educating them as necessary on the contents, support in clarifying alleged inaccuracies, help in preparing dispute letters that properly address the issues, follow-up to determine the results of disputes, and recalculation of credit scores using frozen files[2] to measure the impact. The methodology produces unbiased estimates of the frequency

1. GAO, 2003, p. 17. See also Avery et al. (2003, 2004) and Hunt (2002).

2. FICO maintained a copy of the original reports for the duration of the study so as to preserve the initial credit history information. We refer to these original credit reports as "frozen files."

of errors and prevents contamination of the measures of effects on credit scores by other events that occur during the dispute process.

To achieve a nationally representative study involving 1,000 individuals, invitations were sent in a series of mailing waves to a large stratified random sample of consumers. Approximately 175,000 credit files from the three bureaus with sufficient information to enable production of a VantageScore credit score (a credit score marketed by the three leading credit bureaus) served as the sampling frame.[3]

Participants received credit reports from Equifax, Experian, and TransUnion in FICO's format, a cover letter describing the contents, and a checklist of items to be reviewed. To prepare for the interview, university research associates (RAs) summarized the following key items that determine an individual's credit score and noted significant inconsistencies among the bureaus for possible discussion:

- Number of active accounts.
- Length of credit history.
- Number of new accounts.
- Total outstanding balances.
- Number of accounts with nonzero balances.
- Number of accounts with negative items.
- Number of accounts currently overdue.
- Worst current delinquency.
- Worst historical delinquency.
- Number of times ever 30, 60, or 90+ days overdue.
- Number of inquiries for new credit.
- Number of bankruptcy records.
- Number of other public derogatory items.
- Number of collections.
- Amounts outstanding on collections.
- Number and amounts of mortgages.
- Number and amounts of home equity lines of credit.
- Revolving balances and estimates of revolving credit utilization (current balances relative to credit limits).

If an alleged error involved any of these key items or presented evidence of potential mismatch or identity theft, the case entered the dispute phase for addressing "potentially material errors." Cases were

3. The scale factor for stratified sampling was the inverse of the response rate for the VantageScore category. A differential cash incentive ($75 for individuals with VantageScores below the median, $25 for those above) was also offered to offset a lower tendency of individuals with low credit scores to register for the study and complete the process.

considered to involve "potentially material errors" calling for the filing of a dispute if they contained serious mismatches or evidence of possible identity theft, evidence of improper merging of noncredit information that does not apply to the participant (such as a previous address where the person has no connection), errors in personal information such as current address or previous address, or an error in employment history (citing an employer for whom the participant had not worked).

For cases with potentially material errors, the frozen file was re-scored and participants filed disputes with the bureaus using letters crafted by the RAs to indicate clearly how disputed items should be corrected. To give sufficient time for the dispute process, we waited a minimum of 8 weeks (56 days) before drawing new credit reports to determine the actual outcomes.[4]

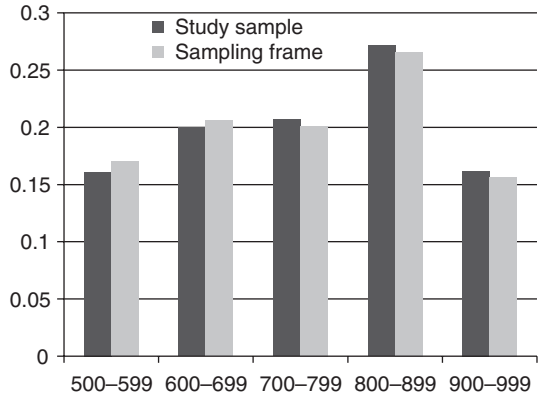
For each disputed case, the research team recorded whether the new report indicated full, partial, or no changes to disputed items: (1) for the set of all disputes filed by the consumer (i.e., with the case as the unit of analysis), (2) for the set of all disputes filed by the consumer with a particular bureau (i.e., with the consumer's credit file at a single bureau as the unit of analysis), and (3) for individual items disputed in a report (such as a specific account or public record). We also counted the number of items disputed with each bureau and the number of items at the bureau which were changed fully, partially or not at all. If some, but not all, requested changes to items that could affect the credit score were made in response to disputes, a FICO analyst performed a second re-scoring of the file to determine the effects of the actual changes.

RESEARCH FINDINGS

The stratified sampling procedure and participation incentives produced a sample of consumers with an excellent representation according to the primary criterion (credit score), good representation from all age groups, and an excellent mix according to gender (51% female). There were participants recruited from each of the 50 US states and the number from each state was generally proportional to the size of the adult population. Figure 1 shows the numbers and percentages of individuals in five VantageScore-quintile groupings for all 174,617 individuals in the sampling frame, and for the 1,001 individuals with

4. The FCRA gives the bureaus 30 days to investigate a consumer's dispute.

FIGURE 1
VantageScore Distributions



whom the review of credit reports was completed (representing 3.9% of invitees).

There was a tendency for individuals with higher education levels (56% having university degrees) and higher income levels (74% having household incomes over $50K) to participate in the study. Higher education was more prevalent in the highest credit-score group and less prevalent in the lowest credit-score group. Higher household incomes were also associated with higher credit scores—with a noticeable transition in credit risk at about $50,000.

A potentially material error in one of the three bureau reports occurred for 26% of the cases overall, with substantial variation across credit-score groups. As shown in Table 1, potential errors ranged from 5% of participants in the highest credit-score group to 45% in the lowest credit-score group.[5]

Table 2 reveals that there were 263 cases in which an alleged error met agreed criteria for a potentially material dispute (26% of all participants). In 95 cases (36% of cases with potentially material disputes), all the disputed items of significance were changed in accordance with the dispute letters filed by the consumer. In 108 cases (41% of cases with potentially material disputes) the disputed items of significance were partly changed in accordance with the dispute letters filed by the consumer. In 59 cases (22% of cases with potentially material disputes), no changes to disputed items of significance were imposed by the bureaus

5. The higher percentage for the latter group is not unexpected, as participants would focus on errors that tend to harm a credit score.

TABLE 1
Frequency of Alleged Errors

Number of Alleged Errors		Average FICO Score					
		<590	590–679	680–749	750–789	>790	Overall
1: Number of alleged errors	Number	73	90	120	133	168	584
	Percent	39.9	44.3	57.4	67.9	80.0	58.3
2: Number of potentially material errors	Number	28	40	22	33	31	154
	Percent	15.3	19.7	10.5	16.8	14.8	15.4
3: At least one potentially material error	Number	82	73	67	30	11	263
	Percent	44.8	36.0	32.1	15.3	5.2	26.3
Total	Number	183	203	209	196	210	1,001
	Percent	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 2
Outcome of Disputes

Outcome of Participant's Disputes		Average FICO Score					
		<590	590–679	680–749	750–789	>790	Overall
No change in material information disputed	Number	22	19	11	4	3	59
	Percent	26.8	26.0	16.4	13.3	27.3	22.4
Potentially material disputes partly satisfied	Number	44	31	26	5	2	108
	Percent	53.7	42.5	38.8	16.7	18.2	41.1
Not determined	Number	.	.	.	1	.	1
	Percent	.	.	.	3.3	.	.04
All potentially material items changed	Number	16	23	30	20	6	95
	Percent	19.5	31.5	44.8	66.7	54.5	36.1
Total	Number	82	73	67	30	11	263
	Percent	100.0	100.0	100.0	100.0	100.0	100.0

in a way that would satisfy the consumer's disputes. In just one case, we had no indication of the outcome because no new reports were obtainable for the person (for technical reasons).

Table 2 also shows that 78% of consumers who filed disputes (20% of participants overall) were successful in having changes made to a potentially material item in one or more of their credit reports following the filing of their dispute(s) with the relevant credit bureau(s). Changes were most likely to occur for disputants whose average credit scores were in the middle and upper-middle quintiles (with FICO scores between 680 and 789).

In Table 3, we provide a summary of individual items disputed in the credit reports and the resolutions that occurred for each type of item. The first three columns of statistics pertain to the number of

TABLE 3
Sources of Disputed Information

Error Source	Number of Alleged Errors	Number of Items Modified	Percent Changed	Number of Reports with This Alleged Error	Number of Reports with This Error Modified	Percent of All Reports Examined with This Error Modified
Collections	502	267	53.2%	223	146	4.9%
Duplicate entries	65	30	46.2%	39	27	0.9%
Header information	154	99	64.3%	127	90	3.0%
Inquiries	88	48	54.5%	48	34	1.1%
Derogatory public records	44	25	56.8%	35	20	0.7%
Tradeline information	708	395	55.8%	409	267	9.0%

individual items in credit reports that were disputed for the 263 cases with potentially material errors; the last three columns indicate the number of credit reports in which items of that type were disputed. Negative information pertaining to revolving credit accounts (current delinquencies and histories of late payments) and information about collections were disputed most frequently (in 9% and 5% of reports, respectively). Effects on the credit score were felt primarily through counts of negative items, outstanding account balances, most recent delinquency, and collection activity.[6] Errors in mortgage accounts, recent inquiries for new credit, and public records were alleged less frequently. Note that over 50% of individual items disputed were changed by the bureaus as requested.

In Table 4, we summarize the changes that occurred in the highest (maximum), average and lowest (minimum) credit scores for the 263 cases with potentially material disputes after the credit reports were revised to reflect changes that were actually made. Particular attention might be focused on the lowest credit score among the three bureaus, as a prudent lender may give that score greatest weight.

After the dispute process, the lowest credit score increased by an average of 7.7 points and 25% of disputants realized increases of 8 points or more in their lowest credit score. The average convergence in credit scores was 3.5 points and 25% of disputants saw a convergence of 6

6. There were 117 cases (12% of participants) where reported items (tradelines or reports of collection activity) were not recognized by the consumer and they were subsequently removed from one or more credit repots as requested in dispute letters. Some may have involved dormant accounts that the bureaus could not verify. Most did not affect the credit score significantly.

TABLE 4
Changes in Credit Scores Attributable to Changes Imposed Following Disputes

Score Changes		Average FICO Score					
		<590	590–679	680–749	750–789	>790	Overall
Change in maximum score	First quartile	0.0	0.0	0.0	0.0	0.0	0.0
	Median	0.0	0.0	0.0	0.0	0.0	0.0
	Mean	5.1	5.4	6.2	1.3	0.5	4.9
	Third quartile	2.0	0.0	6.0	2.0	0.0	3.0
Change in average score	First quartile	0.0	0.0	0.0	0.0	0.0	0.0
	Median	0.0	0.0	1.0	1.7	0.0	0.0
	Mean	4.6	5.4	8.5	8.2	1.5	6.1
	Third quartile	7.3	6.3	11.3	15.7	0.0	7.7
Change in minimum score	First quartile	0.0	0.0	0.0	0.0	0.0	0.0
	Median	0.0	0.0	0.0	1.5	0.0	0.0
	Mean	4.3	5.6	10.6	16.4	4.5	7.7
	Third quartile	5.0	2.0	10.0	28.0	0.0	8.0
Decrease in range	First quartile	−2.0	−2.0	−3.0	0.0	0.0	0.0
	Median	0.0	0.0	0.0	3.0	0.0	0.0
	Mean	−1.4	−0.1	5.3	18.1	5.4	3.5
	Third quartile	0.5	0.0	6.5	29.0	5.0	6.0

points or more between their highest and lowest scores. Changes were greatest for disputants whose average credit scores were above average but not in the highest tier. For individuals in the lowest risk category (highest credit score) there is little room for improvement. Conversely, individuals in the highest risk category often have so many negative entries that correcting some has little impact on credit scores.

Consumers are concerned with whether the change in any of their credit scores would affect access to or terms of credit. In Table 5 we report the frequencies with which any of the credit scores increased by 10 points or more (Panel A) after the actual corrections were imposed and whether any of the scores crossed lending thresholds that separates risk tiers suggested by FICO for setting terms of automobile loans (Panel B). Disputants with average credit scores in the middle tiers (680–749 and 750–789) were more likely to experience benefits than individuals in the lowest and highest tiers. Overall, 33% of disputants (8.7 percent of study participants) experienced an increase of 10 or more points in one or more of their credit scores; 21% of disputants (5.5% of study participants) had one or more scores cross a threshold for more favorable credit terms.

Credit bureaus tend to count errors using a different base for the statistics. Rather than viewing the consumer as the unit of analysis and considering the consumer's experience at all three bureaus, they tend to

TABLE 5
Changes in a Credit-Risk Tier Attributable to Changes in File Following Disputes: Consumer View of Outcome

Panel A (Whether any Score Changed by 10+ Points)

		Average FICO Score					
Score Changed 10+ Points		<590	590–679	680–749	750–789	>790	Overall
No	Number	58	51	41	17	9	176
	Percent	70.7	69.9	61.2	56.7	81.8	66.9
Yes	Number	24	22	26	13	2	87
	Percent	29.3	30.1	38.8	43.3	18.2	33.1
Total	Number	82	73	67	30	11	263
	Percent	100.0	100.0	100.0	100.0	100.0	100.0

Panel B (Whether any Score Crossed a Lending Risk Threshold of 589, 619, 659, 689 or 719 Points)

		Average FICO Score					
Score Crossed Threshold		<590	590–679	680–749	750–789	>790	Overall
No	Number	75	53	42	28	11	209
	Percent	91.5	72.6	62.7	93.3	100.0	79.5
Yes	Number	7	20	25	2	.	54
	Percent	8.5	27.4	37.3	6.7	.	20.5
Total	Number	82	73	67	30	11	263
	Percent	100.0	100.0	100.0	100.0	100.0	100.0

consider the credit report as the unit of analysis. As seen in Table 6, there were 405 dispute letters (sent by the 263 participants) that had at least one potentially material dispute. Viewing the outcomes from the perspective of individual bureaus, we see that a lending threshold was crossed as a result of changes imposed by the bureau in 16% of the disputes filed (which amounts to 2.2% of the 2,973 bureau reports reviewed overall). Disputants with credit scores in the middle and lower-middle tiers were most likely to cross a lending threshold.[7]

DISCUSSION

This comprehensive study of credit-bureau accuracy provides new and objective perspective on a highly controversial subject. A recent study

7. If all changes had been imposed as requested in the dispute letters, 35% (vs. 21%) would have crossed one of the lending thresholds based on one or more of their credit scores. Some of these consumers may, however, have reconsidered their allegations of errors after the bureaus reported the results of their investigations and others may have falsely alleged errors in an attempt to achieve "credit repair."

TABLE 6
Changes in a Credit-Risk Tier Attributable to Changes in File Following Disputes: Bureau View of Outcome

Panel A (Whether any Score Changed by 10+ Points)

		Average FICO Score					
Score Changed 10+ Points		<590	590–679	680–749	750–789	>790	Overall
No	Number	90	72	66	30	16	274
	Percent	69.8	68.6	61.7	65.2	88.9	67.7
Yes	Number	39	33	41	16	2	131
	Percent	30.2	31.4	38.3	34.8	11.1	32.3
Total	Number	129	105	107	46	18	405
	Percent	100.0	100.0	100.0	100.0	100.0	100.0

Panel B (Whether any Score Crossed a Lending Risk Threshold of 589, 619, 659, 689 or 719 Points)

		Average FICO Score					
Score Crossed Threshold		<590	590–679	680–749	750–789	>790	Overall
No	Number	119	80	79	44	18	340
	Percent	92.2	76.2	73.8	95.7	100.0	84.0
Yes	Number	10	25	28	2	.	65
	Percent	7.8	23.8	26.2	4.3	.	16.0
Total	Number	129	105	107	46	18	405
	Percent	100.0	100.0	100.0	100.0	100.0	100.0

commissioned by the Consumer Data Industry Association ("CDIA") used a similar methodology with a large sample (over 2,000 consumers) drawn from an online consumer panel (Turner, Varghese, and Walker 2011).[8] One or more disputed items surfaced in 19% of the reports reviewed but only half of those involved tradeline data or public records that could affect one's credit score. Following the dispute process, changes imposed on the record resulted in an increase of 10 or more points in the credit score for 21% of disputed reports.[9] This represented 1.8% of all credit reports examined.

The frequencies of errors and impacts on credit scores that we observed are higher than those recorded in the panel-based study sponsored by the CDIA but considerably lower than those inferred from ad hoc studies performed by consumer advocacy groups. Some differences in study results are attributable to sampling methodologies; others may be

8. The CDIA is the trade association for consumer data agencies and represents the three nationwide CRAs as well as many other companies that collect data and maintain consumer reports.

9. Note that Turner et al. (2011) use VantageScore credit scores, as opposed to the more widely used FICO credit score.

attributed to the research process and the frame of reference used to compile results. By summarizing the outcomes for the case as a whole (from all three bureaus) and also for the individual bureau disputes, we have taken care to produce statistics that reflect both a consumer's view and a credit bureau's view.

Financial institutions see the risks of errors in individual files mitigated by an accumulative effect for all their clients, but individual consumers bear the full brunt of the errors in their own files. Our findings may therefore provide comfort to financial institutions that rely on such information for extending credit and setting its terms, while underscoring the importance to individual consumers of periodically checking their credit files to ensure their accuracy. There is a small but significant risk that the creditworthiness of an individual consumer is misrepresented.

The Fair Credit Reporting Act (FCRA 1970) embodies the current regulatory guidelines and legal framework for the credit reporting industry.[10] Staten and Cate (2004) describe the FCRA and subsequent amendments as taking the "remedial approach" to regulation, and they stress the importance of consumer education for the system to work effectively. Effectively, the FCRA "designates the consumer as the 'quality-control' inspector ... and places the responsibility for monitoring file accuracy on the party who can determine accuracy at the lowest cost." Unfortunately, it is not evident that most consumers review their credit files and take actions to get errors corrected. Lyons, Rachlis, and Scherpf (2007) found that many consumers "... still lack specific knowledge about what information is contained in credit reports, how to dispute errors, and the possible impact of their credit history on such factors as insurance premiums and employment." A 2012 national consumer poll conducted by Harris Interactive for the National Foundation for Credit Counseling found that only 38% of respondents said they had requested a copy of their credit report within the past 12 months (NFCC 2012) despite the fact that free reports are available annually from each bureau at https://www.annualcreditreport.com/.

10. The FCRA was enacted in 1971. In 1996, the FCRA was amended to include certain accuracy and reinvestigation responsibilities for the CRAs and data furnishers. The 2003 Fair and Accurate Credit Transactions ("FACT") Act imposed further reinvestigation duties on data furnishers. For more on the FCRA and its subsequent amendments, please see: http://www.ftc.gov/os/statutes/031224fcra.pdf.

CONCLUSION

Our findings suggest that credit-bureau data are accurate enough to facilitate efficient lending by financial institutions and management of accounts by creditors, but individual consumers need to be vigilant (and educated) to protect themselves against possible errors in their files. Observations from individual cases raised detailed questions about the reporting of inquiries for new credit, the reporting of collection activity, reporting the refinancing or restructuring of loans, handling of bankruptcy information, and general clarity of information to consumers. Our results also suggest that current regulatory regimes and industry practice are geared to providing data that promote efficiency in our consumer economy while leaving a small percentage of individual consumers vulnerable to significant misrepresentations of their creditworthiness. Some errors go uncorrected because consumers fail to dispute them.

With information from the credit reports and data from a closing survey, we saw a complex interplay among individual demographic characteristics, exposure to stressful events, patterns of credit utilization, and exposure to errors in credit-bureau data. We recognize also that disputes filed by consumers alone may have less clarity than those prepared with the support of university RAs or other trained third parties, and thus may be less successful than achieved in the present study.[11] These phenomena and issues call for further research.

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11. The FTC provides a sample dispute letter for consumers to use that is similar to the dispute letter prepared by the research associates for this study. The sample letter can be found at: http://www.consumer.ftc.gov/articles/0151-disputing-errors-credit-reports#sample%20dispute%20letter

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