



WHITE PAPER

Enhanced Public Record Standards

July 2017

As industry and consumer needs evolve, TransUnion and the other nationwide Credit Reporting Agencies (CRAs) continually seek ways to ensure the data we maintain on our consumer credit files are accurate and timely, to best serve the needs of our customers and consumers.

As such, the CRAs have established enhanced public record data standards and service levels for the collection and timely updating of civil judgments, tax liens and bankruptcy public records supplied by our public record vendor. The focus was on: (i) minimum required consumer identifying information (name, address, social security number and/or date of birth) (“PII”) and (ii) minimum frequency of courthouse visits to obtain newly filed and updated public records (no less frequent than once every 90 days). These enhanced Public Record standards will apply to new and existing bankruptcies, tax liens and civil judgment data in our respective credit reporting databases.

At this time, we continue to work with our public records vendor to refine the requirements and service level expectations in a manner to ensure adherence, but still address the challenges and variances at the data sources themselves. These challenges include varying PII availability on original record documents, differences in automation and electronic docket availability from court to court, variances in courthouse and recorder’s office accessibility to collectors, and dissimilar timeframes for making public record updates available at the point of collection.

Executive Summary

While final details cannot be provided until after the enhanced standards go into effect (July 2017), based on our current analysis of public record data on our credit reporting database we anticipate the following:

- No change to **bankruptcy** public record data
- Significant change to **civil judgment** public record data such that we will be removing all civil judgment public record data
- Significant change to **tax lien** public record data such that we will be removing a minimum of 60% of tax lien public record data
- Data changes and impacts associated with the enhanced collection frequency requirements cannot be known until after the enhanced standards go into effect

Based on these anticipated public record data changes, TransUnion's internal analysis of their likely impact on its credit reporting data base reveals the following:

- Approximately 9% of the population has either a tax lien or a civil judgment reported on their file, which may result in a credit score impact
- The impact across eight TransUnion generic scores tested is expected to be modest. Any score shifts are anticipated to range between 2.5% and 6.4% with most scores increasing.
- There is no loss in the predictive performance of the scores tested since they capture other derogatory-type behavior

Sample Design

In order to gauge the anticipated impact of the enhanced data standards on our consumer reporting database, a random sample of 10M consumers was tested using the following methodology:

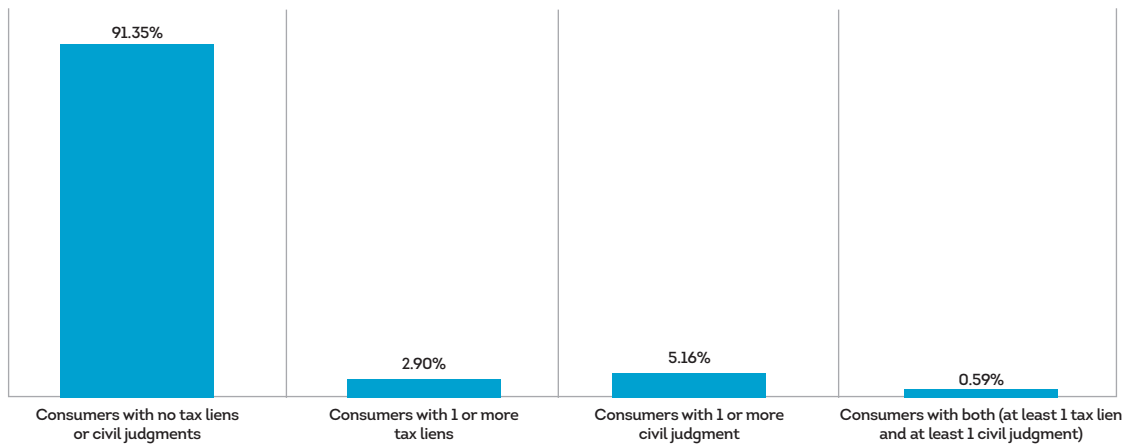
1. Score 10M population for June 2016 archive (Before file)
2. Remove public record information if the following conditions are met:
 - Tax Liens¹ with no SSN present
 - All Civil Judgments²
3. Re-score 10M population for June 2016 archive (After file)
4. Produce before and after score reports:
 - CreditVision® Account Management
 - CreditVision® Auto
 - CreditVision® Bankruptcy
 - CreditVision® New Account
 - TransRisk Account Management 3.0
 - TransRisk Bankruptcy
 - TransRisk New Account 3.0
 - TransRisk Recovery 3.0 – Stage 1

Based on the random 10M sample, more than 9M or 91.35% of the consumers do not have either a tax lien or a civil judgment; therefore these consumers will not be impacted by the new reporting standards and will not experience any score shift as a result of the enhanced data standards for public records.

1. Public Record Type in (FT, PF, PL, PT, RL, SL, TB, TL, TX). 11M public records for 6M consumers across entire database

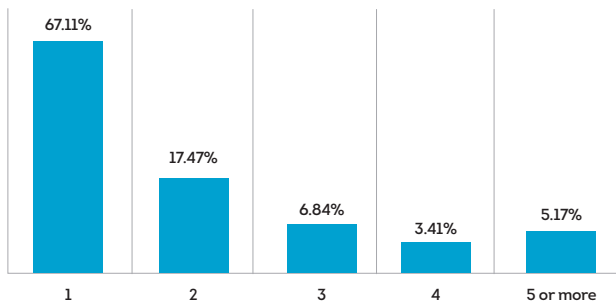
2. Public Record Type in (PC, CJ, CB). 23M public records for 17M consumers across entire database

Consumers with tax liens or civil judgments

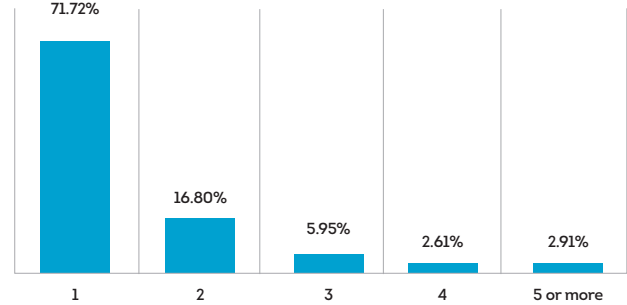


Of the 8.65% of consumers with a tax lien and/or a civil judgment, the majority of the consumers have just one tax lien or one civil judgment.

Distribution of tax liens



Distribution of civil judgments



For the affected population of 8.65%, those consumers who will have a tax lien or a civil judgment removed, will see an average score increase between +4 points and +45 points, depending on the score.

TransUnion score	% of 10M consumers that will experience a score shift	Affected population average point increase	Definition of Performance
CreditVision Account Management	2.49%	+4	Delinquency (90+ days past due) on existing accounts within 12 months
CreditVision Auto	2.45%	+9	Delinquency (60+ days past due) on new auto accounts within 24 months
CreditVision Bankruptcy	4.05%	+8	Bankruptcy filing within 12 months
CreditVision New Account	4.26%	+8	Delinquency (90+ days past due) on new accounts within 24 months
TransRisk Account Management 3.0	3.58%	+16	Delinquency (90+ days past due) on existing accounts within 24 months
TransRisk Bankruptcy	4.51%	+45	Bankruptcy filing within 12 months. Points-to-double-odds (PDO) scheme for TransRisk Bankruptcy is 10:1 @ 25, doubling every 125 points or 50:1 @ 500, doubling every 50 points, depending on the scorecard
TransRisk New Account 3.0	2.92%	+6	Delinquency (90+ days past due) on new accounts within 24 months
TransRisk Recovery 3.0 - Stage 1	6.43%	+10	Likelihood of collecting \$50 or more within 12 months

Impact Analysis Results

In comparing scores from the before and after files, the eight analyzed scores will shift modestly between 2.5% and 6.4%.

June 2016											
Score	SCORE DECREASE					No Change	SCORE INCREASE				
	-41+	-21 to -40	-11 to -20	-6 to -10	-1 to -5		1 to 5	6 to 10	11 to 20	21 to 40	41+
CreditVision Account Management	0.00%	0.00%	0.00%	0.00%	0.00%	97.51%	0.75%	0.76%	0.69%	0.27%	0.00%
CreditVision Auto	0.00%	0.00%	0.00%	0.00%	0.00%	97.55%	0.03%	0.47%	0.61%	1.11%	0.23%
CreditVision Bankruptcy	0.00%	0.00%	0.00%	0.00%	0.00%	95.95%	1.38%	1.23%	0.92%	0.20%	0.31%
CreditVision New Account*	1.08%	0.03%	0.03%	0.02%	0.03%	95.74%	1.70%	0.64%	0.44%	0.19%	0.11%
TransRisk Account Management 3.0	0.00%	0.00%	0.00%	0.00%	0.00%	96.42%	0.28%	0.37%	0.73%	1.31%	0.87%
TransRisk Bankruptcy	0.00%	0.00%	0.00%	0.00%	0.00%	95.49%	0.47%	0.34%	0.52%	0.80%	2.37%
TransRisk New Account 3.0	0.00%	0.00%	0.05%	0.00%	0.00%	97.08%	0.11%	0.89%	1.08%	0.73%	0.05%
TransRisk Recovery 3.0 - Stage 1	0.01%	0.01%	0.01%	0.01%	0.01%	93.57%	1.48%	1.62%	2.23%	0.90%	0.16%

*The 1.08% score decrease for CreditVision New Account is a result of the consumer becoming unscorable—given there was no other information on their file after the removal of the public record.

Further, the following tables provide the impact for each of the eight TransUnion generic scores in 50-point score bands.

CreditVision Account Management

June 2016												
Score Range	SCORE DECREASE					No Change	SCORE INCREASE					Total
	-41+	-21 to -40	-11 to -20	-6 to -10	-1 to -5		1 to 5	6 to 10	11 to 20	21 to 40	41+	
Missing	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.09%
<= 449	0.00%	0.00%	0.00%	0.00%	0.00%	99.25%	0.60%	0.04%	0.10%	0.01%	0.00%	3.22%
450 - 499	0.00%	0.00%	0.00%	0.00%	0.00%	94.65%	4.13%	0.45%	0.45%	0.32%	0.00%	1.17%
500 - 549	0.00%	0.00%	0.00%	0.00%	0.00%	93.09%	4.39%	1.10%	1.00%	0.42%	0.00%	3.76%
550 - 599	0.00%	0.00%	0.00%	0.00%	0.00%	91.48%	2.22%	3.42%	2.19%	0.68%	0.00%	6.32%
600 - 649	0.00%	0.00%	0.00%	0.00%	0.00%	92.59%	1.77%	2.88%	1.69%	1.06%	0.02%	9.65%
650 - 699	0.00%	0.00%	0.00%	0.00%	0.00%	97.35%	0.62%	0.65%	0.94%	0.43%	0.00%	18.59%
700 - 749	0.00%	0.00%	0.00%	0.00%	0.00%	98.52%	0.32%	0.37%	0.65%	0.14%	0.00%	15.73%
750 - 799	0.00%	0.00%	0.00%	0.00%	0.00%	99.40%	0.16%	0.14%	0.27%	0.03%	0.00%	22.72%
800+	0.00%	0.00%	0.00%	0.00%	0.00%	99.78%	0.08%	0.07%	0.07%	0.00%	0.00%	10.75%
Total	0.00%	0.00%	0.00%	0.00%	0.00%	97.51%	0.75%	0.76%	0.69%	0.27%	0.00%	100.00%

CreditVision Auto

June 2016

Score Range	SCORE DECREASE					No Change	SCORE INCREASE					Total
	-41+	-21 to -40	-11 to -20	-6 to -10	-1 to -5		1 to 5	6 to 10	11 to 20	21 to 40	41+	
Missing	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.09%
<= 449	0.00%	0.00%	0.00%	0.00%	0.00%	97.58%	0.00%	0.36%	0.17%	1.50%	0.38%	6.37%
450 - 499	0.00%	0.00%	0.00%	0.00%	0.00%	94.03%	0.00%	0.89%	0.39%	3.78%	0.91%	4.80%
500 - 549	0.00%	0.00%	0.00%	0.00%	0.00%	92.23%	0.00%	1.27%	0.70%	4.57%	1.24%	6.25%
550 - 599	0.00%	0.00%	0.00%	0.00%	0.00%	94.03%	0.00%	1.08%	1.38%	2.99%	0.51%	8.60%
600 - 649	0.00%	0.00%	0.00%	0.00%	0.00%	97.53%	0.00%	0.61%	1.00%	0.73%	0.14%	15.72%
650 - 699	0.00%	0.00%	0.00%	0.00%	0.00%	97.24%	0.00%	0.68%	1.14%	0.80%	0.14%	10.59%
700 - 749	0.00%	0.00%	0.00%	0.00%	0.00%	98.38%	0.05%	0.42%	0.55%	0.57%	0.03%	12.36%
750 - 799	0.00%	0.00%	0.00%	0.00%	0.00%	99.40%	0.10%	0.05%	0.36%	0.09%	0.00%	18.62%
800+	0.00%	0.00%	0.00%	0.00%	0.00%	99.81%	0.07%	0.07%	0.06%	0.00%	0.00%	8.59%
Total	0.00%	0.00%	0.00%	0.00%	0.00%	97.55%	0.03%	0.47%	0.61%	1.11%	0.23%	100.00%

CreditVision Bankruptcy

June 2016

Score Range	SCORE DECREASE					No Change	SCORE INCREASE					Total
	-41+	-21 to -40	-11 to -20	-6 to -10	-1 to -5		1 to 5	6 to 10	11 to 20	21 to 40	41+	
Missing	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.09%
<= 449	0.00%	0.00%	0.00%	0.00%	0.00%	90.77%	0.92%	4.00%	3.48%	0.00%	0.83%	0.04%
450 - 499	0.00%	0.00%	0.00%	0.00%	0.00%	85.65%	3.31%	6.57%	4.16%	0.11%	0.21%	0.64%
500 - 549	0.00%	0.00%	0.00%	0.00%	0.00%	82.92%	7.31%	5.04%	3.41%	1.13%	0.18%	5.08%
550 - 599	0.00%	0.00%	0.00%	0.00%	0.00%	89.70%	4.00%	3.27%	2.19%	0.63%	0.21%	20.15%
600 - 649	0.00%	0.00%	0.00%	0.00%	0.00%	96.68%	0.70%	1.08%	1.08%	0.06%	0.40%	25.45%
650 - 699	0.00%	0.00%	0.00%	0.00%	0.00%	99.05%	0.01%	0.01%	0.05%	0.00%	0.88%	13.14%
700 - 749	0.00%	0.00%	0.00%	0.00%	0.00%	99.79%	0.00%	0.00%	0.00%	0.00%	0.21%	16.77%
750 - 799	0.00%	0.00%	0.00%	0.00%	0.00%	99.98%	0.00%	0.00%	0.00%	0.00%	0.02%	9.94%
800+	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.70%
Total	0.00%	0.00%	0.00%	0.00%	0.00%	95.95%	1.38%	1.23%	0.92%	0.20%	0.31%	100.00%

CreditVision New Account

June 2016												
Score Range	SCORE DECREASE					No Change	SCORE INCREASE					Total
	-41+	-21 to -40	-11 to -20	-6 to -10	-1 to -5		1 to 5	6 to 10	11 to 20	21 to 40	41+	
Missing	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.69%
<= 449	0.00%	0.00%	0.01%	0.01%	0.01%	85.17%	8.87%	5.04%	0.44%	0.11%	0.34%	0.14%
450 - 499	0.02%	0.04%	0.03%	0.02%	0.02%	88.55%	7.43%	3.21%	0.47%	0.15%	0.07%	0.70%
500 - 549	0.35%	0.03%	0.03%	0.03%	0.04%	93.06%	4.00%	1.91%	0.32%	0.16%	0.05%	10.24%
550 - 599	8.19%	0.04%	0.03%	0.02%	0.03%	83.86%	4.68%	1.83%	1.03%	0.20%	0.07%	12.75%
600 - 649	0.00%	0.02%	0.03%	0.02%	0.03%	96.16%	2.07%	0.63%	0.80%	0.18%	0.05%	21.80%
650 - 699	0.01%	0.05%	0.06%	0.04%	0.04%	97.60%	0.94%	0.21%	0.43%	0.39%	0.22%	16.48%
700 - 749	0.01%	0.02%	0.02%	0.02%	0.02%	99.14%	0.12%	0.03%	0.13%	0.21%	0.29%	16.93%
750 - 799	0.00%	0.00%	0.00%	0.00%	0.00%	99.94%	0.00%	0.00%	0.01%	0.02%	0.02%	13.02%
800+	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.26%
Total	1.08%	0.03%	0.03%	0.02%	0.03%	95.74%	1.70%	0.64%	0.44%	0.19%	0.11%	100.00%

TransRisk Account Management 3.0

June 2016												
Score Range	SCORE DECREASE					No Change	SCORE INCREASE					Total
	-41+	-21 to -40	-11 to -20	-6 to -10	-1 to -5		1 to 5	6 to 10	11 to 20	21 to 40	41+	
Missing	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<= 449	0.01%	0.01%	0.00%	0.00%	0.00%	93.41%	0.73%	0.85%	1.64%	2.68%	0.67%	32.25%
450 - 499	0.02%	0.01%	0.01%	0.00%	0.00%	90.53%	0.62%	0.85%	1.76%	2.67%	3.53%	5.21%
500 - 549	0.01%	0.01%	0.00%	0.00%	0.00%	94.39%	0.05%	0.20%	0.57%	2.12%	2.64%	4.98%
550 - 599	0.00%	0.00%	0.00%	0.00%	0.00%	96.60%	0.03%	0.17%	0.45%	0.80%	1.94%	5.65%
600 - 649	0.00%	0.00%	0.00%	0.00%	0.00%	96.76%	0.13%	0.50%	0.63%	0.63%	1.35%	6.29%
650 - 699	0.00%	0.00%	0.00%	0.00%	0.00%	98.01%	0.00%	0.06%	0.22%	0.46%	1.25%	6.15%
700 - 749	0.00%	0.00%	0.00%	0.00%	0.00%	98.93%	0.00%	0.01%	0.02%	0.48%	0.56%	7.03%
750 - 799	0.00%	0.00%	0.00%	0.00%	0.00%	99.41%	0.00%	0.00%	0.02%	0.31%	0.26%	7.72%
800+	0.00%	0.00%	0.00%	0.00%	0.00%	99.82%	0.00%	0.00%	0.00%	0.13%	0.05%	24.71%
Total	0.00%	0.00%	0.00%	0.00%	0.00%	96.42%	0.28%	0.37%	0.73%	1.31%	0.87%	100.00%

TransRisk Bankruptcy

June 2016

Score Range	SCORE DECREASE					No Change	SCORE INCREASE					Total
	-41+	-21 to -40	-11 to -20	-6 to -10	-1 to -5		1 to 5	6 to 10	11 to 20	21 to 40	41+	
Missing	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	11.67%
<= 449	0.00%	0.00%	0.00%	0.00%	0.00%	86.82%	1.71%	1.19%	1.68%	2.40%	6.20%	26.93%
450 - 499	0.00%	0.00%	0.00%	0.00%	0.00%	93.93%	0.00%	0.01%	0.28%	0.63%	5.15%	2.93%
500 - 549	0.00%	0.00%	0.00%	0.00%	0.00%	95.88%	0.00%	0.00%	0.15%	0.41%	3.55%	3.82%
550 - 599	0.00%	0.00%	0.00%	0.00%	0.00%	95.83%	0.00%	0.01%	0.17%	0.38%	3.62%	3.44%
600 - 649	0.00%	0.00%	0.00%	0.00%	0.00%	96.76%	0.00%	0.00%	0.10%	0.35%	2.78%	3.89%
650 - 699	0.00%	0.00%	0.00%	0.00%	0.00%	97.72%	0.00%	0.04%	0.10%	0.49%	1.65%	5.15%
700 - 749	0.00%	0.00%	0.00%	0.00%	0.00%	98.85%	0.00%	0.03%	0.23%	0.55%	0.34%	9.45%
750 - 799	0.00%	0.00%	0.00%	0.00%	0.00%	99.49%	0.05%	0.11%	0.13%	0.04%	0.17%	11.53%
800+	0.00%	0.00%	0.00%	0.00%	0.00%	99.67%	0.00%	0.01%	0.03%	0.07%	0.22%	21.16%
Total	0.00%	0.00%	0.00%	0.00%	0.00%	95.49%	0.47%	0.34%	0.52%	0.80%	2.37%	100.00%

TransRisk New Account 3.0

June 2016

Score Range	SCORE DECREASE					No Change	SCORE INCREASE					Total
	-41+	-21 to -40	-11 to -20	-6 to -10	-1 to -5		1 to 5	6 to 10	11 to 20	21 to 40	41+	
Missing	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<= 449	0.00%	0.00%	0.00%	0.00%	0.00%	99.43%	0.00%	0.17%	0.20%	0.18%	0.01%	11.78%
450 - 499	0.00%	0.00%	0.00%	0.00%	0.00%	82.87%	0.16%	6.53%	8.03%	2.40%	0.01%	1.35%
500 - 549	0.00%	0.00%	0.04%	0.07%	0.00%	88.66%	0.20%	3.34%	5.96%	1.70%	0.02%	4.76%
550 - 599	0.00%	0.00%	0.32%	0.00%	0.00%	89.43%	0.77%	4.68%	2.93%	1.80%	0.08%	7.12%
600 - 649	0.00%	0.00%	0.21%	0.00%	0.00%	94.17%	0.16%	2.03%	1.96%	1.39%	0.07%	10.73%
650 - 699	0.00%	0.00%	0.01%	0.00%	0.00%	97.90%	0.15%	0.44%	0.99%	0.40%	0.11%	15.83%
700 - 749	0.00%	0.00%	0.00%	0.00%	0.00%	98.09%	0.00%	0.02%	0.58%	1.16%	0.15%	7.89%
750 - 799	0.00%	0.00%	0.00%	0.00%	0.00%	98.75%	0.00%	0.00%	0.15%	1.02%	0.07%	7.82%
800+	0.00%	0.00%	0.00%	0.00%	0.00%	99.64%	0.00%	0.01%	0.10%	0.24%	0.01%	32.72%
Total	0.00%	0.00%	0.05%	0.00%	0.00%	97.08%	0.11%	0.89%	1.08%	0.73%	0.05%	100.00%

TransRisk Recovery 3.0 – Stage 1

June 2016

Score Range	SCORE DECREASE					No Change	SCORE INCREASE					Total
	-41+	-21 to -40	-11 to -20	-6 to -10	-1 to -5		1 to 5	6 to 10	11 to 20	21 to 40	41+	
Missing	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<= 449	0.00%	0.00%	0.00%	0.00%	0.00%	93.79%	2.72%	1.26%	0.42%	1.05%	0.77%	0.01%
450 - 499	0.00%	0.00%	0.00%	0.00%	0.00%	90.45%	4.89%	2.28%	0.68%	0.38%	1.33%	0.08%
500 - 549	0.00%	0.00%	0.00%	0.00%	0.00%	89.99%	4.99%	2.29%	1.22%	0.62%	0.89%	0.73%
550 - 599	0.00%	0.02%	0.03%	0.02%	0.03%	88.41%	4.30%	3.26%	2.51%	1.02%	0.40%	7.23%
600 - 649	0.01%	0.03%	0.03%	0.01%	0.02%	88.08%	5.14%	3.37%	1.64%	1.43%	0.25%	20.60%
650 - 699	0.02%	0.03%	0.01%	0.01%	0.01%	90.11%	0.42%	3.27%	3.96%	1.81%	0.35%	15.28%
700 - 749	0.01%	0.00%	0.00%	0.00%	0.00%	96.02%	0.01%	0.48%	2.70%	0.71%	0.06%	31.75%
750 - 799	0.00%	0.00%	0.00%	0.00%	0.00%	98.88%	0.00%	0.06%	0.95%	0.10%	0.00%	24.06%
800+	0.01%	0.00%	0.00%	0.00%	0.00%	96.16%	0.16%	0.29%	2.98%	0.39%	0.02%	0.26%
Total	0.01%	0.01%	0.01%	0.01%	0.01%	93.57%	1.48%	1.62%	2.23%	0.90%	0.16%	100.00%

Performance Analysis Results

The predictive performance for TransUnion new account generic models with a 24-month outcome period were also evaluated. The K-S values for the before and after files are almost identical since each of these scores capture other derogatory-type behavior. Thus, the models' performance will remain stable with the removal of the public record information.

	BEFORE	AFTER
CreditVision New Account	54.64	54.58
CreditVision Auto	56.12	56.15
TransRisk New Account 3.0	53.51	53.43

Conclusion

As a result of the enhanced public record data standards going into effect July 2017, TransUnion's internal impact analysis findings demonstrate that the majority of consumers will be unaffected. Of those that will be affected by a removal of tax lien(s), civil judgment(s), or both, they will experience a score shift between 2.5% and 6.4%, with some consumers becoming unscorable. The predictive performance of TransUnion's generic models remained stable due to the robust design of the models which incorporates other derogatory-type of behavior. In the coming months, we expect to have more details on expected changes, readiness approaches and further insights and suggestions as to how to evaluate these changes for your business needs.

Please contact any member of your TU Account Team with questions you may have or forward your questions pertaining to this matter to the TU Project Team at TUDAS@transunion.com.