

CRA *Wiz* and Fair Lending *Wiz* 7.1: Release Notes

Last Updated November 16, 2015



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Overview

CRA *Wiz* and Fair Lending *Wiz* 7.1 includes compliance updates for the submission of 2015 data, client-requested enhancements, and fixes for bugs in previous versions. It can be installed as an upgrade to Version 7.0 or as a new environment.

Technical Updates

- Windows 8
- Internet Explorer 11
- Installation Kit In an effort to align the CRA *Wiz* & Fair Lending *Wiz* installer with Microsoft's efforts to retire legacy technologies, we have updated our installation program to use Windows Installer 5.0.

Version 7.0 Updates Included in this Release

- 2015 FFIEC Median Family Income
- 2014 Peer Branch & Deposit Data
- 2014 Peer Small Business Data
- 2014 Projected Demographic Data

Dependencies

Q3 2015 Geocoding Data

Note: Please refer the Q3 2015 Geocoding Data Release Notes and Geocoding section below for more information regarding this dependency.

CRA Wiz Updates and Enhancements

Refer to the following sections for CRA Wiz updates included in the 7.1 release:

Submission

Data

Geocoding

Edit

File Management

Filters

Import

Mapping

Premium Mapping

Reports

Submission

- FFIEC <u>HMDA</u> and <u>CRA</u> edits for 2015 data submission have been updated.
- The 2015 version of the FFIEC's encryption utility is included.
- Activity Year 2016 support added.
- Email Address Missing from CRA micro.dat file The micro.dat file has been updated to include an email address on the first line.

Tracking number: 37636

• HMDA Edit S040 - Corrected an issue where the S040 edit was removed from records when a user edited or updated any field in the Edit screen.

Tracking number: 33768

• CRA Edit V950 - Corrected logic where CRA edit V950 would not display if Censustrac

information was 'NULL' Tracking number: 50014

• Submission File Skipping Line - In some cases, HMDA submission files skipped lines due to the presence of carriage returns in the Applnumb field. This has been corrected.

Tracking number: 43217

• Submission Wizard - Invalid Record Count - Updated the informational pop up in the Submission Wizard to reflect a correct count of 'Invalid Record'. Quality edits were appropriately removed from this count.

Tracking number: 22693

Data

2015 ACS County Changes

Please reference the following link for additional information: http://www.ffiec.gov/census/htm/2010CensusInfoSheet.htm#CurrentChanges

New Counties or County Equivalent Entities

 Petersburg Borough (02-195):
 Created from part of former Petersburg Census Area (02-195) and part of Hoonah-Angoon Census Area (02-105)

Deleted Counties or County Equivalent Entities

Bedford (independent) city, Virginia (51-515):
 Changed to town status and added to Bedford County (51-019)

Substantial County or County Equivalent Boundary Changes

Prince of Wales-Hyder Census Area (02-198):
 Prince of Wales-Hyder Census Area (02-198) added part of the former Petersburg Census Area (02-195)

- Hoonah-Angoon Census Area (02-105):
 Part taken to create new Petersburg Borough (02-195)
- Bedford County, Virginia (51-019):
 Added the former independent city of Bedford (51-515)
- Geocoding Data Support Files Beginning with Version 7.1, geocoding support files will be
 delivered with CRA Wiz & Fair Lending Wiz program updates. This means that when the
 program update is installed in client/server environments, the support files will be updated
 also. This change removes the requirement to install geocoding support files on client
 machines for geocoding data updates. Geocoding updates will be data-only updates going
 forward.

Geocoding

Overview

CRA *Wiz* and Fair Lending *Wiz* Version 7.1 includes many updates to geocoding. To better align the application's geocoding methodology with the FFIEC's, Wolters Kluwer has updated its geocoding data sources, methodology and recommend settings.

Background

In December of 2014, the FFIEC released a new version of its Geocoding/Mapping System to revise its geocoding methodology. With this update, the FFIEC geocoder now utilizes parcel level geocoding as its primary method of geocoding with street segment geocoding as a secondary method. Prior to this change, both the FFIEC's Geocoding/Mapping System and CRA *Wiz* & Fair Lending *Wiz* had utilized the same data source and street segment based geocoding. To better align CRA & Fair Lending *Wiz* geocoding results with the new FFIEC methodology, we have worked with the regulators to understand and implement the revised approach.

The main difference between parcel and street segment geocoding is how the latitude and longitude for addresses are assigned. With parcel geocoding, addresses will be geocoded to center point of the parcel of land where a property is located, or in some cases, the roof top of the building itself. With street segment geocoding, latitudes and longitudes are assigned based on address range for the appropriate street segment. In both methods, relevant geocoding data such as state, MSA, county, and census tract information are assigned based on the latitude and longitude assigned to the address. For the majority of addresses, the change of methodology does not result in a different census tract assignment. However, for addresses that have a census tract boundary nearby, it is possible that results could differ.

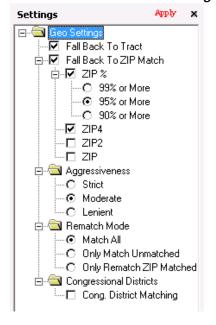
Updates

Updated "Fall Back" Match Strategy - In the event that an address cannot be matched to a parcel or a street segment (primary and secondary match strategies respectively), CRA Wiz & Fair Lending Wiz offers additional "fall back" matching strategies for geocoding records. As part of the implementation of the new geocoding methodology and data sources, Wolters Kluwer ran extensive tests to evaluate and validate the accuracy levels of its "fall back" matching options. As a result, we have revised the order of fall back options.

Version 7.0 Fall Back Options	Version 7.1 Fall Back Options
Tract Match	Tract Match
ZIP4	ZIP % Match (99%, 99% & 90%)
ZIP2	ZIP4
ZIP % Match (99%, 99% & 90%)	ZIP2
ZIP5	ZIP5

Updated Recommended 'Regulatory Grade' Geocoding Settings - All CRA Wiz & Fair
Lending Wiz users can set their desired geocoding settings based on their institution's
preferences. Wolters Kluwer provides a set of suggested settings that will ensure regulatory
level geocoding. As a result of extensive testing with the new geocoding data and
methodology, Wolters Kluwer has revised its recommended geocoding settings:

New Recommended Settings



Noteworthy changes

- ZIP2 matching removed from recommended settings.
- Aggressiveness changed from Lenient to Moderate.

Information on Updating Recommended Geocoding Settings

- New Installation
 If CRA Wiz & Fair Lending Wiz Version 7.1 is installed in a new environment, the recommended settings will be set by default.
- Upgrade Installation
 If CRA Wiz & Fair Lending Wiz Version 7.1 is installed as an upgrade, users will need to update their recommended settings.
- Performance When institutions geocode their files with CRA Wiz and Fair Lending Wiz
 Version 7.1 and Q3 2015 Address Data, they may experience slower processing times when
 batch geocoding. The decrease in performance can be attributed in large part with the
 increased processing demands associated with parcel level geocoding and the increased size
 of the geocoding data itself.

During our extensive rounds of performance testing with the methodology and new data, we found a handful of testing scenarios where the performance geocoding batch files degraded due to environmental factors. Please review the table below for our findings and mitigation suggestions:

Performance Impacting Factors	Description	Mitigation
Memory	Geocoding large files (example: 200K) with the new parcel data requires 500-550MB of free memory. This is an increase from the legacy data which required 300-350MB of free memory. If batch geocoding process is constantly vying for memory with other processes, its performance can be significantly impacted. Scenario: In one testing scenario where SQL Server was installed in the environment where geocoding process was being executed, SQL Server processes severely impacted available memory and there was significant impact geocoding performance.	If SQL Server is installed in the same environment where the batch geocoding process is running, performance issues can be decreased by setting a limit on Maximum Memory consumption for the SQL Server instance.

Not enough Disk IO	Standalone machines that do not have enough Disk IO may experience performance problems. Scenario: We have found that most standalone machines with a local installation of CRA Wiz did not have sufficient Disk IO to geocode large files with optimal performance. During batch processing the Wolters Kluwer Quality Assurance Team observed Disk IO maxing out at 100% and the OS struggled to get enough Disk IO for the batch to process. In this scenario, we found that batch geocoding took 2-3x as long as it previously did.	Upgrade machine with a disk that has a higher RPM.
Not enough Network Bandwidth	Our testing indicates that environments with low network bandwidth can expect significant performance impact when geocoding large files. In these scenario, we found that batch geocoding took 2-3x as long as it previously did.	Reduce network latency issues. Consider moving geocoding data to another location.

Recommendations and Next Steps

- ✓ Install CRA Wiz and Fair Lending Wiz Version 7.1 with the Q3 Geocoding Data
- ✓ Update <u>Geocoding Settings</u> (as desired).
 - Note: Ensure that Geocoding Settings are consistent for all geocoding related processes including batch, single record, geocoding tasks in the Event Scheduler (as needed), Windows Geocoding Service (if applicable), and Browser Based Editing (if applicable).
- ✓ Re-geocode your 2015 HMDA and CRA files with the new version and new data. Take special care to ensure that the **Rematch Mode** in your Geocoding Settings is set to 'Match All'.
- ✓ We recommend that you filter out records that have been manually geocoded to preserve manual work. Note: To filter out your manually geocoded records prior to Batch Geocoding, apply the following custom expression: (NOT MMWSTAT="99").
- ✓ We do not recommend re-geocoding files with activity years prior to 2015.
- ✓ If your institution utilizes the Windows Geocoding Service, please install the latest version to ensure compatibility with Version 7.1 and parcel level geocoding.

Edit

• Replace Commands - Corrected an issue in which users were getting an error message when attempting to access saved replace commands due to duplicate entries in the dbo.ReplaceInfo table.

Tracking number: 41131

File Management

• Exporting fields with 255+ Characters - Fixed an issue were fields that contained more than 255 characters were being truncated when exported.

Tracking number: 22812

Filters

• Geocoded Records - Loan Information > Geocoder Information > Geocoded Record has been updated to include a new Parcel Match option to allow users to filter for records that have been geocoded with a parcel match.

Import

• Import new date fields - Users can now import *new* date fields into CRA *Wiz* & Fair Lending *Wiz* without receiving an error message requiring the user to set data type.

Tracking number: 41030

• Agency Code & Small Business/Small Farm File Types - You no longer need to map AgencyCode to 'Empty' during import of Small Business/Small Farm files.

Tracking number: 41009

• Saved Import Format Printing - Saved import formats now print successfully in IE10 and IE11.

Tracking number: 42576

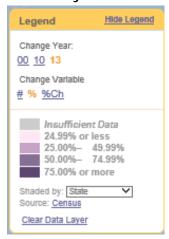
Mapping

• Maps not printing in Adobe Acrobat Version XI - Corrected issue in which maps were not printing successfully to Adobe Acrobat Version XI (eleven).

Tracking number: 41664

Premium Mapping

Web Map - Updated the ranges for the Minority demographic to quarterly buckets. This
indicator can be found at: Web Map > Add Data Layer > Demographics > Population > Race
> Minority.



Web Map - New 'All Hispanic' demographic indicator added. This indicator can be found at:
 Web Map > Add Data Layer > Demographics > Ethnicity > All Hispanic.

Reports

• CRA Tables *New* - The CRA Tables in CRA Wiz and Fair Lending Wiz provide examiners and institutions with the data that examiners use during a CRA exam. These new tables will be included if you have a license for PE Reports. The CRA Tables combine Demographic data, Peer Data, and an institution's lending data in one comprehensive view. Analysis can be conducted for up to three years of an evaluation period and provides an overview of lending activity in Low, Moderate, Middle, and Upper income geographies and borrowers. Analysis also includes breakdowns of business and farm loans by revenue size.

CRA Tables can be accessed through the **Analysis** section of CRA *Wiz* and Fair Lending *Wiz* by clicking on the **CRA Tables** icon. Please refer to the online Help for information on procedures and report output.

• Geocode Statistics Report - Updated to include the Parcel Match category under 'Matched'.

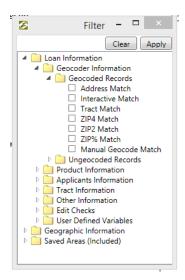
Known Issues

Windows Geocoding Service - Institutions upgrading to the latest version of the Windows
Geocoding Service may encounter a 'Windows Package Manager' error during the installation
process. This is a known issue when upgrading from one version to another. Despite this
error the installer completes successfully and the Service functions correctly:



Tracking Number: 57320

 Mapper > Custom Coordinate Files - Users are currently unable to filter custom coordinate files by viewing Loan Information > Geocoder Information > Geocoded Records.



Work around: Create a copy of the desired file with a filter in the main application and add it to the Mapper as a Custom Coordinate file.

Tracking Number: 50996

• Legends on Printed Maps - When a user moves legends on a print layout for a map, the new location is not retained when a map is printed.

Tracking Number: 38258

Fair Lending Wiz Updates & Enhancements

Refer to the following sections for Fair Lending *Wiz* updates that are included in the 7.1 release:

Decisioning and Pricing Regression Analysis
BISG Race Proxy
Updated Reports

Decisioning and Pricing Regression Analysis

- The statistical library used in Fair Lending Decisioning and Pricing regression module has been replaced in this release. Functionality on how Fair Lending Decisioning and Pricing regression is used is not changing, neither is how statistical calculations are executed by the library.
- Fair Lending *Wiz* has been updated to assist with statistical model validation so that a user or modeling team can validate that their Fair Lending *Wiz* regression output matches statistical tools such as SAS and R. Fair Lending *Wiz* will generate temporary text files with regression code for use with these statistical programs.

Important Note: The text files which contain the SAS and R code only contain code for the last regression model (Decisioning or Pricing) run in Fair Lending *Wiz*.

SAS Command file Location

C:\Program Files (x86)\Wolters Kluwer Financial Services\CRA Wiz and Fair Lending Wiz\FairWiz\Temp\ SASCommand.txt

- 1. Copy the text file contents.
- 2. Paste the content into SAS.
- 3. Run the generate regression model command.

R Command file Location

C:\Program Files (x86)\Wolters Kluwer Financial Services\CRA Wiz and Fair Lending Wiz\FairWiz\Temp\ RCommand.txt

- 1. Copy the text file contents.
- 2. Paste the content into R.
- 3. Run the generate regression model command.

BISG Race Proxy

Following the 7.0 release in which BISG Race Proxy was introduced, Fair Lending *Wiz* has been updated with the 7.1 release to include the following after BISG race proxy has been executed:

- If the first word of a compound last name is present in the LastName column, then the system considers only that surname.
 - Compound Last Names:

Example 1:

Smith-Jones - system will first consider "Smith" and try to find a match in the last name database. If the system can find "Smith," then it will search for "Jones" in last name database.

Example 2:

Use only last name when it contains special characters and titles such as Jr, Sr, I, II, III or any special characters.

- If last name cannot be tied a block group, then the system falls back to the census tract to determine last name probability, so that it can be included in BISG race proxy calculation.
- After a user executes BISG race proxy for first time, the system creates the following additional columns (beyond the columns that were introduced in the 7.0 release):
 - RaceEth (Race Value of Highest Probability)
 - CoRaceEth (CoRace Value of Highest Probability)
 - RaceEthPct (Highest Probability Value is displayed)
 - CoRaceEthPct (Highest Probability Value is displayed)

Additional columns introduced in this release will contain probabilities calculated by BISG across all BISG race groups:

- RBISGAIAPct (American Indian or Alaskan Probability)
- RBISGAPIPct (Asian or Pacific Islander Probability)
- o RBISGBlackOrAAPct (Black or African American Probability)
- o RBISGWhitePct (White Probability)
- RBISGHispanicPct (Hispanic Probability)
- RBISGTwoOrMorePct (Two or more Minority Races Probability)

- o CORBISGAIAPct (American Indian or Alaskan Probability)
- o CORBISGAPIPct (Asian or Pacific Islander Probability)
- o CORBISGBlackOrAAPct (Black or African American Probability)
- CORBISGWhitePct (White Probability)
- o CORBISGHispanicPct (Hispanic Probability)
- o CORBISGTwoOrMorePct (Two or more Minority Races Probability)

RBISGAIAPct	CORBISGAIAPct	RBISGAPIPct	CORBISGAPIPct	RBISGBlackOrAAPct	CORBISGBlackOrAAPct	RBISGWhitePct	CORBISGWhitePct	RBISGHispanicPct	CORBISGHispanicPo
0	0	0.0176	0.1257	0.104	0.0718	99.7788	99.2994	0.078	0.503
0.0015		0.0014		3.9862		95.756		0.134	
0.0058	0.0035	0.0024	0.0059	0.1653	0.0413	99.7431	99.5318	0.051	0.4025
0.0002		0.2153		24.2454		75.1898		0.1662	
0.0075		0.0027		0.0458		99.2322		0.6798	
0	0.0038	0	0	0	0	100	99.9377	0	0.0585
0.0084	0.003	0.0041	0.0084	0.0285	0.0128	99.7533	99.7631	0.184	0.1984
0		93.2619		0.0305		6.3074		0.242	
0		74.0717		0		25.3103		0	
0.0007	0.002	0.0003	0.0005	0	0	99.9846	99.9166	0.0088	0.0617
0.0347	0	0.4007	0	0.0819	0	72.0707	99.3269	27.3107	0.6453
0	0	0.0401	0	0.2343	0.1302	99.6014	99.6992	0.0812	0.1707
0.0142	0	0.0039	0.0611	0.0006	0.0998	99.9559	99.6968	0.011	0.1423
0.0113	0	0	0	0.2168	0.0422	99.6733	99.7681	0.0139	0.1897
	0.0168		0.0118		0.0263		99.8085		0.121
0		0		0.0708		99.7988		0.1098	
0.0044		0.0315		0.1976		99.6165		0.1268	
0.0001	0.0005	0.0501	0.2115	0.0002	0.0733	99.8376	99.5012	0.102	0.1412
0.0005		80.669		0.1393		18.2072		0.105	
0.0011		0.0038		0.0029		99.9433		0.0462	
0		0.0389		0.0956		99.5851		0.2619	
0	0	0.0102	0.0698	0.0939	0.2424	99.8211	99.6145	0.0458	0
0.0006	0	0.0149	0.4538	0.096	0	99.769	99.0469	0.0825	0.3092
0.0035	0.0034	0.0781	0.1831	3.3799	0.5911	96.1387	96.6671	0.3285	2.5244
0.0174		0.0015		0.5881		98.9441		0.4322	
0	0	0.0095	0.0589	0.161	0.0522	99.7843	99.8083	0.0337	0.0681
0	0	0.0675	0.7344	0.4177	0.2031	99.3671	71.8678	0.1123	27.1384
0.0017		0.0228		0.2928		99.2648		0.3838	

Updated Reports

The following reports have been updated to include the BISG Race Table to reflect values generated by BISG race proxy:

Focal Point Report
Difference of Means Report
Risk Factor Analysis Report
Comparative File Review
Data Quality Report

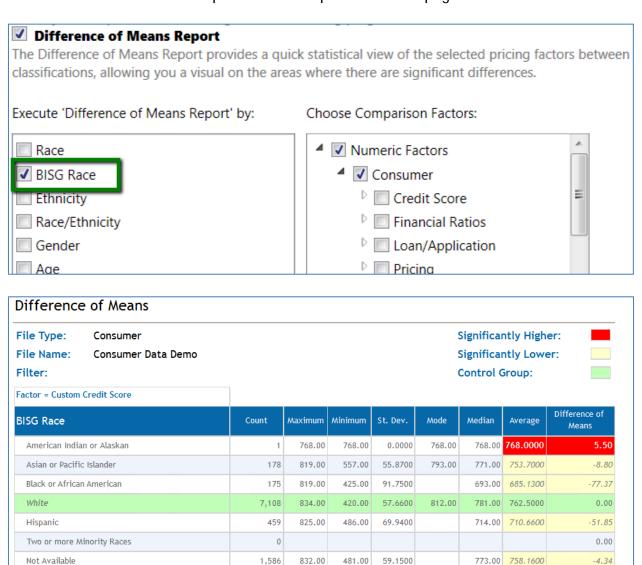
Focal Point Report

The Focal Point report will populate the BISG race table if BISG proxy has been executed against the data:

SG Race											
American Indian or Alaskan	1	1	100.00%	0.03%	0	0.00%	0.00	0	0.00	4.75	0.41
Asian or Pacific Islander	178	49	27.53%	1.34%	74	41.57%	1.61	0	0.00	4.29	-0.04
Black or African American	175	27	15.43%	0.74%	97	55.43%	2.14	0	0.00	4.93	0.59
Hispanic	459	102	22.22%	2.79%	251	54.68%	2.11	0	0.00	4.73	0.40
Two or more Minority Races	0	0	0.00%	0.00%	0	0.00%	0.00	0	0.00		
White	7,108	2,903	40.84%	79.27%	1,839	25.87%	1.00	0	0.00	4.34	0.00
Not Available	1,586	580	36.57%	15.84%	461	29.07%	1.12	0	0.00	4.34	0.00

Difference of Means Report

Select the BISG Race value option on the report selection page:



9,507

834.00

T-test was used to determine statistical significance in this report.

Total

Report Notes:

420.00

61.0900

777.00 757.8100

Risk Factor Analysis Report

The reports available under the Risk Factor Analysis Reports section also contain the option to include BISG Race in analysis:

sk Factor Analysis Reports
□ Disparities in Denial Rates: Underwriting (U1) Identifies substantial disparities between denial rates for applicants by monitored prohibited basis characteristics. □ Disparities in Processing Times: Underwriting (U2) Identifies substantial disparities between loan application processing times for applicants by monitored prohibited basis characteristics. □ Proportion of Withdrawn/Incomplete Apps: Underwriting (U3) Identifies substantial disparities between withdrawn or incomplete application rates for applicants by monitored prohibited basis characteristics.
Percentage of Credit Scoring Overrides: Underwriting (U7) - High Side Overrides Identifies substantial disparities between denied applicants having higher credit scores for applicants by monitored prohibited basis characteristics. Percentage of Credit Scoring Overrides: Underwriting (U7) - Low Side Overrides Identifies substantial disparities between approved applicants having lower credit scores for applicants by monitored prohibited basis characteristics. Disparities in Quoted Prices: Pricing (P4) Identifies substantial disparities between pricing statistics for applicants by monitored prohibited basis characteristics. Proportion of Conventional vs FHA Mortgages: Steering (S3) Marketing Risk Factor: Marketing (M6)
Marketing Risk Factor (M6) Report present the difference between the percentage of total loans made during the period to each protected class compared to the percentage of loans made to each protected class.

For any of the above Risk Factor reports, BISG Race selection is as follows:

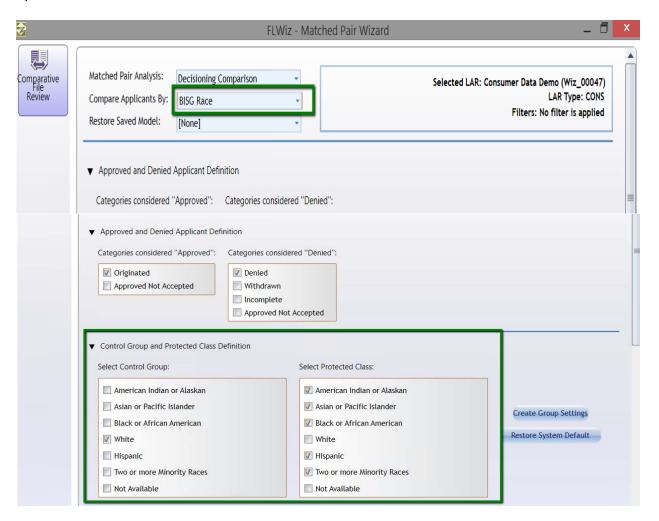


When you select the BISG race option, the report output displays the BISG race table for any of the risk factor reports outlined above:

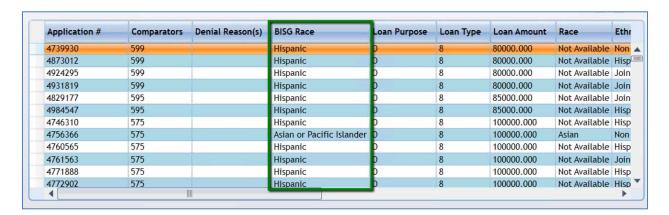


Comparative File Review

Pricing and Decisioning comparative file review report selection criteria now contain a BISG Race option:

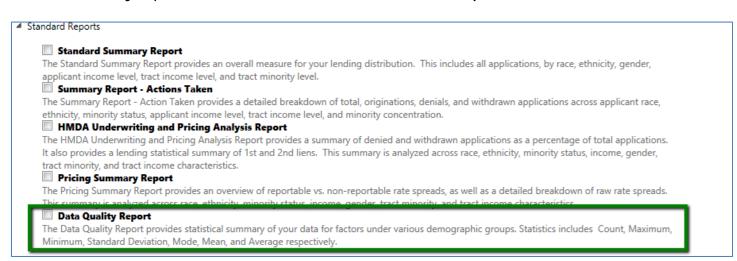


Example report output showing the BISG Race column:



Data Quality Report

The Data Quality report is now available under the Standard Reports section:



Data Quality report output:

Data Quality Report

File Type: Mortgage

File Name: Consumer Data Demo

CoaEthnicityProxy	Count	Maximum	Minimum	Standard Deviation	Mode	Median	Average
Total				'			
Total	9,507	80.00	0.00	19.79	0.00	0.00	35.44
Race							
American Indian or Alaskan	1	0.00	0.00	0.00	0.00	0.00	0.00
Asian	178	80.00	0.00	34.50	0.00	0.00	15.73
Black or African American	175	80.00	80.00	0.00	0.00	0.00	14.63
Native Hawaiian or other Pacific Islander	0	0.00	0.00	0.00	0.00	0.00	0.00
White	7,108	80.00	0.00	20.24	0.00	0.00	37.38
Two or more Minority Races	0	0.00	0.00	0.00	0.00	0.00	0.00
Joint Race	0	0.00	0.00	0.00	0.00	0.00	0.00
Race Not Available	0	0.00	0.00	0.00	0.00	0.00	0.00
BISG Race							
American Indian or Alaskan	1	0.00	0.00	0.00	0.00	0.00	0.00
Asian or Pacific Islander	178	80.00	0.00	34.50	0.00	0.00	15.73
Black or African American	175	80.00	80.00	0.00	0.00	0.00	14.63
White	7,108	80.00	0.00	20.24	0.00	0.00	37.38
Hispanic	459	80.00	0.00	12.73	0.00	0.00	26.32
Two or more Minority Races	0	0.00	0.00	0.00	0.00	0.00	0.00

Consumer Compliance Solutions



Financial Services

About Wolters Kluwer Financial Services - Wolters Kluwer Financial Services provides audit, risk and compliance solutions that help financial organizations improve efficiency and effectiveness across their enterprise. Whether complying with regulatory requirements, addressing a single key risk, or working toward a holistic risk management strategy, more than 15,000 customers worldwide count on Wolters Kluwer Financial Services for a comprehensive and dynamic view of risk management and compliance. With more than 30 offices in over 20 countries, the company's prominent brands include: FRSGlobal, ARC Logics for Financial Services, PCi, Bankers Systems, VMP® Mortgage Solutions, AppOne®, GainsKeeper®, Capital Changes, NILS, AuthenticWeb™ and Uniform Forms™. Wolters Kluwer Financial Services is part of Wolters Kluwer, a leading global information services and publishing company with annual revenues of (2011) €3.4 billion (\$4.7 billion) and approximately 19,000 employees worldwide. Please visit our website for more information.

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