US Department of Housing and Urban Development

Single Family Housing

Developer's Guide

For

Total Scorecard

Final

System:	CHUMS
Subsystem:	AUS
Component:	[Component]
Releases:	3.6 – SOAP MISMO (Final)
Document Type:	Developer's Guide
Document Date:	January 21, 2015

Table of Contents

Table of Contents....i

1.0 INTRODUCTION TO TOTAL SCORECARD.... 1

1.1 Purpose of TOTAL Scorecard Developer's Guide.... 1

1.2 Overview of TOTAL Scorecard.... 2

2.0 GETTING STARTED.... 3

2.1 Things to Consider.... 3
2.1.1 Interface Data File Formats.... 3
2.1.2 Communications Protocol.... 3

2.2 Building the TOTAL Scorecard Interface.... 3
2.2.1 Data Mapping.... 3

2.3 Security Requirements and Recommendations.... 4

3.0 INTERFACE FILE DESCRIPTIONS.... 5

APPENDIX A – SCORECARD DATA ELEMENTS.... 1

APPENDIX B – SCORECARD ERROR CODES.... 1

APPENDIX C – SCORECARD REVIEW RULES.... 1

APPENDIX D – SCORECARD SCHEMAS AND WSDL.... 1

D-1 Schema.... 2

D-2 WSDL.... 5

APPENDIX E – REVISIONS.... 1

E.1 TOTAL Scorecard – Implementation Date December 1, 2003.... 2

E.2 TOTAL Scorecard – Implementation Date October 22, 2003.... 2

E.3 TOTAL Scorecard - Implementation Date October 6, 2004.... 3

E.4 TOTAL Scorecard – Release of Version 1.2 - Implementation Date December 1, 2004.... 3

E.5 TOTAL Scorecard – Release of Version 2.0 - Implementation Date July 14, 2008.... 3

E.6 TOTAL Scorecard – Update to Version 2.0 - Implementation Date July 14, 2008.... 5

E.7 TOTAL Scorecard – Release of Version 2.1 - Implementation Date October 1, 2008 5

E.8 TOTAL Scorecard – Update to Version 2.1 - Implementation Date September 1, 2009 6

E.9 TOTAL Scorecard – Release of Version 2.2 - Implementation Date October 4, 2010 6

E.10 TOTAL Scorecard – Release of Version 2.3 - Implementation Date October 4, 2010 6

E.11 TOTAL Scorecard – Update to Version 2.3 - Implementation Date September 24, 2010 7

E.12 TOTAL Scorecard – Release of Version 2.4 - Implementation Date April 16, 2011 7

E.13 TOTAL Scorecard – Release of Version 2.5 - Implementation Date March 4, 2012 7

E.14 TOTAL Scorecard – Release of Version 2.6 - Implementation Date April 8, 2012 9

E.15 TOTAL Scorecard – Release of Version 2.7- Implementation Date June 11, 2012 9

E.16 TOTAL Scorecard – Release of Version 3.0 - Implementation Date July 21, 2012 10

E.17 TOTAL Scorecard – Release of Version 3.1 - Implementation Date March 2, 2013 11

E.18 TOTAL Scorecard – Release of Version 3.2 - Implementation Date March 30, 2013 11

E.19 TOTAL Scorecard – Release of Version 3.3 - Implementation Date June 1, 2013 11

E.20 TOTAL Scorecard – Release of Version 3.3 - Implementation Date June 28, 2013 11

E.21 TOTAL Scorecard – Release of Version 3.4 - Implementation Date February 15, 2014 12

E.22 TOTAL Scorecard – Release of SOAP Version 3.4 - Implementation Date July 26, 2014 12

E.23 TOTAL Scorecard – Release of SOAP MISMO Version 3.4 - Implementation Date November 8, 2014 13

E.24 Updated Developer's Guide for TOTAL Scorecard – Release of SOAP MISMO Version 3.4 - Implementation Date November 8, 2014 13

E.25 TOTAL Scorecard – Release of Version 3.5 - Implementation Date January 1, 2015 14

E.26 TOTAL Scorecard – Release of Version 3.6 - Implementation Date January 24, 2015 15

1.0 Introduction to TOTAL Scorecard

1.1 Purpose of TOTAL Scorecard Developer's Guide

The TOTAL Scorecard Developer's Guide provides the necessary information to establish an interface between the FHA's TOTAL Scorecard and an Automated Underwriting System(AUS). This document is primarily aimed at the software development and maintenance staff supporting an AUS. The document contains the following sections:

- Section 1 - Introduction to TOTAL Scorecard includes an overview of TOTAL Scorecard.
- Section 2 - Getting Started describes communication protocols, tips on building your TOTAL Scorecard interface, and security requirements.
- Section 3 - Interface File Descriptions details XML file formats and error handling.
- Appendices – including the Scorecard Data Elements, Error Codes and the DTD.

The purpose of this guide is to provide technical guidance to Automated Underwriting System (AUS) providers who are or desire to be interfaced with FHA's TOTAL Mortgage Scorecard. This guide does not provide or imply credit policy guidance for FHA insuring.

For agency credit policies refer to:

HUD Handbook, Mortgage Credit Analysis for Mortgage Insurance on One- to Four-Unit Mortgage Loans, 4155.1
http://portal.hud.gov/hudportal/HUD?src=/program_offices/administration/hudclips/handbooks/hsgh/4155.1

HUD Mortgagee Letters, and
http://www.hud.gov/offices/adm/hudclips/letters/mortgagee/index.cfm

TOTAL Mortgage Scorecard User Guide,
http://portal.hud.gov/hudportal/documents/huddoc?id=total_userguide.pdf

For agency policies pertaining to the use of FHA's TOTAL Mortgage Scorecard, refer to:

TOTAL Mortgage Scorecard User Guide,
http://portal.hud.gov/hudportal/documents/huddoc?id=total_userguide.pdf

HUD Handbook, Mortgage Credit Analysis for Mortgage Insurance on One- to Four-Unit Mortgage Loans, 4155.1,
http://portal.hud.gov/hudportal/HUD?src=/program_offices/administration/hudclips/handbooks/hsgh/4155.1

HUD Handbook, Lender's Guide to Single Family Mortgage Insurance Process, and
http://portal.hud.gov/hudportal/documents/huddoc?id=41552HSGH.pdf

HUD Mortgagee Letters.
http://www.hud.gov/offices/adm/hudclips/letters/mortgagee/index.cfm

Questions: Please address any questions about this Guide to the FHA Resource Center at 1-800-CALLFHA (1-800-225-5342). Persons with hearing or speech impairments may reach this number via TDD/TTY by calling 1-877-TDD-2HUD (877-833-2483)

1.2 Overview of TOTAL Scorecard

TOTAL Scorecard is a transaction-based system. The steps below describe the processing of loan information from the lender's AUS, to the TOTAL Scorecard, and back to the lender. These steps must be performed for each transaction processed through the TOTAL Scorecard.

1. Loan information is entered into the lender's AUS.
2. The lender requests an underwriting decision from the AUS.
3. The AUS pulls the borrower's credit and applies eligibility rules.
4. The AUS calls the TOTAL Scorecard
5. The AUS examines the TOTAL Scorecard results along with other criteria to provide an underwriting decision.

NOTES:

2.0 Getting Started

This section is designed to assist AUS developers (management and staff) in planning the organization's interface to the TOTAL Scorecard.

The following topics are outlined in this section:

- **Things to Consider** - There are decisions that the AUS developer must take into consideration when developing the TOTAL Scorecard interface.
- **Building the TOTAL Scorecard Interface** - There are steps that the AUS developer must follow with regard to implementation of these requirements, whether it be for initial or subsequent use. Most steps are likely to already be part of your system development process.
- **Security Requirements and Recommendations** - There are general rules and requirements that apply to the AUS developer when interfacing with the TOTAL Scorecard which directly impact system and data-related security.

2.1 Things to Consider

This section provides some key points for your consideration in the planning and development of the TOTAL Scorecard interface.

2.1.1 Interface Data File Formats

The TOTAL Scorecard uses Extensible Markup Language (XML). XML uses tags that define the data elements. The TOTAL Scorecard WSDL and Schemas are included in Appendix D in this document. The TOTAL Scorecard call is made using Simple Object Access Protocol (SOAP) Web Services. For further information regarding interface file descriptions, refer to section 3 of this manual. The SOAP call will be secured via SSL using HTTPS.

2.1.2 Communications Protocol

The communications protocol for TOTAL Scorecard is SOAP. The SOAP call to the TOTAL Scorecard will be secured using HTTPS.

The HTTPS communications protocol provides two layers of data protection.

- The HTTPS communications protocol requires that a certificate reside on the server. This certificate must be issued by a trusted certificate authority. This ensures that the user is communicating with the TOTAL Scorecard and not some third party trying to spoof the TOTAL Scorecard's IP address.
- The HTTPS protocol encapsulates standard Hyper Text Transfer Protocol (HTTP) within the Secure Socket Layer (SSL). SSL is a universally accepted mechanism for securing data in transit across the Internet. SSL provides a very secure data encryption mechanism.

2.2 Building the TOTAL Scorecard Interface

2.2.1 Data Mapping

The first aspect in developing of the TOTAL Scorecard interface is reviewing the data and formats required by the TOTAL Scorecard. The AUS developer must map each of the TOTAL Scorecard XML data elements to the corresponding data element(s) in the AUS. A field-by-field matrix is the suggested method for accomplishing this data mapping.
Through the data mapping process you are able to identify:

- **Data elements that are currently available within your system** - This set of data elements should not require a significant effort in the process of developing the interface.

- **Data elements that are available but values must be re-mapped or calculated** - These data elements require re-mapping of the values within your system to the values that TOTAL Scorecard requires.

- **Data elements that are unavailable in your system** - The AUS must be modified to capture these additional data elements, utilizing new or existing screens.

2.3 Security Requirements and Recommendations

TOTAL Scorecard's security requirements and recommendations adhere to the standards that have been established by the Automated Data Processing Security Office at HUD. All TOTAL Scorecard transactions are required to have the following:

- **User ID** – up to ten alphanumeric characters; and

- **Password** – up to ten alphanumeric characters.

User IDs and passwords are sent as part of the SOAP Header. User IDs will be issued to partners as they are ready to begin developing their calls to the TOTAL Scorecard.

3.0 Interface File Descriptions

The AUS interfacing with the TOTAL Scorecard must be able to build TOTAL Scorecard standard XML data for a given Scorecard request. This XML will be transmitted via a SOAP request. This section details the format of both the SOAP Request and Response Objects.

The SOAP Request and Response objects are defined by the XML Schema and Web Service Definition Language (WSDL) shown in Appendix D.

Please note: All data must be properly represented in XML. There are five entity reference substitutions which are shown below. If any data is submitted that contains any of these characters the proper entity reference should be included in the XML or that field must be identified as unparsed character data.

Entity	Character	Entity Reference
Ampersand	&	&
Greater Than Sign	>	>
Less Than Sign	<	<
Quote	“	"
Apostrophe	‘	'

For example if a data field contained the following value “A & B Construction” the data would have to be represented as such:

<mytag>A & B Construction</mytag>

Or

<mytag> <![CDATA[A & B Construction]] </mytag>

Many credit reports contain these characters. It is a good practice to automatically identify all credit reports as unparsed character data.

NOTES:

APPENDIX A – Scorecard Data Elements

Appendix A – Scorecard Data Elements

	Scorecard Table Elements	Definition	Format	Size	Data Type	Input or Output? *	Required for Scoring/ CHUMS	Source	Scoreable Criteria	DTD Element Name
1	Applicant(s) combined monthly income	The sum, in whole dollars, of the applicant(s) Base Employment Income, Overtime, Bonuses, Commissions, Dividends/Interest, Net Rental Income, and Other from Section 5 in 1003. This includes all applicants (even if 4+).	999999	6	Scorecard	I	Scoring	1003 (Section 5)	Must be > 0	monthly_income
2	Appraised value, if available	"As is" or "As Repaired" from URAR (Uniform Residential Appraisal Report) in whole dollars.	9999999	7	Scorecard	I	Scoring	URAR	If entered, must be between 0 and 9,999,999	appraised_value
3	Assets after closing (must allow for negative amounts)	Assets available (post-closing) in whole dollars including gifts.	999999	6	Scorecard	I	Scoring	1003 (Section 7 p minus Subtotal liquid assets Section 6)	Any value is ok	assets_after_clsg
4	FHA case number	FHA case number from FHA Connection	999-9999999 Optionally can be formatted as any of the following: 999999999 999-9999999-999 999999999999	11	Scorecard	I	Scoring	FHA Connection	If entered, must pass check digit routine.	fha_case_number
5	Loan amount including financed Upfront Mortgage Insurance Premium (MIP)	Sum of the base loan amount and portion of the Upfront MIP that is being financed, line o. from Section 7 (Details of Transaction) of the 1003, in whole dollars.	9999999	7	Scorecard	I	Scoring	1003 (Section 7, line o. of the Details of Transaction)	Must be > 0	loan_amount
6	Monthly payment, including Principal, Interest, Taxes, and Insurance	Monthly payment, including Principal, Interest, Taxes, and Insurance in dollars and cents. Interest Rate should be based on Underwriting Interest Rate.	99999.99	8	Scorecard	I	Scoring	1003 (Section 5)	Must be > 0 and < 15000	piti
7	Financed Upfront Mortgage Insurance Premium	The portion of the Upfront MIP that is being financed, line n. from Section 7 (Details of Transaction) of the 1003, in whole dollars.	99999.99	8	Scorecard	I	Scoring	1003 (Section 7, line n. of the Details of Transaction)	Any non-negative value is ok	mip
8	Mortgage term in months (e.g., 180 months, 360 months)	Number of Months stated in Section 1 of 1003.	999	3	Scorecard	I	Scoring	1003 (Section 1)	Must be > 47 and must be < 361	term
9	Sales price	Purchase Price stated in Section 7 in whole dollars of 1003.	9999999	7	Scorecard	I	Scoring	1003 (Section 7)	If entered, must be between 0 and 9,999,999	sale_price
10	Social Security Number for SSN1	Social Security Number stated in Section 3 of 1003 for SSN1.	999999999	9	Scorecard	I	Scoring	1003 (Section 3)	Must be a valid ssn	ssn
11	Social Security Number for SSN2	Social Security Number stated in Section 3 of 1003 for SSN2.	999999999	9	Scorecard	I	Scoring	1003 (Section 3)	If entered, must be a valid ssn	ssn
12	Social Security Number for SSN3	Social Security Number stated in Section 3 of 1003 for SSN3.	999999999	9	Scorecard	I	Scoring	1003 (Section 3)	If entered, must be a valid ssn	ssn

	Scorecard Table Elements	Definition	Format	Size	Data Type	Input or Output? *	Required for Scoring/ CHUMS	Source	Scoreable Criteria	DTD Element Name
13	Social Security Number for SSN4	Social Security Number stated in Section 3 of 1003 for SSN4.	999999999	9	Scorecard	I	Scoring	1003 (Section 3)	If entered, must be a valid ssn	ssn
14	Social Security Number for SSN5	Social Security Number stated in Section 3 of 1003 for SSN5.	999999999	9	Scorecard	I	Scoring	1003 (Section 3)	If entered, must be a valid ssn	ssn
15	Total number of applicants	Total number of applicants stated in Section 3 of 1003. Total number of applicants must equal total SSN's/FICO entered.	9	1	Scorecard	I	Scoring	1003 (Section 3)	Must be > 0 and must be < 6	applicants
16	Unique identification for loan application assigned by AUS	Identification number assigned by the AUS scoring the loan.	char(16)	16	Scorecard	I	Scoring	AUS Vendor	Must be a valid identifier	loan_number
17	Loan-To-Value Ratio	Loan amount without Upfront MIP divided by the lesser of the appraised value or sales price of the property.	999.99	6	Scorecard	I	Scoring	92900-LT, , Mortgage Information	Must be > 10 and must be < 126	ltv
18	Front-End Ratio	The projected monthly principal, interest, taxes, and insurance payment divided by the gross monthly income of all borrowers.	999.99999	9	Scorecard	I	Scoring	92900-LT, Underwriting Information	Must be > 0 and must be < 101	front_end_ratio
19	Back-End Ratio	Housing plus other debt divided by monthly income	999.99999	9	Scorecard	I	Scoring	92900-LT, Underwriting Information	Must be > 0 and must be < 101	back_end_ratio
20	Loan Indicator	Defines type of loan. "A" for ARM "B" for Buydown or space for all other loans.	"A", "B" or Space	1	Scorecard	I	Scoring	1003 (Section 1)	Must be "A" for ARM, "B" for Buydown or a Space	amort_type
21	Underwriting P&I	P&I Amount at which loan is underwritten (Adjusted for ARMs whose LTV is 95% or greater and Buydowns; same as Contract P&I for all other loans) P&I to be used for underwriting purposes. Should be adjusted for ARMs whose LTV is 95% or greater to coincide with Underwriting Interest Rate adjustment. Should be adjusted for Buydowns to coincide with Buydown Interest Rate. Should match Contract P&I for all other loans.	99999.99	8	Scorecard	I	Scoring	See HUD Handbook 4155	Must be > 0 and < 15000	underwriting_pi
22	Contract P&I	Actual P&I payment (CHUMS P&I)	99999.99	8	Additional	I	CHUMS	1003 (Section 5)	Must be > 0 and < 150000	contract_pi
23	Underwriting Interest Rate	Interest rate at which loan is underwritten (Adjusted for ARMs whose LTV is 95% or greater; and for Buydowns same as Contract Interest Rate for all other loans) Interest rate to be used for underwriting purposes. Should be adjusted upward 1 point for ARMs whose LTV is 95% or greater. Should match the Buydown Interest Rate for Buydowns. Should match Contract Interest Rate for all other loans.	99.999	6	Scorecard	I	Scoring	See HUD Handbook 4155	Must be > 0	underwriting_interest

	Scorecard Table Elements	Definition	Format	Size	Data Type	Input or Output? *	Required for Scoring/ CHUMS	Source	Scoreable Criteria	DTD Element Name
24	Contract Interest Rate	Stated interest rate on loan application (CHUMS Interest Rate)	99.999	6	Additional	I	CHUMS	1003 (Section 1)	Must be > 0	contract_interest
25	Borrower Age for SSN1	Borrower Age stated in Section 3 of 1003 for SSN1.	99	2	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_age
26	Borrower Age for SSN2	Borrower Age stated in Section 3 of 1003 for SSN2.	99	2	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_age
27	Borrower Age for SSN3	Borrower Age stated in Section 3 of 1003 for SSN3.	99	2	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_age
28	Borrower Age for SSN4	Borrower Age stated in Section 3 of 1003 for SSN4.	99	2	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_age
29	Borrower Age for SSN5	Borrower Age stated in Section 3 of 1003 for SSN5.	99	2	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_age
30	Borrower Marital Status	Borrower Marital Status stated in Section 3 of 1003. 1-married, 2-separated, 3-unmarried	9	1	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_marital_status
31	Borrower Name for SSN1	Borrower Name for SSN1 stated in Section 3 of 1003.	Last Name, First Name M.I.	22	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_name
32	Borrower Name for SSN2	Borrower Name for SSN2 stated in Section 3 of 1003.	Last Name, First Name M.I.	22	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_name
33	Borrower Name for SSN3	Borrower Name for SSN3 stated in Section 3 of 1003.	Last Name, First Name M.I.	22	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_name
34	Borrower Name for SSN4	Borrower Name for SSN4 stated in Section 3 of 1003.	Last Name, First Name M.I.	22	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_name
35	Borrower Name for SSN5	Borrower Name for SSN5 stated in Section 3 of 1003.	Last Name, First Name M.I.	22	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_name
36	Borrower Race for SSN1	Borrower Race for SSN1 stated in Section 10 of 1003. 0–Not Applicable, 1-White, 2-Black or African American, 3-American Indian or Alaska Native, 4-Asian, 5-Native Hawaiian or Other Pacific Islander, 9–Not Disclosed. Note – This field may appear multiple times in a single Borrower Container	char(1)	1	Additional	I	CHUMS	1003 (Section 10)	Any value is ok	borr_race

	Scorecard Table Elements	Definition	Format	Size	Data Type	Input or Output? *	Required for Scoring/ CHUMS	Source	Scoreable Criteria	DTD Element Name
37	Borrower Race for SSN2	Borrower Race for SSN2 stated in Section 10 of 1003. 0–Not Applicable, 1-White, 2-Black or African American, 3-American Indian or Alaska Native, 4-Asian, 5-Native Hawaiian or Other Pacific Islander, 9–Not Disclosed. Note – This field may appear multiple times in a single Borrower Container	char(1)	1	Additional	I	CHUMS	1003 (Section 10)	Any value is ok	borr_race
38	Borrower Race for SSN3	Borrower Race for SSN3 stated in Section 10 of 1003. 0–Not Applicable, 1-White, 2-Black or African American, 3-American Indian or Alaska Native, 4-Asian, 5-Native Hawaiian or Other Pacific Islander, 9–Not Disclosed. Note – This field may appear multiple times in a single Borrower Container	char(1)	1	Additional	I	CHUMS	1003 (Section 10)	Any value is ok	borr_race
39	Borrower Race for SSN4	Borrower Race for SSN4 stated in Section 10 of 1003. 0–Not Applicable, 1-White, 2-Black or African American, 3-American Indian or Alaska Native, 4-Asian, 5-Native Hawaiian or Other Pacific Islander, 9–Not Disclosed. Note – This field may appear multiple times in a single Borrower Container	char(1)	1	Additional	I	CHUMS	1003 (Section 10)	Any value is ok	borr_race
40	Borrower Race for SSN5	Borrower Race for SSN5 stated in Section 10 of 1003. 0–Not Applicable, 1-White, 2-Black or African American, 3-American Indian or Alaska Native, 4-Asian, 5-Native Hawaiian or Other Pacific Islander, 9–Not Disclosed. Note – This field may appear multiple times in a single Borrower Container	char(1)	1	Additional	I	CHUMS	1003 (Section 10)	Any value is ok	borr_race

	Scorecard Table Elements	Definition	Format	Size	Data Type	Input or Output? *	Required for Scoring/ CHUMS	Source	Scoreable Criteria	DTD Element Name
41	Borrower Sex for SSN1	Borrower Sex for SSN1 stated in Section 3 of 1003. 1-Male, 2-Female	char(1)	1	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_sex
42	Borrower Sex for SSN2	Borrower Sex for SSN2 stated in Section 3 of 1003. 1-Male, 2-Female	char(1)	1	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_sex
43	Borrower Sex for SSN3	Borrower Sex for SSN3 stated in Section 3 of 1003. 1-Male, 2-Female	char(1)	1	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_sex
44	Borrower Sex for SSN4	Borrower Sex for SSN4 stated in Section 3 of 1003. 1-Male, 2-Female	char(1)	1	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_sex
45	Borrower Sex for SSN5	Borrower Sex for SSN5 stated in Section 3 of 1003. 1-Male, 2-Female	char(1)	1	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	borr_sex
46	Borrower Ethnicity for SSN1	Borrower Ethnicity for SSN1. Is borrower Hispanic or Latino? If borrower is Hispanic or Latino, the answer is "Y."	"Y" or "N"	1	Additional	I	CHUMS	CHUMS Insurance Screen	Any value is ok	borr_ethnicity
47	Borrower Ethnicity for SSN2	Borrower Ethnicity for SSN2. Is borrower Hispanic or Latino? If borrower is Hispanic or Latino, the answer is "Y."	"Y" or "N"	1	Additional	I	CHUMS	CHUMS Insurance Screen	Any value is ok	borr_ethnicity
48	Borrower Ethnicity for SSN3	Borrower Ethnicity for SSN3. Is borrower Hispanic or Latino? If borrower is Hispanic or Latino, the answer is "Y."	"Y" or "N"	1	Additional	I	CHUMS	CHUMS Insurance Screen	Any value is ok	borr_ethnicity
49	Borrower Ethnicity for SSN4	Borrower Ethnicity for SSN4. Is borrower Hispanic or Latino? If borrower is Hispanic or Latino, the answer is "Y."	"Y" or "N"	1	Additional	I	CHUMS	CHUMS Insurance Screen	Any value is ok	borr_ethnicity
50	Borrower Ethnicity for SSN5	Borrower Ethnicity for SSN5. Is borrower Hispanic or Latino? If borrower is Hispanic or Latino, the answer is "Y."	"Y" or "N"	1	Additional	I	CHUMS	CHUMS Insurance Screen	Any value is ok	borr_ethnicity
51	Borrower Birth Date for SSN1	Borrower Birth Date for SSN1	Yyyymmdd	8	Additional	I	CHUMS	CHUMS Insurance Screen	Any value is ok	borr_birth_date
52	Borrower Birth Date for SSN2	Borrower Birth Date for SSN2	Yyyymmdd	8	Additional	I	CHUMS	CHUMS Insurance Screen	Any value is ok	borr_birth_date
53	Borrower Birth Date for SSN3	Borrower Birth Date for SSN3	Yyyymmdd	8	Additional	I	CHUMS	CHUMS Insurance Screen	Any value is ok	borr_birth_date
54	Borrower Birth Date for SSN4	Borrower Birth Date for SSN4	Yyyymmdd	8	Additional	I	CHUMS	CHUMS Insurance Screen	Any value is ok	borr_birth_date
55	Borrower Birth Date for SSN5	Borrower Birth Date for SSN5	Yyyymmdd	8	Additional	I	CHUMS	CHUMS Insurance Screen	Any value is ok	borr_birth_date
56	First time home buyer (FTHB)	Has borrower had an ownership interest in a property in the last three years? If you have, FTHB = "N". If you have not, FTHB = "Y". If any borrower is a FTHB, the answer is "Y."	char(1)	1	Scorecard	I	Scoring	1003 (Section 8)	"Y" or "N"	first_time_buyer

	Scorecard Table Elements	Definition	Format	Size	Data Type	Input or Output? *	Required for Scoring/ CHUMS	Source	Scoreable Criteria	DTD Element Name
57	Loan purpose	1-Purchase an existing house, previously occupied 2-Finance improvements to an existing property 3-Refinance 4-Purchase a new condo unit 5-Purchase an existing condo unit 6-Purchase existing home, not previously occupied 7-Construct home – proceeds to be paid out during construction 8-HUD only - finance co-op purchase	char(2)	2	Additional	I	CHUMS	1003 (Section 2)	Any value is ok	loan_purpose
58	Property address	Property street address stated in Section 2 of 1003.	Char(60)	60	Additional	I	CHUMS	1003 (Section 2)	Any value is ok	prop_address
59	Property city	Property city name stated in Section 2 of 1003.	Char(17)	17	Additional	I	CHUMS	1002 (Section 2)	Any value is ok	prop_city
60	Property state	Property state abbreviation stated in Section 2 of 1003	Char(2)	2	Additional	I	CHUMS	1002 (Section 2)	Any value is ok	prop_state
61	Property zip code	Property zip code stated in Section 2 of 1003	Char(9)	9	Additional	I	CHUMS	1002 (Section 2)	Any value is ok	prop_zip
62	Property county code	Property fips county code.	Numeric(3)	3	Additional	I	CHUMS	1002 (Section 2)	Any value is ok	prop_county
63	Self employed indicator for borrower	Is borrower self-employed? If one borrower is self-employed, the answer is "Y."	"Y" or "N"	1	Additional	I	CHUMS	1003 (Section 4)	Any value is ok	self_employ
64	Veteran indicator for borrower	Is borrower a Veteran? If one borrower is a Veteran, the answer is "Y."	"Y" or "N"	1	Additional	I	CHUMS	1003 (Section 1)	Any value is ok	veteran
65	Borrower's Paid Closing Costs	The closing costs that the borrower actually pays (Total closing costs less allowable closing costs paid by the seller or other interested third party on behalf of the borrower).	999999	6	Scorecard	I	CHUMS	URLA, VII Details of Transaction, Line F Estimated closing costs minus Line K, Borrower's closing costs paid by seller.	If Purchase: 0 to 20% Sale Price. If Refinance 0 to 20% Appraised Value	borr_clsg_costs

	Scorecard Table Elements	Definition	Format	Size	Data Type	Input or Output? *	Required for Scoring/ CHUMS	Source	Scoreable Criteria	DTD Element Name
66	Borrower Type	1-Occupant 2-Landlord 3-Reserved 4-Reserved 5-Escrow Commitment 6-Reserved 7-Corporation (Refinance Only) 8-Government Agency or Non-Profit Organization	1-digit numeric	1	Additional	I	CHUMS	1003 (Section 2)	Any value is ok	borr_type
67	Current Housing Expenses	Sum of borrower's current monthly housing expenses such as rent or mortgage payments, insurance, taxes, etc	99999.99	7	Scorecard	I	CHUMS	URLA, V. Monthly Income and Combined Housing Expense Information, Combined Monthly Housing Expense.	0 to 99,999.99	monthly_expense
68	Energy Efficient Mortgage Indicator	Is there an energy efficient mortgage indicator?	"Y" or "N"	1	Additional	I	CHUMS	See HUD Handbook 4155 Chapter 2-39	Any value is ok	Eem
69	First Payment Date	Month and Year of first payment	YYYYMM	8	Additional	I	CHUMS	CHUMS Insurance Screen	Any value is ok	first_pay_date
70	Gift letter amount	Amount of Gift(s) in whole dollars	999999	6	Scorecard	I	CHUMS	Form HUD-92900-LT, Mortgage Information, Amount of Gift (Total of all Gifts)	0 to 999,999	gift_amt
71	Gift letter source	Source of Gift 00 - N/A 01 - Relative 03 - Government Assistance 06 - Employer/Other 15 - Nonprofit/Religious/Community – Non-Seller Funded	99	2	Scorecard	I	CHUMS	Form HUD-92900-LT, Mortgage Information, Amount of Gifts (If there are multiple gifts, indicate the source from the largest sum)	“00”, “01”, “03”, “06”, “15”, or blank.	gift_source

	Scorecard Table Elements	Definition	Format	Size	Data Type	Input or Output? *	Required for Scoring/ CHUMS	Source	Scoreable Criteria	DTD Element Name
72	Number of Dependents for borrowers	Total number of dependents for borrowers	99	2	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	dependents
73	Required Investment	Borrower Funds to Close Required: Lenders must enter the total amount that the borrower is required to pay at closing. If the borrower is receiving cash back, the amount should be negative	999999	6	Scorecard	I	CHUMS	URLA, VII Details of Transaction, Line P, Cash from/to Borrower	Lower Bound: Negative Loan Amount Upper Bound: If the Sale Price is at least $35,000: (120% * [lesser of Sale Price or Appraised Value]) – Mortgage Amount	req_invest
74	Solar energy indicator	Is there a solar energy indicator?	"Y" or "N"	1	Additional	I	CHUMS	See HUD Handbook 4155 Chapter 1-11	Any value is ok	solar
75	Total cash requirements	Total combined cash available to close loan in whole dollars	999999	6	Additional	I	CHUMS	1003 (Section 7)	Any value is ok	total_req
76	Years at Current Job for SSN1	Years at current job for SSN1	2-digit numeric	2	Additional	I	CHUMS	1003 (Section 4)	Any value is ok	years_at_job
77	Years Renting for borrower	Greatest number of years renting for any borrower	2-digit numeric	2	Additional	I	CHUMS	1003 (Section 3)	Any value is ok	years_renting
78	Total Closing Costs	Total closing costs of the transaction	999999	6	Scorecard	I	CHUMS	URLA, VII Details of Transaction, Line F, Estimated closing costs	If Purchase and Sale Price is at least $35,000: 0 to 20% Sale Price. If Refinance and Appraised Value is at least $35,000: 0 to 20% Appraised Value Otherwise, must be greater than or equal to zero.	clsg_costs
79	Unpaid Principle Balance (for refis)	Amount of principal due on first loan	9999999	7	Additional	I	CHUMS	CHUMS Insurance Screen	Any value is ok	unpaid_balance
80	Mortgage Basis	Total cost to the buyer, including the buyer's share of any repairs, alterations, and additions to the property and the closing costs, contract price, and existing debt being refinanced, but excluding prepaids.	9999999	7	Additional	I	CHUMS	CHUMS Insurance Screen	Any value is ok	mortgage_basis
81	Assets Available	Total assets available for closing, including cash, savings bonds, and securities.	999999	6	Additional	I	CHUMS	CHUMS Insurance Screen	Any value is ok	assets_avail

	Scorecard Table Elements	Definition	Format	Size	Data Type	Input or Output? *	Required for Scoring/ CHUMS	Source	Scoreable Criteria	DTD Element Name
82	Total Fixed Payment	Sum of borrower's total fixed monthly expenses such as the mortgage payment, insurance, taxes, fees, and other recurring charges, including all monthly payment debts and housing debts.	999999	6	Scorecard	I	CHUMS	Form HUD-92900-LT, Debts & Obligations, Total Fixed Payment.	0 to Monthly Income	total_fixed
83	Counsel Type	Indicates if First Time Homebuyer (FTHB) completed homebuyer counseling. " "- N/A, "A"- Not Counseled, "D" – HUD Approved Counseling Agency	"A", "D", or " "	1	Scorecard	I	Scoring	CHUMS Insurance Screen	"A", "D", or " "	counsel_type
84	Closing Date	Date loan was settled or closed.	Yymmdd	6	Additional	I	CHUMS	CHUMS Insurance Screen	Any value is ok	closing_date
85	Maturity Date	Date of last mortgage payment.	Yyyymm	6	Additional	I	CHUMS	CHUMS Insurance Screen	Any value is ok	maturity_date
86	Buydown Interest Rate	Interest rate paid by borrower as a result of points paid up front. To be used for underwriting purposes.	99.999	6	Additional	I	CHUMS	1003 (Section 1)	Must be > 0	buydown_interest
87	Secondary Financing Amount	Amount of financing provided from a source other than the originating lender that creates a lien against a property (even if the debt may be forgiven by the provider of the funds).	999999	6	Additional	I	CHUMS	CHUMS Insurance Screen	Any value is ok	secondary_financing_amt
88	Secondary Financing Source	Type of entity providing secondary financing 00 - N/A 01 - Government & Nonprofit Instrumentality of Government 02 - Nonprofit (not Instrumentality of Government) 03 - Private Organizations/Eligible Individuals 04 - Lender	99	2	Additional	I	CHUMS	CHUMS Insurance Screen	Any value is ok	secondary_financing_src
89	EEM Escrow Amount	Amount held in escrow for energy efficient improvements.	999999	6	Additional	I	CHUMS	CHUMS Insurance Screen	Any value is ok	eem_escrow_amt
90	Seller Concessions	The amount the seller and/or interested third party contributes toward the buyer's closing costs, prepaid expenses, discount points, UFMIP, and Interest Rate Buydowns.	999999	6	Scorecard	I	CHUMS	URLA, VII Details of Transaction, Line K, Borrower's closing costs paid by seller.	0 to 20% * Sale Price.	seller_concessions
91	Credit Report Type	Designates format of the Credit Report Data	Char(10)	10	Scorecard	I	Scoring	Credit Report	Must be a supported Credit Report Type. Please contact Single Family Housing for a current list of supported Credit Report Types	creditreporttype
92	Credit Report Data	Raw Credit Report	Unlimited Alphanumeric	Unlimited	Scorecard	I	Scoring	Credit Report	Any value is ok	creditreportdata

	Scorecard Table Elements	Definition	Format	Size	Data Type	Input or Output? *	Required for Scoring/ CHUMS	Source	Scoreable Criteria	DTD Element Name
93	Lender ID	Code to Identify the originator making the underwriting request. Should be the FHA 10 digit lender ID. Note: When processing a loan for a Sponsored Originator, the AUS should send the Sponsored Originator EIN. If the AUS is unable to send the Sponsored Originator EIN, the AUS is allowed to send 6999609996 in this field. That value will indicate to TOTAL Scorecard the loan is originated by a Sponsored Originator.	Char(10)	20	Scorecard	I	Scoring	FHA	Must be a valid FHA 10 digit lender ID	lender_id
94	Sponsor ID	Code to Identify the lender acting as an approved sponsor for the originator making the underwriting request. Should be the FHA 10 digit lender ID. Required if the Lender ID is a Loan Correspondent. Optional if the Lender ID is for a DE Approved originator.	Char(10)	20	Scorecard	I	Scoring	FHA	If entered, must be a valid FHA 10 digit lender ID	sponsor_id
95	Version	The version of the TOTAL Scorecard used during the initial underwriting decision of the loan application. This should match the version output from the TOTAL Scorecard during the initial submission of the loan application to the TOTAL Scorecard. Should be blank for the initial submission of a loan application.	Char(11)	11	Scorecard	I	Scoring	Version output from the initial submission of the loan to the TOTAL Scorecard	Any value is ok	version
96	Down Payment	The difference between the sales price of the property and the mortgage amount excluding any financed closing costs or mortgage insurance premiums.	999999	6	Scorecard	I	CHUMS	URLA, VII Details of Transaction, Line A, Purchase price minus Line M, Loan Amount (exclude PMI, MIP, Funding Fee financed)	0 to 150%(Sales Price – (Mortgage Amount – MIP)) Should be 0 for refinance	down_payment
97	Base Mortgage Amount	Mortgage amount prior to adding any financed closing costs or any upfront mortgage insurance premium, or any combination.	9999999	7	Additional	I	CHUMS		Any value is ok	base_mortgage_amount
98	Base LTV	Base mortgage amount divided by the lesser of the appraised value or sales price of the property	999.99	6	Additional	I	CHUMS	Calculated	Any value is ok	base_LTV
99	Manufactured Housing	Indicator for specifying whether the dwelling is a manufactured (mobile) home.	“Y” or “N”	1	Additional	I	CHUMS	URAR	Any value is ok	manufactured_housing
100	Number of Living Units	Number of separate dwellings. For example, a two-family house has 2 living units.	99	2	Additional	I	CHUMS	URLA, II. Property Information and Purpose of Loan section, No. of Units	Any value is ok	living_units

	Scorecard Table Elements	Definition	Format	Size	Data Type	Input or Output? *	Required for Scoring/ CHUMS	Source	Scoreable Criteria	DTD Element Name
101	ARM Type	Type of ARM 1 – 1 Year Arm H – Hybrid Arm N – Not an ARM	“1”, “H”, or “N”	1	Additional	I	CHUMS	Note	Any value is ok	ARM_type
102	Refinance Type	“ “ - Unknown “C” - Conventional “H” - HOPE For Homeowners “N” - Not Refinance “R” - Prior FHA “S” - Streamline Refinance	Char(1)	1	Scorecard	I	Scoring		Any value is OK	refinance_type
103	Sponsored Originator EIN	The Employer Identification Number for the Sponsored Origination Company	999999999 Optionally can be formatted as: 99-9999999	9	Scorecard	I	Scoring	FHA	If entered, must be a valid EIN on the CHUMS Sponsored Originator List.	_EmployerIdentificationNumber attribute from the LOAN_ORIGINATOR
104	Condominium Indicator	Condo/Not a Condominium(Y/N)	“Y” or “N”	1	Scorecard	I	CHUMS	Form HUD-92900-LT, Property Type	“Y”, “N”, or blank	condo_ind
105	Loan Application Type	Designates format of the Loan Application Data	Char(15)	15	Scorecard	I	Scoring	Loan Application	Must be a supported Loan Application Type. MISMOAUS2.3.1 MISMOAUS2.4 FannieMaeRLD3.2 MISMO3.3	loanapptype
106	Loan Application Data	Loan Application Data	Unlimited Alphanumeric	Unlimited	Scorecard	I	Scoring	Loan Application	Loan Application Data in the format specified by the Loan Application Type	loanappdata
			Output Variables Follow:							
1	Number of review rules/credit overrides that were triggered	The number of review rules/credit overrides that were triggered (0-5).	99	2	Scorecard	O	Scoring	N/A	N/A	NumReviews
2	Error Code	Error codes derived during the validation process; error codes are returned comma delimited (Example: 166, 300, 325)	Char(50)	50	Scorecard	O	Scoring	N/A	N/A	Errcde
3	Array containing the ID of the review rules triggered	Comma delimited field with codes indicating which review rules were triggered. Please see Appendix C for the list of Review Rules.	99,99	30	Scorecard	O	Scoring	N/A	N/A	ReviewRules
4	Post-review rules Accept or Refer decision	Accept/Refer decision. Takes into account algorithm score, review rules and credit overrides.	"A," "R," or "U"	1	Scorecard	O	Scoring	N/A	N/A	PostReview
5	Pre-review rules Accept or Refer decision	Accept/Refer based only on algorithm score.	"A," "R," or "U"	1	Scorecard	O	Scoring	N/A	N/A	PreReview
6	Borrower1 FICO	FICO score for Borrower1	9999	4	Scorecard	O	Scoring	Credit Report	N/A	LFico
7	Borrower2 FICO	FICO score for Borrower2	9999	4	Scorecard	O	Scoring	credit Report	N/A	LFico

	Scorecard Table Elements	Definition	Format	Size	Data Type	Input or Output? *	Required for Scoring/ CHUMS	Source	Scoreable Criteria	DTD Element Name
8	Borrower3 FICO	FICO score for Borrower3	9999	4	Scorecard	O	Scoring	Credit Report	N/A	LFico
9	Borrower4 FICO	FICO score for Borrower4	9999	4	Scorecard	O	Scoring	Credit Report	N/A	LFico
10	Borrower5 FICO	FICO score for Borrower5	9999	4	Scorecard	O	Scoring	Credit Report	N/A	LFico
11	Social Security Number for Borrower1	Social Security Number stated in Section 3 of 1003 for Borrower1.	999999999	9	Scorecard	O	Scoring	1003 (Section 3)	N/A	ssn
12	Social Security Number for Borrower2	Social Security Number stated in Section 3 of 1003 for Borrower2.	999999999	9	Scorecard	O	Scoring	1003 (Section 3)	N/A	ssn
13	Social Security Number for Borrower3	Social Security Number stated in Section 3 of 1003 for Borrower3.	999999999	9	Scorecard	O	Scoring	1003 (Section 3)	N/A	ssn
14	Social Security Number for Borrower4	Social Security Number stated in Section 3 of 1003 for Borrower4.	999999999	9	Scorecard	O	Scoring	1003 (Section 3)	N/A	ssn
15	Social Security Number for Borrower5	Social Security Number stated in Section 3 of 1003 for Borrower5.	999999999	9	Scorecard	O	Scoring	1003 (Section 3)	N/A	ssn
16	Repository for selected FICO for Borrower1	The Credit Repository which provided the FICO reported from the scorecard.	Char(20)	20	Scorecard	O	Scoring	Credit Report	N/A	repository
17	Repository for selected FICO for Borrower2	The Credit Repository which provided the FICO reported from the scorecard.	Char(20)	20	Scorecard	O	Scoring	Credit Report	N/A	repository
18	Repository for selected FICO for Borrower3	The Credit Repository which provided the FICO reported from the scorecard.	Char(20)	20	Scorecard	O	Scoring	Credit Report	N/A	repository
19	Repository for selected FICO for Borrower4	The Credit Repository which provided the FICO reported from the scorecard.	Char(20)	20	Scorecard	O	Scoring	Credit Report	N/A	repository
20	Repository for selected FICO for Borrower5	The Credit Repository which provided the FICO reported from the scorecard.	Char(20)	20	Scorecard	O	Scoring	Credit Report	N/A	repository
21	Version	The Version of the TOTAL Scorecard used during this scorecard submission.	Char(11)	11	Scorecard	O	Scoring	N/A	N/A	Version
22	Unique identification for loan application assigned by AUS	Identification number assigned by the AUS scoring the loan.	char(16)	16	Scorecard	O	Scoring	AUS Vendor	N/A	loan_number
23	Upfront MIP Factor	Percentage used for calculating the upfront mortgage insurance premium. To calculate the upfront mortgage insurance premium, the factor should be multiplied by the mortgage amount.	99.999	6	Scorecard	O	Scoring	N/A	N/A	upfrontMIPFactor
24	Annual MIP Factor	Percentage used for calculating the annual mortgage insurance premium. To calculate the annual mortgage insurance premium, the factor should be multiplied by the mortgage amount.	99.999	6	Scorecard	O	Scoring	N/A	N/A	annualMIPFactor

	Scorecard Table Elements	Definition	Format	Size	Data Type	Input or Output? *	Required for Scoring/ CHUMS	Source	Scoreable Criteria	DTD Element Name
25	Higher Mortgage Insurance Premium Indicator * Only a zero is retuned at this time. This is a place holder for future use	Indicates if the upfront mortgage insurance premium was raised above level indicated by the borrower's credit score and LTV combination. 0 – MIP was not raised 1 – MIP was raised due to weakness in the combination of cash reserves, mortgage payment ratio, and/or rate of loan amortization. 2 – MIP was raised due to weakness in credit history; thin credit files. 3 – MIP was raised due to a combination of 1) cash reserves, mortgage payment ratio, and/or rate of loan amortization and 2) weakness in credit history; thin credit files. 4 – MIP was raised due to a combination of weaknesses but no dominant cause	0-4	1	Scorecard	O	Scoring	N/A	N/A	MIPBumpIndicator
26	County Limits (1 Unit)	The One Unit FHA Mortgage Limit for the county associated with the TOTAL Scorecard Version. Data will only be populated if AUS provides the state and county code in the call to TOTAL Scorecard.	9999999	7	Scorecard	O	Scoring	N/A	N/A	limit1
27	County Limits (2 Unit)	The Two Unit FHA Mortgage Limit for the county associated with the TOTAL Scorecard Version. Data will only be populated if AUS provides the state and county code in the call to TOTAL Scorecard.	9999999	7	Scorecard	O	Scoring	N/A	N/A	limit2
28	County Limits (3 Unit)	The Three Unit FHA Mortgage Limit for the associated with the TOTAL Scorecard Version. Data will only be populated if AUS provides the state and county code in the call to TOTAL Scorecard.	9999999	7	Scorecard	O	Scoring	N/A	N/A	limit3
29	County Limits (4 Unit)	The Four Unit FHA Mortgage Limit for the county Data will only be populated if AUS provides the state and county code in the call to TOTAL Scorecard.	9999999	7	Scorecard	O	Scoring	N/A	N/A	limit4

APPENDIX B – Scorecard Error Codes

Appendix B - Scorecard Error Codes

ERROR CODES	ERROR MESSAGES
001	The TOTAL Scorecard server was not set up correctly
004	One SSN must be entered
005	SSN1 is not valid
006	SSN2 is not valid
007	SSN3 is not valid
008	SSN4 is not valid
009	SSN5 is not valid
010	SSN2 is required
011	SSN3 is required
012	SSN4 is required
235	A zero FICO Score is only permitted for one applicant
240	One FICO Score is required when only one applicant
290	Invalid FHA Case Number
300	Applicant(s) combined monthly income must be greater than 0
305	Appraised Value must be between $0 and $9,999,999.
310	Loan amount including MIP must be greater than 0
315	Monthly payment, including Principal, Interest, Taxes and Insurance, must be greater than $0 and less than $15,000
320	Mortgage Insurance Premium cannot be less than 0
325	Mortgage term in months must be between 48 and 360
330	Sale price must be between $0 and $9,999,999.
335	Either Appraised Value or Sale Price is required
340	Total number of applicants must be between 1 and 5
345	Total number of applicants does not match number of SSNs entered
350	Unique identification for AUS must be entered
355	Unique identification for loan application assigned by AUS must be entered
360	Loan-To-Value Ratio must be between 11 and 125
365	Front End Ratio must be greater than 0 and less than or equal to 100
370	Back End Ratio must be greater than 0 and less than or equal to 100
372	Back End Ratio must be greater than or equal to Front End Ratio
375	Underwriting P&I must be greater than $0 and less than $15,000
380	Underwriting Interest must be greater than 0
385	Either Lender ID or Sponsored Originator EIN is required
386	Both Lender ID and Sponsored Originator EIN not allowed. Please submit either Lender ID or Sponsored Originator EIN.

ERROR CODES	ERROR MESSAGES
387	Sponsored Originator EIN is invalid. Sponsored Originator EIN must be nine numeric digits.
388	Sponsored Originator EIN is invalid. Sponsored Originator EIN must be in the CHUMS Sponsored Originator list.
390	Lender ID must contain 10 digits
391	Invalid Lender ID Please ensure lender ID is entered correctly. If it is entered correctly, please contact Lender Approval Division at (202)708-3976.
392	Lender ID is not active
393	Sponsor ID is required
394	Sponsor ID must contain 10 digits
395	Invalid Sponsor ID
396	Sponsor ID is not active
397	Both Lender ID and Sponsor ID cannot be mortgagee type 4
398	Lender ID is not certified through FHA Connection Certification Screen
399	Sponsor ID is not certified through FHA Connection Certification Screen
400	Credit Report is required
405	Each Credit Report must include a Credit Report Type and a Credit Report Data
415	First Time Homebuyer must be “Y” or “N”
420	Counsel Type is not valid
425	Current Housing Expense must be between $0 and $99,999.99
430	Gift Letter Amount must be between $0 and $999,999
435	Gift Letter Source must be “00”, “01”, “03”, “06”, or “15”
440	Required Investment must greater than the Negative Loan Amount
445	Required Investment must be less than or equal to $999,999
450	Down Payment is required
465	Total Fixed Payment must be between $0 and Monthly Income
470	Condo Indicator must be “Y” or “N”
475	Total Closing Costs cannot exceed 20% Sale Price on a purchase. Total Closing Costs cannot exceed 20% Appraised Value on a refinance
480	Seller Concession Amount must be between $0 and 20% of the Sales Price
485	Borrower Closing Costs cannot exceed 20% Sale Price on a purchase. Borrower Closing Costs cannot exceed 20% Appraised Value on a refinance
490	Gift Letter Amount must be greater than zero when Gift Letter Source is not “N/A”
495	Gift Letter Source cannot be “N/A” when Gift Letter Amount is greater than zero
500	Citizenship is required for all borrowers
505	Citizenship must be “USCitizen”, “PermanentResidentAlien" or "NonPermanentResidentAlien"
510	Full borrower address including street address, city, state, and postal code are required for all borrowers
515	Invalid State Abbreviation for Borrower 1 current address

ERROR CODES	ERROR MESSAGES
520	Invalid State Abbreviation for Borrower 2 current address
525	Invalid State Abbreviation for Borrower 3 current address
530	Invalid State Abbreviation for Borrower 4 current address
535	Invalid State Abbreviation for Borrower 5 current address
540	Invalid Zip Code for Borrower 1 current address
545	Invalid Zip Code for Borrower 2 current address
550	Invalid Zip Code for Borrower 3 current address
555	Invalid Zip Code for Borrower 4 current address
560	Invalid Zip Code for Borrower 5 current address
565	Partial employment address information provided for borrower 1. If any employment information is provided then the following data items are required: Name, Address, City, State, Zip Code, Phone, Position, Years on job, and Self Employment Indicator **Please note: this error is temporarily suspended until a future date**
570	Partial employment address information provided for borrower 2. If any employment information is provided then the following data items are required: Name, Address, City, State, Zip Code, Phone, Position, Years on job, and Self Employment Indicator **Please note: this error is temporarily suspended until a future date**
575	Partial employment address information provided for borrower 3. If any employment information is provided then the following data items are required: Name, Address, City, State, Zip Code, Phone, Position, Years on job, and Self Employment Indicator **Please note: this error is temporarily suspended until a future date**
585	Partial employment address information provided for borrower 4. If any employment information is provided then the following data items are required: Name, Address, City, State, Zip Code, Phone, Position, Years on job, and Self Employment Indicator **Please note: this error is temporarily suspended until a future date**
590	Partial employment address information provided for borrower 5. If any employment information is provided then the following data items are required: Name, Address, City, State, Zip Code, Phone, Position, Years on job, and Self Employment Indicator **Please note: this error is temporarily suspended until a future date**
595	Invalid State Name for Borrower 1 employment
600	Invalid State Name for Borrower 2 employment
610	Invalid State Name for Borrower 3 employment
615	Invalid State Name for Borrower 4 employment
620	Invalid State Name for Borrower 5 employment
625	Invalid Zip Code for Borrower 1 employment
630	Invalid Zip Code for Borrower 2 employment
635	Invalid Zip Code for Borrower 3 employment
640	Invalid Zip Code for Borrower 4 employment
645	Invalid Zip Code for Borrower 5 employment
650	Borrower 1 Self Employment Indicator should be True or False
655	Borrower 2 Self Employment Indicator should be True or False
660	Borrower 3 Self Employment Indicator should be True or False

ERROR CODES	ERROR MESSAGES
665	Borrower 4 Self Employment Indicator should be True or False
670	Borrower 5 Self Employment Indicator should be True or False
675	Years on Current Job or Months on Current Job for Borrower 1 must be numeric and greater than zero if employment is indicated
680	Years on Current Job or Months on Current Job for Borrower 2 must be numeric and greater than zero if employment is indicated
685	Years on Current Job or Months on Current Job for Borrower 3 must be numeric and greater than zero if employment is indicated
690	Years on Current Job or Months on Current Job for Borrower 4 must be numeric and greater than zero if employment is indicated
695	Years on Current Job or Months on Current Job for Borrower 5 must be numeric and greater than zero if employment is indicated
700	Partial listing real estate agent information supplied. If any listing real estate agent information is provided both First Name and Last Name of the listing real estate agent are required
710	Listing real estate agent information is not allowed on a refinance.
715	Partial selling real estate agent information supplied. If any selling real estate agent information is provided both First Name and Last Name of the selling real estate agent are required
720	Selling real estate agent information is not allowed on a refinance.
725	Partial closing agent information supplied. If any closing agent information is provided both First Name and Last Name of the closing agent are required
730	Partial notary information supplied. If any notary information is provided both First Name and Last Name of the notary are required
735	Partial seller information supplied. If any seller information is provided both First Name and Last Name of the seller are required
745	Invalid lender loan originator State
755	Invalid broker loan originator State
765	Invalid broker company State
770	Partial gift donor information supplied. If any gift donor information is provided both First Name and Last Name of the gift donor are required
775	Partial loan processor information supplied. If any loan processor information is provided both First Name and Last Name of the loan processor are required
780	Partial landlord information supplied. If any landlord information is provided both First Name and Last Name of the landlord are required
785	Loan Application Data is Required
790	Invalid Loan Application Type
795	Invalid Loan Application Data
800	Multiple Loan Applications were submitted. Only one Loan Application is allowed
999	The TOTAL Scorecard experienced an unexpected error while processing. One example that would cause this to occur is if the Web server was unable to open a connection to the database server. This should be very rare.

APPENDIX C – Scorecard Review Rules

Appendix C – Scorecard Review Rules

01	Front End Ratio is too high
02	Back End Ratio is too high
04	Recent Foreclosure
05	Recent Bankruptcy
06	Late Mortgage Payments
07	Ineligible for FHA financing based on values submitted to TOTAL – See Upfront Premiums Chart
08	Ineligible for FHA financing based on values submitted to TOTAL unless the loan is 203(h) or complies with Mortgagee Letter 2010-23 'FHA Refinance of Borrowers in Negative Equity Positions'
09	Current Housing Expense exceeds Monthly Income
10	Gift Amount exceeds 150% of Required Investment **Please note: This review rule was never implemented.**
11	Seller Concession Amount exceeds 6% of Sale Price
12	At least one 30-day late Mortgage Payment in the last 12 months – Applies to only Cash Out Refinance
13	At least one borrower with no available credit score
14	The lowest median FICO score is less than 620 and the Back-End Ratio (DTI) is greater than 43.00. Please see ML 2013-05.
15	Required Investment is less than zero and the loan is a purchase transaction.

APPENDIX D – Scorecard Schemas and WSDL

D-1 Schema


```
<?xml version="1.0" encoding="UTF-8"?>
<schema attributeFormDefault="unqualified"
elementFormDefault="qualified"
targetNamespace="http://xmlns.oracle.com/F17CTOTALScorecard/F17CTOTALScorecard/F17CTOTALScorecard
"
xmlns="http://www.w3.org/2001/XMLSchema"
xmlns:tda="http://xmlns.oracle.com/F17CTOTALScorecard/F17CTOTALScorecard/F17CTOTALScorecard">
<element name="process">
  <complexType>
    <sequence>
        <element name="monthly_income" type="string" default="0" minOccurs="0"/>
        <element name="appraised_value" type="string" default="0" minOccurs="0"/>
        <element name="assets_after_clsg" type="string" default="0" minOccurs="0"/>
        <element name="fha_case_number" type="string" default="0" minOccurs="0"/>
        <element name="loan_amount" type="string" default="0" minOccurs="0"/>
        <element name="piti" type="string" default="0" minOccurs="0"/>
        <element name="mip" type="string" default="0" minOccurs="0"/>
        <element name="term" type="string" default="0" minOccurs="0"/>
        <element name="sale_price" type="string" default="0" minOccurs="0"/>
        <element name="applicants" type="string" default="0" minOccurs="0"/>
        <element name="loan_number" type="string" minOccurs="0"/>
        <element name="ltv" type="string" default="0" minOccurs="0"/>
        <element name="front_end_ratio" type="string" default="0" minOccurs="0"/>
        <element name="back_end_ratio" type="string" default="0" minOccurs="0"/>
        <element name="amort_type" type="string" minOccurs="0"/>
        <element name="underwriting_pi" type="string" default="0" minOccurs="0"/>
        <element name="contract_pi" type="string" default="0" minOccurs="0"/>
        <element name="underwriting_interest" type="string" default="0" minOccurs="0"/>
        <element name="contract_interest" type="string" default="0" minOccurs="0"/>
        <element name="borr_marital_status" type="string" default="0" minOccurs="0"/>
        <element name="first_time_buyer" type="string" minOccurs="0"/>
        <element name="loan_purpose" type="string" default="0" minOccurs="0"/>
        <element name="prop_address" type="string" minOccurs="0"/>
        <element name="prop_city" type="string" minOccurs="0"/>
        <element name="prop_state" type="string" minOccurs="0"/>
        <element name="prop_zip" type="string" minOccurs="0"/>
        <element name="prop_county" type="string" default="0" minOccurs="0"/>
        <element name="self_employ" type="string" minOccurs="0"/>
        <element name="veteran" type="string" minOccurs="0"/>
        <element name="borr_clsg_costs" type="string" default="0" minOccurs="0"/>
        <element name="borr_type" type="string" default="0" minOccurs="0"/>
        <element name="monthly_expense" type="string" default="0" minOccurs="0"/>
        <element name="eem" type="string" minOccurs="0"/>
        <element name="first_pay_date" type="string" default="0" minOccurs="0"/>
        <element name="gift_amt" type="string" default="0" minOccurs="0"/>
        <element name="gift_source" type="string" default="0" minOccurs="0"/>
        <element name="dependents" type="string" default="0" minOccurs="0"/>
        <element name="req_invest" type="string" default="0" minOccurs="0"/>
        <element name="solar" type="string" minOccurs="0"/>
        <element name="total_req" type="string" default="0" minOccurs="0"/>
        <element name="years_at_job" type="string" default="0" minOccurs="0"/>
        <element name="years_renting" type="string" default="0" minOccurs="0"/>
        <element name="clsg_costs" type="string" default="0" minOccurs="0"/>
        <element name="unpaid_balance" type="string" default="0" minOccurs="0"/>
```

```
<element name="mortgage_basis" type="string" default="0" minOccurs="0"/>
<element name="assets_avail" type="string" default="0" minOccurs="0"/>
<element name="total_fixed" type="string" default="0" minOccurs="0"/>
<element name="counsel_type" type="string" minOccurs="0"/>
<element name="closing_date" type="string" default="0" minOccurs="0"/>
<element name="maturity_date" type="string" default="0" minOccurs="0"/>
<element name="buydown_interest" type="string" default="0" minOccurs="0"/>
<element name="secondary_financing_amt" type="string" default="0" minOccurs="0"/>
<element name="secondary_financing_src" type="string" default="0" minOccurs="0"/>
<element name="eem_escrow_amt" type="string" default="0" minOccurs="0"/>
<element name="seller_concessions" type="string" default="0" minOccurs="0"/>
<element name="lender_id" type="string" minOccurs="0"/>
<element name="sponsor_id" type="string" minOccurs="0"/>
<element name="version" type="string" default="3.3" minOccurs="0"/>
<element name="down_payment" type="string" minOccurs="0"/>
<element name="base_mortgage_amount" type="string" default="0" minOccurs="0"/>
<element name="base_LTV" type="string" default="0" minOccurs="0"/>
<element name="manufactured_housing" type="string" minOccurs="0"/>
<element name="living_units" type="string" default="0" minOccurs="0"/>
<element name="ARM_type" type="string" minOccurs="0"/>
<element name="refinance_type" type="string" minOccurs="0"/>
<element name="condo_ind" type="string" minOccurs="0"/>
<element name="LOAN_ORIGINATOR" minOccurs="0">
   <complexType>
      <attribute name="_EmployerIdentificationNumber" type="string" default="0"/>
   </complexType>
</element>
<element name="borrower" minOccurs="0" maxOccurs="unbounded">
   <complexType>
      <sequence>
            <element name="ssn" type="string" default="0" minOccurs="0"/>
            <element name="borr_age" type="string" default="0" minOccurs="0"/>
            <element name="borr_name" type="string" minOccurs="0"/>
            <element name="borr_race" type="string" minOccurs="0"/>
            <element name="borr_sex" type="string" default="0" minOccurs="0"/>
            <element name="borr_ethnicity" type="string" minOccurs="0"/>
            <element name="borr_birth_date" type="string" default="0" minOccurs="0"/>
      </sequence>
  </complexType>
</element>
<element name="creditreport" minOccurs="0" maxOccurs="unbounded">
   <complexType>
      <sequence>
            <element name="creditreporttype" type="string" minOccurs="0"/>
            <element name="creditreportdata" type="string" minOccurs="0"/>
      </sequence>
   </complexType>
</element>
<element name="loanapp" minOccurs="0" maxOccurs="unbounded">
   <complexType>
      <sequence>
            <element name="loanapptype" minOccurs="0" maxOccurs="1">
               <simpleType>
                  <restriction base="string">
                        <enumeration value="MISMO3.3"/>
                        <enumeration value="MISMOAUS2.3.1"/>
```

```
                    <enumeration value="MISMOAUS2.4"/>
                    <enumeration value="FannieMaeRLD3.2"/>
                  </restriction>
                </simpleType>
              </element>
              <element name="loanappdata" minOccurs="0" maxOccurs="1">
                <complexType mixed="true">
                  <sequence>
                        <any namespace="##any" processContents="lax" minOccurs="0" maxOccurs="1"/>
                  </sequence>
                </complexType>
              </element>
            </sequence>
          </complexType>
        </element>
      </sequence>
    </complexType>
  </element>
  <element name="processResponse">
    <complexType>
      <sequence>
        <element name="NumReviews" type="int" minOccurs="0"/>
        <element name="Errcde" type="string" minOccurs="0" maxOccurs="1"/>
        <element name="ReviewRules" type="string" minOccurs="0" maxOccurs="1"/>
        <element name="PostReview" type="string" minOccurs="0" maxOccurs="1"/>
        <element name="PreReview" type="string" minOccurs="0" maxOccurs="1"/>
        <element name="Borrowers" minOccurs="0" maxOccurs="1">
          <complexType>
            <sequence>
              <element name="Borrower" minOccurs="0" maxOccurs="5">
                <complexType>
                  <sequence>
                    <element name="LFico" type="int" minOccurs="0" maxOccurs="1"/>
                    <element name="ssn" type="string" minOccurs="0" maxOccurs="1"/>
                    <element name="repository" type="string" minOccurs="0" maxOccurs="1"/>
                  </sequence>
                </complexType>
              </element>
            </sequence>
          </complexType>
        </element>
        <element name="loan_number" type="string" minOccurs="0" maxOccurs="1"/>
        <element name="upfrontMIPFactor" type="decimal" minOccurs="0" maxOccurs="1"/>
        <element name="annualMIPFactor" type="decimal" minOccurs="0" maxOccurs="1"/>
        <element name="MIPBumpIndicator" type="string" minOccurs="0" maxOccurs="1"/>
        <element name="limit1" type="int" minOccurs="0" maxOccurs="1"/>
        <element name="limit2" type="int" minOccurs="0" maxOccurs="1"/>
        <element name="limit3" type="int" minOccurs="0" maxOccurs="1"/>
        <element name="limit4" type="int" minOccurs="0" maxOccurs="1"/>
        <element name="Version" type="string" minOccurs="0" maxOccurs="1"/>
        <element name="ServerName" type="string" minOccurs="0" maxOccurs="1"/>
        <element name="Score" type="string" minOccurs="0" maxOccurs="1"/>
      </sequence>
    </complexType>
  </element>
```

```
<element name="TOTALRequest-Response">
   <complexType>
      <sequence>
           <element ref="tda:process" minOccurs="0" maxOccurs="1"/>
           <element ref="tda:processResponse" minOccurs="0" maxOccurs="1"/>
      </sequence>
   </complexType>
</element>
</schema>
```

D-2 WSDL

```
<wsdl:definitions name="F17CTOTALScorecard"
targetNamespace="http://xmlns.oracle.com/F17CTOTALScorecard/F17CTOTALScorecard/F17CTOTALScorecard
"><wsdl:documentation><abstractWSDL>http://hwvalad3826.hud.gov:8001/soa-
infra/services/F17_MISMO/F17CTOTALScorecard!1.0/F17CTOTALScorecard.wsdl</abstractWSDL></wsdl:docu
mentation><plnk:partnerLinkType name="F17CTOTALScorecard"><plnk:role
name="F17CTOTALScorecardProvider"
portType="client:F17CTOTALScorecard"/></plnk:partnerLinkType><wsp:Policy
wsu:Id="wss_username_token_service_policy"><sp:SupportingTokens><wsp:Policy><sp:UsernameToken
sp:IncludeToken="http://schemas.xmlsoap.org/ws/2005/07/securitypolicy/IncludeToken/AlwaysToRecipient"><ws
p:Policy><sp:WssUsernameToken10/></wsp:Policy></sp:UsernameToken></wsp:Policy></sp:SupportingTokens>
</wsp:Policy><wsdl:types><schema><import
namespace="http://xmlns.oracle.com/F17CTOTALScorecard/F17CTOTALScorecard/F17CTOTALScorecard"
schemaLocation="http://hwvalad3826.hud.gov:8001/soa-
infra/services/F17_MISMO/F17CTOTALScorecard/apps/chums/xsd/F17CTOTALScorecard.xsd"/></schema><sch
ema><import
namespace="http://xmlns.oracle.com/F17CTOTALScorecard/F17CTOTALScorecard/F17CTOTALScorecard"
schemaLocation="http://hwvalad3826.hud.gov:8001/soa-
infra/services/F17_MISMO/F17CTOTALScorecard/f17ctotalscorecard_client_ep?XSD=xsd/parserResults.xsd"/></
schema><xsd:schema><xsd:import namespace="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-secext-1.0.xsd" schemaLocation="http://hwvalad3826.hud.gov:8001/soa-
infra/services/F17_MISMO/F17CTOTALScorecard/f17ctotalscorecard_client_ep?XSD=xsd/wsse.xsd"/></xsd:sche
ma></wsdl:types><wsdl:message name="F17CTOTALScorecardRequestMessage"><wsdl:part name="payload"
element="client:process"/></wsdl:message><wsdl:message
name="F17CTOTALScorecardResponseMessage"><wsdl:part name="payload"
element="client:processResponse"/></wsdl:message><wsdl:portType
name="F17CTOTALScorecard"><wsdl:operation name="process"><wsdl:input
message="client:F17CTOTALScorecardRequestMessage"/><wsdl:output
message="client:F17CTOTALScorecardResponseMessage"/></wsdl:operation></wsdl:portType><wsdl:binding
name="F17CTOTALScorecardBinding" type="client:F17CTOTALScorecard"><soap:binding
transport="http://schemas.xmlsoap.org/soap/http"/><wsp:PolicyReference
URI="#wss_username_token_service_policy" wsdl:required="false"/><wsdl:operation
name="process"><soap:operation style="document" soapAction="process"/><wsdl:input><soap:body
use="literal"/></wsdl:input><wsdl:output><soap:body
use="literal"/></wsdl:output></wsdl:operation></wsdl:binding><wsdl:service
name="f17ctotalscorecard_client_ep"><wsdl:port name="F17CTOTALScorecard_pt"
binding="client:F17CTOTALScorecardBinding"><soap:address location="http://hwvalad3826.hud.gov:8001/soa-
infra/services/F17_MISMO/F17CTOTALScorecard/f17ctotalscorecard_client_ep"/></wsdl:port></wsdl:service></
wsdl:definitions>
```

APPENDIX E – Revisions

Revisions

E.1 TOTAL Scorecard – Implementation Date December 1, 2003

Added two new error codes

398: Lender ID is not certified
399: Sponsor ID is not certified

E.2 TOTAL Scorecard – Implementation Date October 22, 2003

Changes made to be in compliance with HMDA requirements.

Added the following fields:

Name	Appendix A - position
Borrower Ethnicity for SSN1	46
Borrower Ethnicity for SSN2	47
Borrower Ethnicity for SSN3	48
Borrower Ethnicity for SSN4	49
Borrower Ethnicity for SSN5	50
Borrower Birth Date for SSN1	51
Borrower Birth Date for SSN2	52
Borrower Birth Date for SSN3	53
Borrower Birth Date for SSN4	54
Borrower Birth Date for SSN5	55
Secondary Financing Amount	87
Secondary Financing Source	88
EEM Escrow Amount	89
Seller Concessions	90

Modified the following fields:

Gift Letter Source	70
Borr X Race	36 through 40

Modification to DTD Only
Modified Race to allow multiple occurrences

Changes to pull FICO scores from the credit report:

Removed the following fields:

Name	Appendix A - old position
Beacon Score for SSN1	5

Beacon Score for SSN2	6
Beacon Score for SSN3	7
Beacon Score for SSN4	8
Beacon Score for SSN5	9
FICO Score for SSN1	10
FICO Score for SSN2	11
FICO Score for SSN3	12
FICO Score for SSN4	13
FICO Score for SSN5	14
Empirica Score for SSN1	15
Empirica Score for SSN2	16
Empirica Score for SSN3	17
Empirica Score for SSN4	18
Empirica Score for SSN5	19

E.3 TOTAL Scorecard - Implementation Date October 6, 2004

Modified the Appraised Value and Sales Price edits:

Name	Appendix A - position
Appraised Value	2
Sales Price	9

Modified the definition of Assets After Closing:

Name	Appendix A – position
Assets After Closing	3

E.4 TOTAL Scorecard – Release of Version 1.2 - Implementation Date December 1, 2004

Name	Appendix A - position
Version	95 (input)
Version	21 (output)

E.5 TOTAL Scorecard – Release of Version 2.0 - Implementation Date July 14, 2008

December 3, 2007 published updated documentation for this implementation.

Version 2.0 will collect three new required fields: Down Payment, Base Mortgage Amount, and Base LTV. Please see the Input Fields table in Appendix A (page A-9) for field definitions and the input DTD in Appendix C. Three new error codes were added to correspond to these new fields. Please see Appendix B (page B-2) for error codes.

In Version 2.0, two previously optional fields will be required. The two required fields are First Time Home Buyer and Counsel Type. Two new error codes were added to correspond to these newly required fields. Please see Appendix B (page B-2) for error codes.

Version 2.0 will allow for a new value in the Counsel Type field. This new value will be "D" which means the borrower was counseled by a HUD approved counseling agency.

Version 2.0 will collect three new optional fields: Manufactured Housing, Number of Living Units, and ARM Type. Please see the Input Fields table in Appendix A (page A-9) for field definitions and the input DTD in Appendix C.

Version 2.0 returns three new fields: Upfront MIP Factor, Annual MIP Factor, and Higher Mortgage Insurance Premium Indicator. Please see the Output Fields table in Appendix A (page A-10) for field definitions and the output DTD in Appendix C (page C-2). Please note: Only a zero will be returned for the Higher Mortgage Insurance Premium Indicator at this time. This is a place holder for future use.

Version 2.0 returns a new review rule (07). Please see the Output Fields table in Appendix A (page A-9) for Review Rule definitions.

Removed 4 Scorecard Error Codes from Appendix B

200:	FICO Score numbers for SSN2 must be 0 when SSN2 not entered
210:	FICO Score numbers for SSN3 must be 0 when SSN3 not entered
220:	FICO Score numbers for SSN4 must be 0 when SSN4 not entered
230:	FICO Score numbers for SSN5 must be 0 when SSN5 not entered

Modified the Appraised Value and Sales Price field size and Scoreable Criteria.
Modified the Loan Amount, Unpaid Principle Balance and Mortgage Basis field size.

Name	Appendix A – position
Appraised Value	2
Loan Amount	5
Sales Price	9
Unpaid Principle Balance	79
Mortgage Basis	80

Modified the Error Messages for Appraised Value (305) and Sales Price (330) from Appendix B.

Modified the definition for Loan Purpose

Version 2.0 added two new values for Gift Letter Source (14 and 15) and removed one value (02).

Version 2.0 added a new value for Secondary Financing Source (04).

E.6 TOTAL Scorecard – Update to Version 2.0 - Implementation Date July 14, 2008

May 13, 2008 published updated documentation for this implementation

Added new input field refinance_type. Please see the Input Fields table in Appendix A (item 102) for field definition and the input DTD in Appendix D.

Modified the Monthly payment, including Principal, Interest, Taxes, and Insurance, Underwriting P&I, and Contract P&I field size and Scorable Criteria.

Name	Appendix A – position
Monthly payment	2
Underwriting P&I	21
Contract P&I	22

Modified the Error Messages for Monthly payment, including Principal, Interest, Taxes, and Insurance (315) and Underwriting P&I (375) from Appendix B.

E.7 TOTAL Scorecard – Release of Version 2.1 - Implementation Date October 1, 2008

September 2, 2008 published updated documentation for this implementation.

Version 2.1 added a new value for Refinance Type. In the Definition for the Input fields table in Appendix A (item 102), this new value will be "H" which means the borrower is applying for a HOPE loan.

In Version 2.1, three previously required fields will be optional. The three optional fields are Down Payment, Base Mortgage Amount and Base LTV.

Removed 3 Scorecard Error Codes from Appendix B

425:	DOWN PAYMENT AMOUNT IS NOT VALID
430:	BASE MORTGAGE AMOUNT IS NOT VALID
435:	BASE LTV IS NOT VALID

Modified the Down Payment, Base Mortgage Amount, and Base LTV Scoreable Criteria.

Name	Appendix A – position
Down payment	96
Base Mortgage Amount	97
Base LTV	98

E.8 TOTAL Scorecard – Update to Version 2.1 - Implementation Date September 1, 2009

August 3, 2009 published updated documentation for this implementation.

Modified allowable values for the "refinance_type" field. Added the following allowable values:

"H" - HOPE For Homeowners
"S" - Streamline Refinance

Removed "14 - Nonprofit/Religious/Community - Seller Funded" as an allowable value for the "gift_source" field.

E.9 TOTAL Scorecard – Release of Version 2.2 - Implementation Date October 4, 2010

May 12, 2010 published updated documentation for this implementation.

Modified to reference Version 2.2 which was implemented on April 3, 2010 to support MIP Factor changes described in Mortgagee Letter 2010-02.

No interface changes were made as part of this modification.

E.10 TOTAL Scorecard – Release of Version 2.3 - Implementation Date October 4, 2010

August 19, 2010 published updated documentation for this implementation.

Added new input field Sponsored Originator EIN. Please see the Input Fields table in Appendix A (item 103) for field definition and the input DTD in Appendix C.

Modified the definition for Lender ID. Please see Input Fields table in Appendix A (item 93) for new field definition.

Added 4 Scorecard Error Codes in Appendix B

385 Either Lender ID or Sponsored Originator EIN is required
386 Both Lender ID and Sponsored Originator EIN not allowed. Please submit either Lender ID or Sponsored Originator EIN.
387 Sponsored Originator EIN is invalid. Sponsored Originator EIN must be nine numeric digits.
388 Sponsored Originator EIN is invalid. Sponsored Originator EIN must be in the CHUMS Sponsored Originator list.

Added new review rule (08) for Version 2.3. Please see the Review Rule definitions in the Output Fields table in Appendix A. The new review rule is needed for FICO and LTV processing.

E.11 TOTAL Scorecard – Update to Version 2.3 - Implementation Date September 24, 2010

Modified definition for error codes 001 and 999. No functionality with TOTAL Scorecard was modified.

The definitions for two error codes were modified. Please see Appendix B.

The old definitions were:
001 - Data in AUS system to calculate score is not complete
999 - AUS system unable to score loan with data provided

The new definitions are:
001 - The TOTAL Scorecard server was not set up correctly
999 - The TOTAL Scorecard experienced an unexpected error while processing. One example that would cause this to occur is if the Web server was unable to open a connection to the database server. This should be very rare.

E.12 TOTAL Scorecard – Release of Version 2.4 - Implementation Date April 16, 2011

February 17, 2011 published updated documentation for this implementation.

Modified to reference TOTAL Scorecard Version 2.4 which will be implemented on April 16, 2011 to support Annual MIP Factor increases as described in Mortgagee Letter 2011-10.

No interface changes were made as part of this modification.

E.13 TOTAL Scorecard – Release of Version 2.5 - Implementation Date March 4, 2012

December 1, 2011 published updated documentation for this implementation.

The scoreable criteria was changed on nine fields. These fields are currently optional. They will be required beginning July 21, 2012. These fields are:

Borrower Paid Closing Costs	65	borr_clsg_costs
Current Housing Expenses	67	monthly_expense
Gift Letter Amount	70	gift_amt
Gift Letter Source	71	gift_source
Required Investment	73	req_invest
Total Closing Costs	78	clsg_costs
Total Fixed Payment	82	total_fixed
Seller Concessions	90	seller_concessions
Down Payment	96	down_payment

The Source column in Appendix A was changed on the following six fields to remove all references to form 92900-WS.

Assets After Closing	3	assets_after_clsg
Loan-To-Value Ratio	17	ltv
Front-End Ratio	18	front_end_ratio
Back-End Ratio	19	back_end_ratio
Borrower Paid Closing Costs	65	borr_clsg_costs
Total Closing Costs	78	clsg_costs

One new input field was added. This field is currently optional. It will be required beginning July 21, 2012.

Condominium Indicator	104	condo_ind

Three new Review Rules were added (Output data item #3). These review rules will be implemented beginning July 21, 2012.

09 – Current Housing Expense exceeds Monthly Income.
10 – Gift Amount exceeds 150% of Required Investment.
11 – Seller Concession Amount exceeds 6% of Sale Price.

Four new Output fields were added.

County Limits (1 Unit)	26	limit1
County Limits (2 Unit)	27	limit2
County Limits (3 Unit)	28	limit3
County Limits (4 Unit)	29	limit4

Added 12 Scorecard Error Codes in Appendix B

Error Code	Error Message
425	Current Housing Expense must be between $0 and $99,999.99
430	Gift Letter Amount must be between $0 and $999,999
435	Gift Letter Source must be “00”, “01”, “03”, “06”, or “15”
440	Required Investment must be greater than the Negative Loan Amount
445	Required Investment must be less than: 120% (lesser of Sale Price or Appraised Value) – Mortgage Amount
450	Down Payment is required
455	Down Payment cannot be less than zero
460	Down Payment must be less than 150% (Sales Price – (Mortgage Amount – MIP))
465	Total Fixed Payment must be between $0 and Monthly Income

470	Condo Indicator must be "Y" or "N"
475	Total Closing Costs cannot exceed 20% of Sale Price on a purchase. Total Closing Costs cannot exceed 20% of Appraised Value on a refinance
480	Seller Concession Amount must be between $0 and 20% of Sales Price
485	Borrower Closing Costs cannot exceed 20% of Sale Price on a purchase. Borrower Closing Costs cannot exceed 20% of Appraised Value on a refinance

E.14 TOTAL Scorecard – Release of Version 2.6 - Implementation Date April 8, 2012

March 15, 2012 published updated documentation for this implementation.

Modified to reference TOTAL Scorecard Version 2.6 which will be implemented on April 8, 2012 to support MIP Factor increases as described in Mortgagee Letter 2012-04.

No interface changes were made as part of this modification.

The message for error code 372 was modified to be consistent with the actual edit. The message was changed from "Back End Ratio must be greater than Front End Ratio" to "Back End Ratio must be greater than or equal to Front End Ratio"

E.15 TOTAL Scorecard – Release of Version 2.7- Implementation Date June 11, 2012

April 19, 2012 published updated documentation for this implementation.

Modified to reference TOTAL Scorecard Version 2.7 which will be implemented on June 11, 2012 to support MIP Factor changes as described in Mortgagee Letter 2012-04.

No interface changes were made as part of this modification.

Error codes 455 and 460 were removed. They had been defined as

455	Down Payment cannot be less than zero
460	Down Payment must be less than 150% (Sales Price – (Mortgage Amount – MIP))

Error code 445 was modified. The old definition was

445	Required Investment must be less than: 120% (lesser of Sale Price or Appraised Value) – Mortgage Amount

The new definition is:

445	For a purchase Required Investment must be less than 120% (Sale Price) – Mortgage Amount. For a refinance Required Investment must be less than or equal to $999,999.

E.16 TOTAL Scorecard – Release of Version 3.0 - Implementation Date July 21, 2012

May 18, 2012 published updated documentation for this implementation.

Modified to reference TOTAL Scorecard Version 3.0 which will be implemented on July 21, 2012

The scoreable criteria was changed on ten fields. They will be required beginning July 21, 2012. These fields are:

Borrower Paid Closing Costs	65	borr_clsg_costs
Current Housing Expenses	67	monthly_expense
Gift Letter Amount	70	gift_amt
Gift Letter Source	71	gift_source
Required Investment	73	req_invest
Total Closing Costs	78	clsg_costs
Total Fixed Payment	82	total_fixed
Seller Concessions	90	seller_concessions
Down Payment	96	down_payment
Condominium Indicator	104	condo_ind

Version 3.0 will return four new Review Rules and two new Error Codes.

A new Appendix C has been added to list all current Review Rules.
The new Review Rules are:

09	Current Housing Expense exceeds Monthly Income
10	Gift Amount exceeds 150% of Required Investment **Please note: This review rule was never implemented.**
11	Seller Concession Amount exceeds 6% of Sale Price
12	At least one 30-day late Mortgage Payment in the last 12 months – Applies to only Cash Out Refinance
13	At least one borrower with no available credit score

The new Error Codes are:

490	Gift Letter Amount must be greater than zero when Gift Letter Source is not “N/A”

495	Gift Letter Source cannot be "N/A" when Gift Letter Amount is greater than zero

Two Scorecard Error Codes were removed from Appendix B

235: A zero FICO Score is only permitted for one applicant
240: One FICO Score is required when only one applicant

E.17 TOTAL Scorecard – Release of Version 3.1 - Implementation Date March 2, 2013

February 11, 2013 published updated documentation for this implementation.

Modified to reference TOTAL Scorecard Version 3.1 which will be implemented on March 2, 2013.

No interface changes were made as part of this modification.

E.18 TOTAL Scorecard – Release of Version 3.2 - Implementation Date March 30, 2013

March 04, 2013 published updated documentation for this implementation.

Two new Review Rules are added for version 3.2:

14	The lowest median FICO score is less than 620 and the Back-End Ratio (DTI) is greater than 43.00. Please see ML 2013-05.
15	Required Investment is less than zero and the loan is a purchase transaction.

The MIP Factors were modified to support MIP Factor changes described in Mortgagee Letter 2013-04.

E.19 TOTAL Scorecard – Release of Version 3.3 - Implementation Date June 1, 2013

April 10, 2013 published updated documentation for this implementation.

Modified to reference TOTAL Scorecard Version 3.3 which will be implemented on June 1, 2013.

The MIP Factors were modified to support MIP Factor changes described in Mortgagee Letter 2013-04.

No interface changes were made as part of this modification.

E.20 TOTAL Scorecard – Release of Version 3.3 - Implementation Date June 28, 2013

June 18, 2013 published updated documentation for this implementation.

Modified scorable criteria for Required Investment and Total Closing Costs. Please see revised scorable criteria in Appendix A.

E.21 TOTAL Scorecard – Release of Version 3.4 - Implementation Date February 15, 2014

March 05, 2014 published updated documentation for this implementation.

Modified to reference TOTAL Scorecard Version 3.4 which was implemented on February 15, 2014.

Modified definition for all four County Limits so that limits returned are associated with a TOTAL Scorecard version and aligned more closely to FHA Mortgage Limit changes. This definition change applies to TOTAL Scorecard Version 3.3 and forward.

Field	Field Number	Old Definition	New Definition
County Limits (1 Unit)	26	The One Unit FHA Mortgage Limit for the county currently in effect. Data will only be populated if AUS provides the state and county code in the call to TOTAL Scorecard	The One Unit FHA Mortgage Limit for the county associated with the TOTAL Scorecard Version. Data will only be populated if AUS provides the state and county code in the call to TOTAL Scorecard.
County Limits (2 Unit)	27	The Two Unit FHA Mortgage Limit for the county currently in effect. Data will only be populated if AUS provides the state and county code in the call to TOTAL Scorecard	The Two Unit FHA Mortgage Limit for the county associated with the TOTAL Scorecard Version. Data will only be populated if AUS provides the state and county code in the call to TOTAL Scorecard.
County Limits (3 Unit)	28	The Three Unit FHA Mortgage Limit for the county currently in effect. Data will only be populated if AUS provides the state and county code in the call to TOTAL Scorecard	The Three Unit FHA Mortgage Limit for the county associated with the TOTAL Scorecard Version. Data will only be populated if AUS provides the state and county code in the call to TOTAL Scorecard.
County Limits (4 Unit)	29	The Four Unit FHA Mortgage Limit for the county currently in effect. Data will only be populated if AUS provides the state and county code in the call to TOTAL Scorecard	The Four Unit FHA Mortgage Limit for the county associated with the TOTAL Scorecard Version. Data will only be populated if AUS provides the state and county code in the call to TOTAL Scorecard.

E.22 TOTAL Scorecard – Release of SOAP Version 3.4 - Implementation Date July 26, 2014

May 16, 2014 published updated documentation for this implementation.

Modified to reference SOAP call to TOTAL Scorecard Version 3.4 which will be implemented on July 26, 2014.

Section 3.0 Interface File Descriptions and Appendix D have been completely replaced. The older versions of the developer's guide contained DTDs. The new version contains the WSDL and Schema. The new version also describes entity references and unparsed character data.

- 2.1.1 Interface Data File Formats
- 2.1.2 Communications Protocol
- 2.3 Security Requirements and Recommendations

Error code 445 was modified. The old definition was

445	For a purchase Required Investment must be less than 120% (Sale Price) – Mortgage Amount. For a refinance Required Investment must be less than or equal to $999,999.

The new definition is:

445	Required Investment must be less than or equal to $999,999.

E.23 TOTAL Scorecard – Release of SOAP MISMO Version 3.4 - Implementation Date November 8, 2014

June 6, 2014 published updated documentation for this implementation.

Modified to reference Loan Application container to contain MISMO or Fannie Mae RLD loan application which will be implemented on November 8, 2014.

- Loan Application Type (Field 105) and Loan Application Data (Field 106) were added in Appendix A.
- Error Codes 500 through 800 were added in Appendix B.
- Schema in Appendix D was updated to include the "loanapp" container.

E.24 Updated Developer's Guide for TOTAL Scorecard – Release of SOAP MISMO Version 3.4 - Implementation Date November 8, 2014

September 25, 2014 updated documentation for SOAP MISMO implementation

- In Appendix A, updated Scorecard Table Elements, Definition and Source columns for loan amount and MIP.

The previous definitions were:

Loan amount including MIP	Sum of loan amount and MIP in whole dollars from Section 7 in 1003.	9999999	7	Scorecard	I	Scoring	1003 (Section 7)	Must be > 0 and < 15000	piti
Mortgage Insurance Premium	Loan amount multiplied by the appropriate MIP Factor in whole dollars from Section 7 of 1003.	99999.99	8	Scorecard	I	Scoring	1003 (Section 7)	Any non-negative value is ok	mip

The new definitions are:

Loan amount including financed Upfront Mortgage Insurance Premium (MIP)	Sum of the base loan amount and portion of the Upfront MIP that is being financed, line o. from Section 7 (Details of Transaction) of the 1003, in whole dollars.	9999999	7	Scorecard	I	Scoring	1003 (Section 7, line o. of the Details of Transaction)	Must be > 0	loan_amount
Financed Upfront Mortgage Insurance Premium	The portion of the Upfront MIP that is being financed, line n. from Section 7 (Details of Transaction) of the 1003, in whole dollars.	99999.99	8	Scorecard	I	Scoring	1003 (Section 7, line n. of the Details of Transaction)	Any non-negative value is ok	mip

- In Appendix A, updated Format, Size and Scoreable Criteria for Loan Application Type.

The old definition was:

Loan Application Type	Designates format of the Loan Application Data	Char(10)	10	Scorecard	I	Scoring	Loan Application	Must be a supported Loan Application Type. MISMOAUS2.3.1 MISMOAUS2.4 FannieMaeRLD3.2	loanapptype

The new definition is:

Loan Application Type	Designates format of the Loan Application Data	Char(15)	15	Scorecard	*I*	Scoring	Loan Application	Must be a supported Loan Application Type. MISMOAUS2.3.1 MISMOAUS2.4 FannieMaeRLD3.2 MISMO3.3	loanapptype

- In Appendix B, error codes 565 through 590 are temporarily suspended until a future date.
- In Appendix D, changes were made to the loanapp element in D-1 Schema. Also, removed the obsolete aus and signon elements from the schema. A new wsdl was provided in D-2 WSDL.

E.25 TOTAL Scorecard – Release of Version 3.5 - Implementation Date January 1, 2015

December 16, 2014 published updated documentation for this implementation.

Modified to reference TOTAL Scorecard Version 3.5. The implementation date for version 3.5 is January 1, 2015.

No interface changes were made as part of this modification. This version was created to support the Calendar Year 2015 Mortgage Limits.

E.26 TOTAL Scorecard – Release of Version 3.6 - Implementation Date January 24, 2015

Modified to reference TOTAL Scorecard Version 3.6. The implementation date for version 3.6 is January 24, 2015.

In Appendix A, updated the Scoreable Criteria Table Elements for Appraised Value and Sales Price.

The previous definitions were:

Appraised value, if available	"As is" or "As Repaired" from URAR (Uniform Residential Appraisal Report) in whole dollars.	9999999	7	Scorecard	I	Scoring	URAR	If entered, must be > 9000 and must be <= 9,999,999	appraised_value
Sales price	Purchase Price stated in Section 7 in whole dollars of 1003.	9999999	7	Scorecard	I	Scoring	1003 (Section 7)	If entered, must be > 9000 and must be <= 9,999,999	sale_price

The new definitions are:

Appraised value, if available	"As is" or "As Repaired" from URAR (Uniform Residential Appraisal Report) in whole dollars.	9999999	7	Scorecard	I	Scoring	URAR	If entered, must be between 0 and 9,999,999	appraised_value
Sales price	Purchase Price stated in Section 7 in whole dollars of 1003.	9999999	7	Scorecard	I	Scoring	1003 (Section 7)	If entered, must be between 0 and 9,999,999	sale_price

In Appendix B, updated definitions for Error Codes 305 and 330.

Error code 305 was modified. The old definition was:

305	Appraised Value must be between $9,000 and $9,999,999. Otherwise, it must be 0.

The new definition is:

305	Appraised Value must be between $0 and $9,999,999.

Error code 330 was modified. The old definition was:

330	Sale price must be between $9,000 and $9,999,999.

The new definition is:

330	Sale price must be between $0 and $9,999,999.

In Appendix B, updated definitions for Error Codes 675, 680, 685, 690 and 695.

The old definitions were:

675	Years on Current Job for Borrower 1 must be numeric and greater than zero
680	Years on Current Job for Borrower 2 must be numeric and greater than zero
685	Years on Current Job for Borrower 3 must be numeric and greater than zero
690	Years on Current Job for Borrower 4 must be numeric and greater than zero
695	Years on Current Job for Borrower 5 must be numeric and greater than zero

The new definitions are:

675	Years on Current Job or Months on Current Job for Borrower 1 must be numeric and greater than zero if employment is indicated
680	Years on Current Job or Months on Current Job for Borrower 2 must be numeric and greater than zero if employment is indicated
685	Years on Current Job or Months on Current Job for Borrower 3 must be numeric and greater than zero if employment is indicated
690	Years on Current Job or Months on Current Job for Borrower 4 must be numeric and greater than zero if employment is indicated
695	Years on Current Job or Months on Current Job for Borrower 5 must be numeric and greater than zero if employment is indicated

In Appendix B, error codes 740, 750 and 760 have been removed

740	Partial lender loan originator information supplied. If any lender loan originator information is provided both First Name, Last Name, and either NMLS ID or State and License combination of the lender loan originator are required
750	Partial broker loan originator information supplied. If any broker loan originator information is provided both First Name, Last Name, and either NMLS ID or State and License combination of the broker loan originator are required
760	Partial broker company information supplied. If any broker company information is provided Broker Company Name, Address and either NMLSID or State and License combination are required

The Annual MIP Factors were modified to support MIP Factor changes described in Mortgagee Letter 2015-01.