2015 Topcoding and Suppression

INTERVIEW SURVEY AND DIARY SURVEY
CONSUMER EXPENDITURE
PUBLIC USE MICRODATA

August 30, 2016

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I.   Topcoding and Other Nondisclosure Requirements

CE needs to ensure that users are not able to identify consumer units' (CU) who participated in the survey. CE ensures protects the respondents' identify by changing sensitive data with two methods: Topcoding and suppression.

Topcoding refers to the replacement of data if the value of the original data exceeds prescribed critical values. Critical values for each variable containing sensitive data are calculated in accordance with Census Disclosure Review Board guidelines. Each observation that falls outside the critical value is replaced with a topcoded value that represents the mean of the subset of all outlying observations. All five quarters of data in the CE microdata release are used when calculating the critical value and topcode amounts. If an observation is topcoded, the flag variable assigned to that observation is set to 'T.' for simplicity, this document will refer only to "topcoding," but the reader should be aware that outliers at the lower extremes may also be "bottom-coded."

Since the critical value and mean of the set of values outside the critical value may differ with each annual (five-quarter) release, the topcode values may change annually and be applied at a different starting point. By topcoding values in this manner, means are preserved for each five-quarter data release when using the total sample. This, however, will not be the case when means are estimated by characteristic, because topcode values are not calculated by characteristic.

Suppression refers to the suppression of data if the value of the original data could reveal the identity but topcoding is not suitable. For example, state information is suppressed by changing the code from one state to that of a neighboring state.

II.   Interview Survey

A. CU Characteristics and Income File (FMLI)

1. Directly topcoded

The following table shows the FMLI file variables that are subject to topcoding and their associated critical values and topcode values. For multiple imputed income variables, it is possible for an upper topcode value to be less than the upper critical value or for a lower topcode value to be greater than the lower critical value.

Variable	Description	Upper Critical Value	Lower Critical Value	Upper Topcode Value	Lower Topcode Value
CREDFINX	Total amount paid in finance, late charges, and interest for all cards in LAST MONTH	1,115	.	2,639	.
CREDITX	Total amount owed on all cards	30,000	.	50,270	.
CREDTYRX	Total amount owed on all cards ONE YEAR AGO	34,000	.	50,628	.
INTRDVX	Amount received in interest or dividend during the past 12 months	40,000	.	115,062	.
INTRDVXM	Amount of income received from interest and dividends	40,000	.	67,745	.
IRAX	Total value of all retirement accounts	950,000	.	1,470,333	.
IRAYRX	Total value of all retirement accounts one year ago	942,000	.	1,473,261	.
LIQUDYRX	Total value of accounts year ago	140,000	.	323,959	.
LIQUIDX	Total value of accounts	150,000	.	351,351	.
LUMPSUMX	Amount of lump sum receipts	130,000	.	463,643	.
MISCTAXX	Amount of other taxes paid during the past 12 months	26,000	.	63,750	.

NETRENTM	Net Rental income or loss	50,400	(15,000)	76,561	(9,757)
NETRENTX	Net Rental income or loss	50,400	(15,000)	112,487	(18,510)
OTHASTX	Value of other financial assets	1,000,000	.	3,412,845	.
OTHFINX	Total amount paid in finance, late charges, and interest for all other loans	1,200	.	2,700	.
OTHLNYRX	Total amount owed on all other loans one year ago	67,000	.	160,571	.
OTHLONX	Total amount owed on all other loans	77,000	.	168,164	.
OTHREGX	Amount income from other sources	36,000	.	55,548	.
OTHREGXM	Amount income from other sources	36,000	.	36,281	.
OTHRINCM	Amount received in other money income	37,000	.	37,106	.
OTHRINCX	Amount received in other money income	37,000	.	54,077	.
OTHSTYRX	Value of other assets year ago	2,500,000	.	3,677,461	.
RENTEQVX	Estimated monthly rental equivalence of owned home	3,500	.	5,381	.
RETSURVM	Amount income from retirement survivor disability	71,000	.	77,794	.
RETSURVX	Amount income from retirement survivor disability	71,000	.	110,055	.
ROYESTX	Amount income from royalty or estates and trusts	80,000	.	248,924	.
ROYESTXM	Amount income from royalty or estates and trusts	80,000	.	138,768	.
STOCKX	Total value directly held stocks bonds mutual funds year ago	900,000	.	2,135,671	.
STOCKYRX	Total value directly held stocks bonds mutual funds year ago	1,000,000	.	2,262,999	.
WHLFYRX	Total surrender value of policies year ago	460,000	.	1,285,000	.

WHOLIFX	Total surrender value of policies	500,000	.	1,386,364	.

2. **Indirectly topcoded**

Some income variables that are subject to topcoding are constructed by summing up the values of "lower level" component variables from the MEMI or FMLI file. These variables are not topcoded by the conventional method of replacement with a topcode value. Instead the variables' components are summed normally and the variables are flagged as topcoded if one of their component variables is topcoded.

Following are the income variables that are calculated using values of their component variables. See the descriptions of each variable in the interview data dictionary for a list of component variables.

Variable	Description
FSMPFRMX, FSMPFRXM	Amount of income or loss received from self-employment income
FGOVRETX, FGOVRETM	Amount of government retirement deducted from last pay, annualized for all CU members
FINATXEM	Amount of CU income after taxes (Estimated)
FINCBTAX, FINCBTXM	Amount of CU income before taxes
FINDRETX	Amount of money placed in individual retirement plan
FJSSDEDX, FJSSDEDM	Estimated amount of annual Social Security contribution
FPRIPENX, FPRIPENM	Amount of private pension fund deducted from last pay, annualized for all CU members
FRRDEDX, FRRDEDM	Amount of Railroad Retirement deducted from last pay, annualized for all CU members
FSALARYX, FSALARYM	Amount received from wage and salary income before deductions
NONINCMX	Amount of other money receipts excluded from family income
TOTXEST	Amount of personal taxes paid (Estimated)

Example of indirectly topcoded variable

Here are some examples of indirect topcoding. The value for the variable FSMPFRMX (family income or loss from self-employment) is computed as the sum of the values reported for the variable SEMPFRMX (member income or loss from self-employment) from the MEMI file. SEMPFRMX is subject to topcoding beyond the critical value of $150,000 (-$170,000). The topcode value for SEMPFRMX is $321,846 (-$435,000). See MEMBER CHARACTERISTICS AND INCOME FILE (MEMI).

		SEMPFRMX		*FSMPFRMX*	
			AFTER		**FLAGGED AS**
CU		**REPORTED**	**TOPCODING**	**VALUE**	**TOPCODED?**
CU 1:	Member 1	$95,000	$95,000	170,000	No
	Member 2	75,000	75,000		
CU 2:	Member 1	160,000	321,846	331,846	Yes
	Member 2	10,000	10,000		
CU 3:	Member 1	450,000	321,846	643,692	Yes
	Member 2	350,000	321,846		
CU 4:	Member 1	300,000	321,846	-113,154	Yes
	Member 2	-200,000	-435,000		

While CUs 1 and 2 each originally report $100,000 in FSMPFRMX, topcoding is done only on the value reported by MEMI1 of CU2. Thus, the value for FSMPFRMX for CU2 is higher than for CU1 and is flagged as topcoded while CU1 is not. By using the mean of the subset of observations that are above (below) the critical value as the topcode amount, values on the public use data can be either below or above the actual reported value. Note that while CU3 has a topcoded value lower than the reported value, CU2's topcoded SFMFRMX value ($331,846) is higher than the amount that it reported ($170,000). The case of CU4 demonstrates that the reported value for FSMPFRMX can be positive, while the topcoded value can be negative. The reverse can also occur.

B. Member Characteristics and Income File (MEMI)

1. Direct topcoding

The following table lists the MEMI file variables that are subject to topcoding. The table also shows the critical values and topcode values associated with each variable listed. For multiple imputed income variables, it is possible for an upper topcode value to be less than the upper critical value or for a lower topcode value to be greater than the lower critical value.

Variable	Description	Upper Critical Value	Lower Critical Value	Upper Topcode Value	Lower Topcode Value
AGE	Age of member	82	.	87	.
ANFEDTX	Annual amount federal tax deducted from pay	.	.	.	.
ANFEDTXM	Annual amount federal tax deducted from pay	.	.	.	.
ANGOVRTM	Annual amount government retirement	9,091	.	11,045	.
ANGOVRTX	Annual amount government retirement	9,091	.	10,999	.
ANPRVPNM	Annual amount private pensions	22,498	.	33,827	.
ANPRVPNX	Annual amount private pensions	22,498	.	33,402	.
ANRRDEDM	Annual amount Railroad retirement	7,969	.	16,251	.
ANRRDEDX	Annual amount Railroad retirement	7,969	.	18,282	.
ANSLTX	Annual amount state and local income tax	.	.	.	.
ANSLTXM	Annual amount state and local income tax	.	.	.	.
GOVRETX	Government retirement deducted from last pay	2,700	.	12,019	.
GROSPAYX	Amount of last gross pay	7,083	.	19,137	.
INDRETX	Self-employment retirement plan contributions	45,000	.	85,562	.
JSSDEDX	Estimated annual Social Security contribution	9,957	.	15,557	.
JSSDEDXM	Estimated annual Social Security contribution	9,957	.	11,600	.
PRIVPENX	Private pension deducted from last pay	5,000	.	61,517	.

RRRDEDX	Railroad retirement deducted from last pay	472	.	12,975	.
SALARYX	Wage and salary income received before deductions	150,000	.	253,182	.
SALARYXM	Wage and salary income received before deductions	150,000	.	212,148	.
SEMPFRMM	AMT OF SELF EMPLOYMENT INCOME OR LOSS	200,000	(35,000)	165,120	(23,297)
SEMPFRMX	AMT OF SELF EMPLOYMENT INCOME OR LOSS	200,000	(35,000)	322,837	(114,667)
SLFEMPSM	Self-employment Social Security contribution	21,944	.	15,579	.
SLFEMPSS	Self-employment Social Security contribution	21,944	.	25,722	.

2. Special suppression for MEMI file variables

In some scenarios it is possible to deduce revealing information because it is built into a formula. For example, the five MEMI file variables -- AMTFED, GOVRETX, PRIVPENX, RRRDEDX, and SLTAXX -- describe deductions from the most recent pay. These variables are used in conjunction with GROSPAYX (amount of last gross pay) and SALARYXM (annual wage and salary income) to derive ANFEDTX, ANGOVRTX, ANPRVPNX, ANRRDEDX, and ANSLTX, which represent the estimated annual deductions for each of these income deduction categories. The estimated annual Federal income tax deduction from pay is calculated as

$$(1) \quad \text{ANFEDTXM} = (\text{SALARYXM} (\text{AMTFED}/\text{GROSPAYX})).$$

SALARYXM can be estimated by using the above terms and rearranging such that

$$(2) \quad \text{SALARYXM} = (\text{ANFEDTXM} (\text{GROSPAYX}/\text{AMTFED})).$$

In the above example, a problem with disclosure may arise when neither ANFEDTXM, GROSPAYX, nor AMTFED are topcoded, *but SALARYXM is*. In this situation, the original value of SALARYXM can be recalculated by inserting the non-topcoded values into equation (2) and solving for SALARYXM. To prevent this, the non-topcoded terms in equation (2) will be suppressed (blanked out) and their associated flags will be assigned a value of 'T'.

The following chart describes the specific rules that CE applies to prevent the potential disclosure outlined above.

If SALARYXM is greater than the critical value but ANFEDTXM, GROSPAYX, and AMTFED are not, then the values for ANFEDTXM, GROSPAYX, and AMTFED are suppressed and their flag variables are assigned a value of 'T.'

If SALARYXM is greater than the critical value but ANGOVRTM, GROSPAYX, and GOVRETX are not, then the values for ANGOVRTM, GROSPAYX, and GOVRETX are suppressed and their flag variables are assigned a value of 'T.'

If SALARYXM is greater than the critical value but ANPRVPNM, GROSPAYX, and PRIVPENX are not, then the values for ANPRVPNM, GROSPAYX, and PRIVPENX are suppressed and their flag variables are assigned a value of 'T.'

If SALARYXM is greater than the critical value but ANRRDEDM, GROSPAYX, and RRRDEDX are not, then the values for ANRRDEDM, GROSPAYX, and RRRDEDX are suppressed and their flag variables are assigned a value of 'T.'

If SALARYXM is greater than the critical value but ANSLTXM, GROSPAYX, and SLTAXX are not, then the values for ANSLTXM, GROSPAYX, and SLTAXX are suppressed and their flag variables are assigned a value of 'T.'

The same special suppression for MEMI file variables occurs with the original (pre-income imputation) variables that correspond to the variables noted above (SALARYX, ANFEDTX).

C. Monthly Expenditure File (MTBI)

The MTBI variable COST is subject to topcoding for some UCCs. The COST variable is not topcoded by the conventional method of replacement with a topcode value. First, variables are topcoded in the EXPN files. Then those variables are mapped to their appropriate UCC. If the variable was topcoded in the EXPN files, then the associated UCC will have a topcoded COST value, and the value of COST_ is set to 'T.' All the EXPN variables that are topcoded are listed in the EXPN section. To obtain the concordance file that lists what EXPN variables are mapped to which UCC, please contact the Consumer Expenditure Survey via the phone number or email address listed on the last page of this documentation.

Note: For some UCCs, multiple topcode values should be expected based on where the original value is mapped from.

D. Income File (ITBI)

The ITBI variable COST is subject to topcoding for some UCCs. CE does not use the conventional method but topcodes the variable COST with three steps:

1. Topcode variables in the FMLI files.
2. Map topcoded variables to their appropriate UCC.
3. If the variable was topcoded in the FMLI files, the associated UCC will have a topcoded COST value and the value of COST_ is set to 'T.'

All topcoded FMLI variables are listed in [FMLI section](#) of this documentation. To obtain the concordance file that lists what FMLI variables are mapped to which UCC, contact the Consumer Expenditure Survey.

Note: For some UCCs, multiple topcode values should be expected based on where the original value is mapped from.

E. Detailed Expenditure Files (EXPN)

CE topcodes the below EXPN file variables. The table also lists the critical values, the associated topcoded values, and the conditions that determine if CE topcodes a variable.

Variable	Description	Condition	Upper Critical Value	Lower Critical Value	Upper Topcode Value	Lower Topcode Value
ADVMATX	Since the 1st of (month, three months ago), excluding the current month, what was the total cost of materials and supplies purchased for jobs not yet started?	NA	7,020	.	16,000	.
DISPX	What was the selling price (trade-in value)?	OWNYD EQ '100' OR OWNYD EQ '200'	465,000	.	601,000	.
DISPX	What was the selling price (trade-in value)?	OWNYD EQ '300'	137,000	.	257,500	.
DISPX	What was the selling price (trade-in value)?	OWNYD EQ '400' OR OWNYD EQ '500'	47,500	.	214,250	.

INTCHGX	Cable/Satellite - cont expnesnse	INTSERV EQ '100' AND INTMO EQ '13'	240	.	308	.
INTCHGX	Cable/Satellite	INTSERV EQ '100' AND INTMO NE '13'	255	.	344	.
INTCHGX	Internet services - cont expenses	INTSERV EQ '200' AND INTMO EQ '13'	140	.	180	.
INTCHGX	Internet services	INTSERV EQ '200' AND INTMO NE '13'	200	.	259	.
JCPIRE1X	CPI quarterly rental equivalence adjusted for ownership percentage	OWNYI EQ '100'	10,500	.	15,620	.
JCPIRE1X	CPI quarterly rental equivalence adjusted for ownership percentage	OWNYI EQ '300'	14,400	.	28,348	.
JCPIRE2X	CPI quarterly rental equivalence adjusted for ownership percentage	OWNYI EQ '300'	1,000	.	7,021	.
JCPIRE3X	CPI quarterly rental equivalence adjusted for ownership percentage	OWNYI EQ '300'	3,600	.	8,157	.
JEDUCNET	Net amount paid for educational expenses (housing) - cont expn	EDUC_AY EQ '310' AND EDMONTHA EQ '13'	1,795	.	4,239	.
JEDUCNET	Net amount paid for educational expenses (housing)	EDUC_AY EQ '310' AND EDMONTHA NE '13'	6,500	.	7,867	.
JFEETOTX	JX1FETOT Repayment of loans owned by cooperative, regular fee	REGFEECR EQ '01000' AND (OWNYI EQ '100' OR OWNYI EQ '200')	27	.	225	.
JFEETOTX	JX1FETOT Repayment of loans owned by cooperative, regular fee	REGFEECR EQ '01000' AND (OWNYI EQ '300')	.	.	.	.

JFEETOTX	JX1FETOT Repayment of loans owned by cooperative, regular fee	REGFEECR EQ '01000' AND (OWNYI EQ '400' OR OWNYI EQ '500')	.	.	.	.
JFEETOTX	JX2FETOT Payment for medical services in retirement community, regular fee	REGFEECR EQ '29000'	.	.	.	.
JLABOR1X	LANDSCAP/OUTDOOR BUILDING REPAIR/PAINTING	('140'<=CRMCODEB AND CRMCODEB<= '190')	24,000	.	60,440	.
JLABOR1X	PLUMBING/ELECTRICAL/HEAT/AC	('200'<=CRMCODEB AND CRMCODEB<= '220')	10,000	.	13,125	.
JLABOR1X	FLOORING/CARPETING	('230'<=CRMCODEB AND CRMCODEB<= '232')	.	.	.	.
JLABOR1X	INSULATION, ROOFING, SIDING, MASONRY, WINDOWS	('240'<=CRMCODEB AND CRMCODEB<= '290')	12,800	.	17,278	.
JLABOR1X	CONST AND ADDITIONS	(CRMCODEB='100' | CRMCODEB='110')	20,000	.	44,333	.
JLABOR1X	ROOM FINISHING/REMODELING	(CRMCODEB='120' | CRMCODEB='130')	20,000	.	34,139	.
JLABOR1X	OTHER REPAIR AND COMBINED CODES	(CRMCODEB='300' | CRMCODEB='310')	11,810	.	17,833	.
JLABOR2X	LANDSCAP/OUTDOOR BUILDING REPAIR/PAINTING	('140'<=CRMCODEB AND CRMCODEB<= '190')	22,000	.	39,333	.
JLABOR2X	PLUMBING/ELECTRICAL/HEAT/AC	('200'<=CRMCODEB AND CRMCODEB<= '220')	9,300	.	10,367	.

JLABOR2X	FLOORING/CARPETING	('230'<=CRMCODEB AND CRMCODEB<='232')	.	.	.	.
JLABOR2X	INSULATION, ROOFING, SIDING, MASONRY, WINDOWS	('240'<=CRMCODEB AND CRMCODEB<='290')	15,172	.	25,000	.
JLABOR2X	CONST AND ADDITIONS	(CRMCODEB='100' | CRMCODEB='110')	25,800	.	41,150	.
JLABOR2X	ROOM FINISHING/REMODELING	(CRMCODEB='120' | CRMCODEB='130')	21,000	.	49,800	.
JLABOR2X	OTHER REPAIR AND COMBINED CODES	(CRMCODEB='300' | CRMCODEB='310')	7,793	.	18,603	.
JLABOR3X	LANDSCAP/OUTDOOR BUILDING REPAIR/PAINTING	('140'<=CRMCODEB AND CRMCODEB<='190')	16,000	.	36,681	.
JLABOR3X	PLUMBING/ELECTRICAL/HEAT/AC	('200'<=CRMCODEB AND CRMCODEB<='220')	11,304	.	13,723	.
JLABOR3X	FLOORING/CARPETING	('230'<=CRMCODEB AND CRMCODEB<='232')	.	.	.	.
JLABOR3X	INSULATION, ROOFING, SIDING, MASONRY, WINDOWS	('240'<=CRMCODEB AND CRMCODEB<='290')	14,535	.	16,750	.
JLABOR3X	CONST AND ADDITIONS	(CRMCODEB='100' | CRMCODEB='110')	26,000	.	62,667	.
JLABOR3X	ROOM FINISHING/REMODELING	(CRMCODEB='120' | CRMCODEB='130')	26,999	.	43,522	.
JLABOR3X	OTHER REPAIR AND COMBINED CODES	(CRMCODEB='300' | CRMCODEB='310')	20,000	.	31,000	.

JLCPRINX	Estimated amount of principal paid on home equity loan during reference period	OWNYH EQ '100' OR OWNYH EQ '200'	5,516	(1,513)	19,388	(5,949)
JLCPRINX	Estimated amount of principal paid on home equity loan during reference period	OWNYH EQ '300'	4,550	-	5,534	(1,183)
JLCPRINX	Estimated amount of principal paid on home equity loan during reference period	OWNYH EQ '400' OR OWNYH EQ '500'	.	.	.	.
JRNTEQ2X	Monthly rental equivalence of owned home	NA	6,400	.	19,250	.
JRNTEQ3X	Monthly rental equivalence of owned home	NA	32,500	.	50,400	.
LDGCOSTX	Cost for hotels, motels, cottages, trailer camps, or other lodging including taxes and tips	NA	2,245	.	3,925	.
MEDPMTX	Eye examinations, treatment, or surgery	MEDPCARY EQ '110'	540	.	1,625	.
MEDPMTX	Dental care	MEDPCARY EQ '200'	2,000	.	3,976	.
MEDPMTX	Hospital room or hospital services	MEDPCARY EQ '330'	3,000	.	7,750	.
MEDPMTX	Services by medical professionals other than physician	MEDPCARY EQ '410'	750	.	1,606	.
MEDPMTX	Physician services	MEDPCARY EQ '420'	618	.	1,578	.
MEDPMTX	Lab tests or x-rays	MEDPCARY EQ '510'	800	.	2,508	.
MEDPMTX	Care in convalescent or nursing home	MEDPCARY EQ '520'	5,735	.	12,356	.
MEDPMTX	Other medical care	MEDPCARY EQ '530'	1,233	.	6,272	.
MEDPMTX	Rental of supportive or convalescent equipment	MEDPCARY EQ '630'	.	.	.	.

MEDPMTX	Purchase of supportive or convalescent equipment	MEDPCARY EQ '640'	.	.	.	.
MEDPMTX	Rental of medical or surgical equipment for general use	MEDPCARY EQ '650'	.	.	.	.
MEDPMTX	Purchase of medical or surgical equipment for general use	MEDPCARY EQ '660'	.	.	.	.
MEDRMBX	Eye examinations, treatment, or surgery	MEDRCARY EQ '110'	400	.	768	.
MEDRMBX	Dental care	MEDRCARY EQ '200'	2,200	.	5,175	.
MEDRMBX	Hospital room or hospital services	MEDRCARY EQ '330'	1,800	.	5,667	.
MEDRMBX	Services by medical professionals other than physician	MEDRCARY EQ '410'	840	.	1,743	.
MEDRMBX	Physician services	MEDRCARY EQ '420'	1,000	.	2,819	.
MEDRMBX	Lab tests or x-rays	MEDRCARY EQ '510'	330	.	1,567	.
MEDRMBX	Care in convalescent or nursing home	MEDRCARY EQ '520'	S	.	S	.
MEDRMBX	Other medical care	MEDRCARY EQ '530'	528	.	1,167	.
MEDRMBX	Rental of supportive or convalescent equipment	MEDRCARY EQ '630'	.	.	.	.
MEDRMBX	Purchase of supportive or convalescent equipment	MEDRCARY EQ '640'	.	.	.	.
MEDRMBX	Rental of medical or surgical equipment for general use	MEDRCARY EQ '650'	.	.	.	.
MEDRMBX	Purchase of medical or surgical equipment for general use	MEDRCARY EQ '660'	.	.	.	.
MISCEXPX	Amount of the payment by CU for occupational expenses	MISCCODE EQ '380' AND MISCMO EQ '13'	200	.	466	.
MISCEXPX	Amount of the payment by CU for occupational expenses	MISCCODE EQ '380' AND MISCMO NE '13'	716	.	1,447	.
MRTPMTG	Loan payment	(LOANTYPE EQ '2')	2,100	.	2,475	.

MRTPMTX	Mortgage payment, including escrow	(LOANTYPE EQ '1')	3,682	.	5,606	.
NETPURX	Amount paid for boat with motor	VEHICYB EQ '160'	87,000	.	163,200	.
ORGMRTG	What was the amount of the lump sum home equity loan when you obtained it?	(OWNYG EQ '100' OR OWNYG EQ '200') AND (LOANTYPE EQ '2')	170,000	.	269,315	.
ORGMRTG	What was the amount of the lump sum home equity loan when you obtained it?	(OWNYG EQ '300') AND (LOANTYPE EQ '2')	85,000	.	124,327	.
ORGMRTG	What was the amount of the lump sum home equity loan when you obtained it?	(OWNYG EQ '400' OR OWNYG EQ '500') AND (LOANTYPE EQ '2')	S	.	S	.
ORGMRTX	What was the amount of the mortgage when you obtained it excluding any interest?	(OWNYF EQ '100' OR OWNYF EQ '200') AND (LOANTYPE EQ '1')	420,000	.	595,264	.
ORGMRTX	What was the amount of the mortgage when you obtained it excluding any interest?	(OWNYF EQ '300') AND (LOANTYPE EQ '1')	621,332	.	706,968	.
ORGMRTX	What was the amount of the mortgage when you obtained it excluding any interest?	(OWNYF EQ '400' OR OWNYF EQ '500') AND (LOANTYPE EQ '1')	210,000	.	683,342	.
OWN_PURX	What was the total price paid for the property not including closing costs?	OWNYB EQ '100' OR OWNYB EQ '200'	600,000	.	973,357	.
OWN_PURX	What was the total price paid for the property not including closing costs?	OWNYB EQ '300'	468,000	.	631,667	.
OWN_PURX	What was the total price paid for the property not including closing costs?	OWNYB EQ '400' OR OWNYB EQ '500'	220,000	.	353,333	.

PAYMT1G	Amount of lump sum payment on home equity loan in first month of the reference period	(OWNYG EQ '100' OR OWNYG EQ '200') AND (LOANTYPE EQ '2')	1,200	.	2,120	.
PAYMT1G	Amount of lump sum payment on home equity loan in first month of the reference period	(OWNYG EQ '300') AND (LOANTYPE EQ '2')	-	.	660	.
PAYMT1G	Amount of lump sum payment on home equity loan in first month of the reference period	(OWNYG EQ '400' OR OWNYG EQ '500') AND (LOANTYPE EQ '2')	.	.	.	.
PAYMT1X	Amount of lump sum payment on mortgage in first month of the reference period	(OWNYF EQ '100' OR OWNYF EQ '200') AND (LOANTYPE EQ '1')	4,113	.	5,842	.
PAYMT1X	Amount of lump sum payment on mortgage in first month of the reference period	(OWNYF EQ '300') AND (LOANTYPE EQ '1')	1,500	.	3,944	.
PAYMT1X	Amount of lump sum payment on mortgage in first month of the reference period	(OWNYF EQ '400' OR OWNYF EQ '500') AND (LOANTYPE EQ '1')	S	.	S	.
PAYMT2G	Amount of lump sum payment on home equity loan in second month of the reference period	(OWNYG EQ '100' OR OWNYG EQ '200') AND (LOANTYPE EQ '2')	1,200	.	2,120	.
PAYMT2G	Amount of lump sum payment on home equity loan in second month of the reference period	(OWNYG EQ '300') AND (LOANTYPE EQ '2')	500	.	775	.

PAYMT2G	Amount of lump sum payment on home equity loan in second month of the reference period	(OWNYG EQ '400' OR OWNYG EQ '500') AND (LOANTYPE EQ '2')	.	.	.	.
PAYMT2X	Amount of lump sum payment on mortgage in second month of the reference period	(OWNYF EQ '100' OR OWNYF EQ '200') AND (LOANTYPE EQ '1')	4,113	.	5,863	.
PAYMT2X	Amount of lump sum payment on mortgage in second month of the reference period	(OWNYF EQ '300') AND (LOANTYPE EQ '1')	1,200	.	3,944	.
PAYMT2X	Amount of lump sum payment on mortgage in second month of the reference period	(OWNYF EQ '400' OR OWNYF EQ '500') AND (LOANTYPE EQ '1')	S	.	S	.
PAYMT3G	Amount of lump sum payment on home equity loan in third month of the reference period	(OWNYG EQ '100' OR OWNYG EQ '200') AND (LOANTYPE EQ '2')	1,200	.	2,120	.
PAYMT3G	Amount of lump sum payment on home equity loan in third month of the reference period	(OWNYG EQ '300') AND (LOANTYPE EQ '2')	500	.	775	.
PAYMT3G	Amount of lump sum payment on home equity loan in third month of the reference period	(OWNYG EQ '400' OR OWNYG EQ '500') AND (LOANTYPE EQ '2')	.	.	.	.
PAYMT3X	Amount of lump sum payment on mortgage in third month of the reference period	(OWNYF EQ '100' OR OWNYF EQ '200') AND (LOANTYPE EQ '1')	4,113	.	5,829	.

PAYMT3X	Amount of lump sum payment on mortgage in third month of the reference period	(OWNYF EQ '300') AND (LOANTYPE EQ '1')	1,200	.	3,944	.
PAYMT3X	Amount of lump sum payment on mortgage in third month of the reference period	(OWNYF EQ '400' OR OWNYF EQ '500') AND (LOANTYPE EQ '1')	S	.	S	.
PROPVALX	About how much do you think this property would sell for on today's market?	OWNYI EQ '100'	850,000	.	1,562,556	.
PROPVALX	About how much do you think this property would sell for on today's market?	OWNYI EQ '200' OR OWNYI EQ '400' OR OWNYI EQ '500'	.	.	.	.
PROPVALX	About how much do you think this property would sell for on today's market?	OWNYI EQ '300'	850,000	.	2,230,303	.
PRPVAL2X	About how much do you think this property would sell for on today's market?	NA	140,000	.	235,714	.
QADCAB1X	Cable/Satellite	NA	200	.	228	.
QADCAB2X	Cable/Satellite	NA	200	.	224	.
QADCAB3X	Cable/Satellite	NA	200	.	224	.
QADFUL1X	PIPED-IN WATER/SEWERAGE 1-2 MONTHS	(UTILY EQ '200' | UTILY EQ '220') AND BLPERIOD IN ('1','2','3','A','B')	.	.	.	.
QADFUL1X	PIPED-IN WATER/SEWERAGE ANNUAL/OTH	(UTILY EQ '200' | UTILY EQ '220') AND BLPERIOD IN ('4','5','F')	.	.	.	.

QADFUL1X	ELECTRICITY 1-2 MONTHS	UTILY EQ '100' AND BLPERIOD IN ('1','2','3','A','B')	500	.	709	.
QADFUL1X	ELECTRICITY ANNUAL/OTH	UTILY EQ '100' AND BLPERIOD IN ('4','5','F')	240	.	920	.
QADFUL1X	NATURAL/UTILITY GAS 1-2 MONTHS	UTILY EQ '110' AND BLPERIOD IN ('1','2','3','A','B')	386	.	521	.
QADFUL1X	NATURAL/UTILITY GAS ANNUAL/OTH	UTILY EQ '110' AND BLPERIOD IN ('4','5','F')	1,000	.	1,398	.
QADFUL1X	FUEL OIL	UTILY EQ '130'	1,486	.	2,267	.
QADFUL1X	BOTTLED OR TANKED GAS	UTILY EQ '150'	1,137	.	1,650	.
QADFUL1X	OTHER FUELS	UTILY EQ '180'	840	.	997	.
QADFUL1X	TRASH/GARBAGE COLL	UTILY EQ '210'	167	.	230	.
QADFUL1X	WATER SOFTENING	UTILY EQ '270'	175	.	239	.
QADFUL1X	SEPTIC TANK CLEANING	UTILY EQ '280'	650	.	2,640	.
QADFUL2X	PIPED-IN WATER/SEWERAGE 1-2 MONTHS	(UTILY EQ '200' | UTILY EQ '220') AND BLPERIOD IN ('1','2','3','A','B')	.	.	.	.
QADFUL2X	PIPED-IN WATER/SEWERAGE ANNUAL/OTH	(UTILY EQ '200' | UTILY EQ '220') AND BLPERIOD IN ('4','5','F')	.	.	.	.
QADFUL2X	ELECTRICITY 1-2 MONTHS	UTILY EQ '100' AND BLPERIOD IN ('1','2','3','A','B')	500	.	674	.
QADFUL2X	ELECTRICITY ANNUAL/OTH	UTILY EQ '100' AND BLPERIOD IN ('4','5','F')	25	.	267	.
QADFUL2X	NATURAL/UTILITY GAS 1-2 MONTHS	UTILY EQ '110' AND BLPERIOD IN ('1','2','3','A','B')	362	.	474	.

QADFUL2X	NATURAL/UTILITY GAS ANNUAL/OTH	UTILY EQ '110' AND BLPERIOD IN ('4','5','F')	475	.	906	.
QADFUL2X	FUEL OIL	UTILY EQ '130'	1,369	.	1,627	.
QADFUL2X	BOTTLED OR TANKED GAS	UTILY EQ '150'	1,033	.	1,474	.
QADFUL2X	OTHER FUELS	UTILY EQ '180'	700	.	1,033	.
QADFUL2X	TRASH/GARBAGE COLL	UTILY EQ '210'	141	.	221	.
QADFUL2X	WATER SOFTENING	UTILY EQ '270'	210	.	290	.
QADFUL2X	SEPTIC TANK CLEANING	UTILY EQ '280'	450	.	700	.
QADFUL3X	PIPED-IN WATER/SEWERAGE 1-2 MONTHS	(UTILY EQ '200' | UTILY EQ '220') AND BLPERIOD IN ('1','2','3','A','B')	.	.	.	.
QADFUL3X	PIPED-IN WATER/SEWERAGE ANNUAL/OTH	(UTILY EQ '200' | UTILY EQ '220') AND BLPERIOD IN ('4','5','F')	.	.	.	.
QADFUL3X	ELECTRICITY 1-2 MONTHS	UTILY EQ '100' AND BLPERIOD IN ('1','2','3','A','B')	500	.	705	.
QADFUL3X	ELECTRICITY ANNUAL/OTH	UTILY EQ '100' AND BLPERIOD IN ('4','5','F')	50	.	219	.
QADFUL3X	NATURAL/UTILITY GAS 1-2 MONTHS	UTILY EQ '110' AND BLPERIOD IN ('1','2','3','A','B')	371	.	507	.
QADFUL3X	NATURAL/UTILITY GAS ANNUAL/OTH	UTILY EQ '110' AND BLPERIOD IN ('4','5','F')	600	.	940	.
QADFUL3X	FUEL OIL	UTILY EQ '130'	2,000	.	3,027	.
QADFUL3X	BOTTLED OR TANKED GAS	UTILY EQ '150'	1,520	.	2,014	.
QADFUL3X	OTHER FUELS	UTILY EQ '180'	726	.	927	.
QADFUL3X	TRASH/GARBAGE COLL	UTILY EQ '210'	169	.	228	.

QADFUL3X	WATER SOFTENING	UTILY EQ '270'	279	.	391	.
QADFUL3X	SEPTIC TANK CLEANING	UTILY EQ '280'	380	.	444	.
QADINE1X	Internet services	NA	180	.	260	.
QADINE2X	Internet services	NA	180	.	251	.
QADINE3X	Internet services	NA	180	.	259	.
QADPSP2X	LANDSCAP/OUTDOOR BUILDING REPAIR/PAINTING	('140'<=CRMCODEB AND CRMCODEB<= '190')	2,500	.	4,167	.
QADPSP2X	PLUMBING/ELECTRICAL/HEAT/AC	('200'<=CRMCODEB AND CRMCODEB<= '220')	1,400	.	2,167	.
QADPSP2X	FLOORING/CARPETING	('230'<=CRMCODEB AND CRMCODEB<= '232')	.	.	.	.
QADPSP2X	INSULATION, ROOFING, SIDING, MASONRY, WINDOWS	('240'<=CRMCODEB AND CRMCODEB<= '290')	1,600	.	2,505	.
QADPSP2X	CONST AND ADDITIONS	(CRMCODEB='100' | CRMCODEB='110')	3,600	.	15,200	.
QADPSP2X	ROOM FINISHING/REMODELING	(CRMCODEB='120' | CRMCODEB='130')	5,100	.	10,290	.
QADPSP2X	OTHER REPAIR AND COMBINED CODES	(CRMCODEB='300' | CRMCODEB='310')	1,500	.	3,433	.
QADPSP3X	LANDSCAP/OUTDOOR BUILDING REPAIR/PAINTING	('140'<=CRMCODEB AND CRMCODEB<= '190')	4,000	.	6,297	.
QADPSP3X	PLUMBING/ELECTRICAL/HEAT/AC	('200'<=CRMCODEB AND CRMCODEB<= '220')	2,000	.	2,753	.
QADPSP3X	FLOORING/CARPETING	('230'<=CRMCODEB AND CRMCODEB<= '232')	.	.	.	.

QADPSP3X	INSULATION, ROOFING, SIDING, MASONRY, WINDOWS	('240'<=CRMCODEB AND CRMCODEB<= '290')	3,568	.	3,967	.
QADPSP3X	CONST AND ADDITIONS	(CRMCODEB=' 100' | CRMCODEB='1 10')	6,300	.	13,200	.
QADPSP3X	ROOM FINISHING/REMODELING	(CRMCODEB=' 120' | CRMCODEB='1 30')	7,937	.	10,334	.
QADPSP3X	OTHER REPAIR AND COMBINED CODES	(CRMCODEB=' 300' | CRMCODEB='3 10')	3,700	.	6,833	.
QADPSPLX	LANDSCAP/OUTDOOR BUILDING REPAIR/PAINTING	('140'<=CRMCODEB AND CRMCODEB<= '190')	2,500	.	3,667	.
QADPSPLX	PLUMBING/ELECTRICAL/HEAT/AC	('200'<=CRMCODEB AND CRMCODEB<= '220')	1,305	.	3,194	.
QADPSPLX	FLOORING/CARPETING	('230'<=CRMCODEB AND CRMCODEB<= '232')	.	.	.	.
QADPSPLX	INSULATION, ROOFING, SIDING, MASONRY, WINDOWS	('240'<=CRMCODEB AND CRMCODEB<= '290')	1,878	.	5,933	.
QADPSPLX	CONST AND ADDITIONS	(CRMCODEB=' 100' | CRMCODEB='1 10')	5,000	.	12,667	.
QADPSPLX	ROOM FINISHING/REMODELING	(CRMCODEB=' 120' | CRMCODEB='1 30')	10,000	.	12,000	.
QADPSPLX	OTHER REPAIR AND COMBINED CODES	(CRMCODEB=' 300' | CRMCODEB='3 10')	2,000	.	3,310	.
QADPTAX	What was the total price paid for the property not including closing costs?	OWNYB EQ '100' OR OWNYB EQ '200'	11,000	.	15,773	.

QADPTAX	What was the total price paid for the property not including closing costs?	OWNYB EQ '300'	8,700	.	13,469	.
QADPTAX	What was the total price paid for the property not including closing costs?	OWNYB EQ '400' OR OWNYB EQ '500'	2,700	.	7,235	.
QADRSP2X	RENTED SUPPLIES FOR CONST/REPAIR/MAINT	NA	140	.	553	.
QADRSP3X	RENTED SUPPLIES FOR CONST/REPAIR/MAINT	NA	223	.	550	.
QADRSPLX	RENTED SUPPLIES FOR CONST/REPAIR/MAINT	NA	490	.	1,883	.
QBLNCM1G	Principal balance outstanding at beginning of month, 3 months ago	('100' LE OWNYG LE '500') AND (LOANTYPE EQ '2')	112,579	.	139,206	.
QBLNCM1X	Principal balance outstanding at beginning of month 3 months ago	('100' LE OWNYF LE '500') AND (LOANTYPE EQ '1')	406,697	.	557,593	.
QBLNCM2G	Principal balance outstanding at beginning of month, 2 months ago	('100' LE OWNYG LE '500') AND (LOANTYPE EQ '2')	111,535	.	138,128	.
QBLNCM2X	Principal balance outstanding at beginning of month 2 months ago	('100' LE OWNYF LE '500') AND (LOANTYPE EQ '1')	406,413	.	557,328	.
QBLNCM3G	Principal balance outstanding at beginning of month, 1 month ago	('100' LE OWNYG LE '500') AND (LOANTYPE EQ '2')	112,465	.	163,675	.
QBLNCM3X	Principal balance outstanding at beginning of month 1 month ago	('100' LE OWNYF LE '500') AND (LOANTYPE EQ '1')	406,127	.	556,942	.

QHI3MCX	Dental Insurance	HHICODE EQ '4' AND HHISPECT IN ('1')	1,599	.	3,109	.
QHI3MCX	Vision Insurance	HHICODE EQ '4' AND HHISPECT IN ('2')	1,000	.	1,346	.
QHI3MCX	PrscrpDrug/Other/DK	HHICODE EQ '4' AND HHISPECT IN ('3','4','5','6','B',' F','G')	5,460	.	8,900	.
QHI3MCX	Health Insurance HMO/FFS/MEDSUP, COV<= 1, INDIVIDUAL	HHICODE NE '4' AND HHICOVQ <= 1 AND HHIGROUP IN ('1')	4,140	.	7,076	.
QHI3MCX	Health Insurance HMO/FFS/MEDSUP, COV<= 1, GROUP	HHICODE NE '4' AND HHICOVQ <= 1 AND HHIGROUP IN ('2' '3')	4,020	.	7,664	.
QHI3MCX	Health Insurance HMO/FFS/MEDSUP, COV> 1, INDIVIDUAL	HHICODE NE '4' AND HHICOVQ > 1 AND HHIGROUP IN ('1')	9,900	.	13,835	.
QHI3MCX	Health Insurance HMO/FFS/MEDSUP, COV> 1, GROUP	HHICODE NE '4' AND HHICOVQ > 1 AND HHIGROUP IN ('2' '3')	6,403	.	10,284	.
QLMPSUMX	Amount paid for mortgage in special or lump sum payments during reference period	OWNYI EQ '100' OR OWNYI EQ '200'	6,000	.	34,022	.
QLMPSUMX	Amount paid for mortgage in special or lump sum payments during reference period	OWNYI EQ '300'	4,000	.	35,333	.

QLMPSUMX	Amount paid for mortgage in special or lump sum payments during reference period	OWNYI EQ '400' OR OWNYI EQ '500'	35	.	16,833	.
QLR3MCMX	Amount paid for ground or land rent, adjusted for business	OWNYI EQ '100' OR OWNYI EQ '200'	3,388	.	17,590	.
QLR3MCMX	Amount paid for ground or land rent, adjusted for business	OWNYI EQ '300'	2,600	.	12,885	.
QPRINM1G	Amount of principal paid during first month of reference period	(OWNYG EQ '100' OR OWNYG EQ '200') AND (LOANTYPE EQ '2')	1,183	.	1,569	.
QPRINM1G	Amount of principal paid during first month of reference period	(OWNYG EQ '300') AND (LOANTYPE EQ '2')	1,518	.	1,593	.
QPRINM1G	Amount of principal paid during first month of reference period	(OWNYG EQ '400' OR OWNYG EQ '500') AND (LOANTYPE EQ '2')	S	.	S	.
QPRINM1X	Amount of principal paid during first month of reference period	(OWNYF EQ '100' OR OWNYF EQ '200') AND (LOANTYPE EQ '1')	1,157	.	1,662	.
QPRINM1X	Amount of principal paid during first month of reference period	(OWNYF EQ '300') AND (LOANTYPE EQ '1')	1,255	.	1,793	.
QPRINM1X	Amount of principal paid during first month of reference period	(OWNYF EQ '400' OR OWNYF EQ '500') AND (LOANTYPE EQ '1')	1,231	.	2,014	.
QPRINM2G	Amount of principal paid during second month of reference period	(OWNYG EQ '100' OR OWNYG EQ '200') AND (LOANTYPE EQ '2')	1,191	.	1,577	.

QPRINM2G	Amount of principal paid during second month of reference period	(OWNYG EQ '300') AND (LOANTYPE EQ '2')	1,529	.	1,605	.
QPRINM2G	Amount of principal paid during second month of reference period	(OWNYG EQ '400' OR OWNYG EQ '500') AND (LOANTYPE EQ '2')	S	.	S	.
QPRINM2X	Amount of principal paid during second month of reference period	(OWNYF EQ '100' OR OWNYF EQ '200') AND (LOANTYPE EQ '1')	1,151	.	1,651	.
QPRINM2X	Amount of principal paid during second month of reference period	(OWNYF EQ '300') AND (LOANTYPE EQ '1')	1,260	.	1,803	.
QPRINM2X	Amount of principal paid during second month of reference period	(OWNYF EQ '400' OR OWNYF EQ '500') AND (LOANTYPE EQ '1')	1,239	.	2,021	.
QPRINM3G	Amount of principal paid during third month of reference period	(OWNYG EQ '100' OR OWNYG EQ '200') AND (LOANTYPE EQ '2')	1,196	.	1,642	.
QPRINM3G	Amount of principal paid during third month of reference period	(OWNYG EQ '300') AND (LOANTYPE EQ '2')	1,540	.	1,616	.
QPRINM3G	Amount of principal paid during third month of reference period	(OWNYG EQ '400' OR OWNYG EQ '500') AND (LOANTYPE EQ '2')	.	.	.	.
QPRINM3X	Amount of principal paid during third month of reference period	(OWNYF EQ '100' OR OWNYF EQ '200') AND (LOANTYPE EQ '1')	1,154	.	1,656	.

QPRINM3X	Amount of principal paid during third month of reference period	(OWNYF EQ '300') AND (LOANTYPE EQ '1')	1,250	.	1,794	.
QPRINM3X	Amount of principal paid during third month of reference period	(OWNYF EQ '400' OR OWNYF EQ '500') AND (LOANTYPE EQ '1')	1,247	.	2,028	.
QRT3MCMX	Rental payments made in reference period adjusted for business and rooms rented to others	NA	6,600	.	9,567	.
QSPCLX	QX1SPCL Repayment of loans owned by cooperative, special payment	SPFEECR EQ '01000'	.	.	.	.
QSPCLX	QX2SPCL Payment for medical service in retirement community, special payment	SPFEECR EQ '29000'	.	.	.	.
RNTEQVX	Monthly rental equivalence of owned home	OWNYI EQ '100'	3,500	.	5,199	.
RNTEQVX	Monthly rental equivalence of owned home	OWNYI EQ '300'	5,000	.	10,528	.
SALEX	How much did you sell it for?	VEHICYC EQ '160'	9,000	.	25,500	.
TELCEL1X	Cell phone service	NA	400	.	511	.
TELCEL2X	Cell phone service	NA	400	.	516	.
TELCEL3X	Cell phone service	NA	400	.	523	.
TELRES1X	Residential phone service	NA	280	.	330	.
TELRES2X	Residential phone service	NA	279	.	325	.
TELRES3X	Residential phone service	NA	280	.	379	.
TOTOWED	Estimated amount of principal paid on home equity loan during reference period	OWNYH EQ '100' OR OWNYH EQ '200'	219,899	.	363,919	.

Variable	Description				
TOTOWED	Estimated amount of principal paid on home equity loan during reference period	OWNYH EQ '300'	350,000	.	396,000	.
TOTOWED	Estimated amount of principal paid on home equity loan during reference period	OWNYH EQ '400' OR OWNYH EQ '500'	.	.	.	.
TOTYUPDX	Amount of (lodging) expense not covered by a business, employer, or other non-CU member (for trips funded by non-CU member)	TOTYUPDY EQ '130'	1,761	.	3,536	.
TRNONCUX	Amount of the (lodging) expense paid for non CU member	TRNONCUY EQ '130'	2,226	.	4,025	.

III. Diary Survey

A. CU Characteristics and Income File (FMLD)

1. Directly topcoded

The following table shows the FMLD file variables that are subject to topcoding and their associated critical values and topcode values. For multiple imputed income variables, it is possible for an upper topcode value to be less than the upper critical value or for a lower topcode value to be greater than the lower critical value.

Variable	Description	Upper Critical Value	Lower Critical Value	Upper Topcode Value	Lower Topcode Value
ADDFEDX	Amount of Federal income tax paid in addition to that withheld	35,000	.	62,843	.
ADDOTHX	Amount of other taxes paid during the past 12 months	8,000	.	35,333	.

ADDSTAX	State and local tax paid in addition to that withheld	9,500	.	22,044	.
FEDREFX	Amount of refund received from Federal income tax	8,999	.	11,736	.
INTRDVX	AMT RECEIVED IN INTEREST LAST 12 MNTHS	40,000	.	105,481	.
INTRDVXM	AMT RECEIVED IN INTEREST LAST 12 MNTHS	40,000	.	65,597	.
LUMPX	Amount of lump sum receipts	130,000	.	247,857	.
NETRENTM	NET RENTAL INCOME OR LOSS	56,400	(14,600)	78,045	(13,998)
NETRENTX	NET RENTAL INCOME OR LOSS	56,400	(14,600)	104,167	(24,000)
OCCEXPNX	Amount of payment by CU for occupational expenses	8,000	.	23,525	.
OTHINX	Amount received in other money income	37,000	.	128,787	.
OTHINXM	Amount received in other money income	37,000	.	82,036	.
OTHREGX	AMT INCOME FROM OTHER SOURCES	37,000	.	43,047	.
OTHREGXM	AMT INCOME FROM OTHER SOURCES	37,000	.	30,753	.
RETSURVM	AMT INCOME FROM RET SURVIVOR DISABILITY	75,900	.	64,498	.
RETSURVX	AMT INCOME FROM RET SURVIVOR DISABILITY	75,900	.	92,036	.
ROYESTX	AMT INCOME FROM ROYALTY OR ESTATES AND TRUSTS	200,000	.	516,667	.

ROYESTXM	AMT INCOME FROM ROYALTY OR ESTATES AND TRUSTS	200,000	.	379,878	.
STATREFX	Refund received from state and local income tax	2,500	.	4,223	.

2. Indirectly topcoded

Some income variables that are subject to topcoding are constructed by summing up the values of "lower level" component variables from the MEMD or FMLD. These variables are not topcoded by the conventional method of replacement with a topcode value. Instead the variables' components are summed normally and the variables are flagged as topcoded if one of their component variables is topcoded.

Following are the income variables that are calculated using values of their component variables. See the descriptions of each variable in the diary data dictionary for a list of component variables.

Variable	Description
FSMPFRXM FSMPFRX1-5 FSMPFRMX	Amount of income received from self-employment income
FGVXM, FGVX1-5 FGVX	Amount of government retirement deducted from last pay, annualized for all CU members
FINCBEFM FINCBEF1-5 FINCBEFX	Amount of CU income before taxes
FIRAX	Amount of money placed in individual retirement plan
FJSSDEDM FJSSDED1-5 FJSSDEDX	Estimated amount of annual Social Security contribution
FPVTXM FPVTX	Amount of private pension fund deducted from last pay, annualized for all CU members

Variable	Description
FRRXM FRRX	Amount of Railroad Retirement deducted from last pay, annualized for all CU members
FSTATXXM FSTATXX1-5 FSTATXX	Amount of State and local income taxes deducted from last pay, annualized for all CU members
FWAGEXM FWAGEX1-5 FWAGEX	Amount received from wage and salary income before deduction
OTHRECX	Amount of other money receipts excluded from family income

For examples see the Interview Survey examples.

B. Member Characteristics and Income File (MEMD)

The following table lists MEMD file variables that are subject to topcoding. The table also shows the critical values and topcode values associated with each variable listed. For multiple imputed income variables, it is possible for an upper topcode value to be less than the upper critical value or for a lower topcode value to be greater than the lower critical value.

Variable	Description	Upper Critical Value	Lower Critical Value	Upper Topcode Value	Lower Topcode Value
AGE	Age of member	82	.	86.90	.
ANFEDTXM	Annual amount federal tax deducted from pay	25,000	.	40,480.03	.
ANFEDTXX	Annual amount federal tax deducted from pay	25,000	.	41,222.47	.
ANGVX	Annual amount government retirement	9,091	.	12,235.62	.
ANGVXM	Annual amount government retirement	9,091	.	12,367.15	.
ANPVTX	Annual amount private pensions	22,498	.	33,818.78	.

Code	Description				
ANPVTXM	Annual amount private pensions	22,498	.	34,266.63	.
ANRRX	Annual amount Railroad retirement	-	.	6,453.33	.
ANRRXM	Annual amount Railroad retirement	-	.	6,453.33	.
ANSTATXM	Annual amount state and local income tax	7,948	.	11,475.75	.
ANSTATXX	Annual amount state and local income tax	7,948	.	11,475.75	.
FEDTXX	Amount of federal tax deducted from last pay	1,100	.	2,309.29	.
GROSPAYX	Amount of last gross pay	7,083	.	15,932.83	.
GVX	Government retirement deducted from last pay	2,700	.	9,616.67	.
IRAX	Self-employment retirement plan contributions	45,000	.	103,142.86	.
JSSDEDX	Estimated annual Social Security contribution	9,957	.	15,085.60	.
JSSDEDXM	Estimated annual Social Security contribution	9,957	.	11,604.75	.
PVTX	Private pension deducted from last pay	5,000	.	11,576.00	.
RRX	Railroad retirement deducted from last pay	.	.	.	.
SEMPFRMM	AMT OF SELF EMPLOYMENT INCOME OR LOSS	150,000	-15000	172,374.03	-9214.5
SEMPFRMX	AMT OF SELF EMPLOYMENT INCOME OR LOSS	150,000	-15000	466,555.56	-48000
SLFEMPSM	Self-employment Social Security contribution	21,944	.	28,951.42	.
SLFEMPSS	Self-employment Social Security contribution	21,944	.	30,850.05	.

STATXX	State and local income tax deducted last pay	329	.	745.09	.
WAGEX	Wage and salary income received before deductions	150,000	.	225,513.74	.
WAGEXM	Wage and salary income received before deductions	150,000	.	188,882.81	.

Special suppression for MEMD file variables

The five MEMD file variables—FEDTXX, GVX, PVTX, RRX, and STATXX—describe deductions from the most recent pay. These variables are used in conjunction with GROSPAYX (amount of last gross pay) and WAGEXM (annual wage and salary income) to derive ANFEDTXM, ANGVXM, ANPVTXM, ANRRXM, and ANSTATXM, which represent the estimated annual deductions for each of these income deduction categories. For example, the estimated annual Federal income tax deduction from pay is calculated as

$$(1) \quad ANFEDTXM = (WAGEXM \ (FEDTXX/GROSPAYX)).$$

Note that WAGEX can be estimated by using the above terms and rearranging such that

$$(2) \quad WAGEXM = (ANFEDTXM \ (GROSPAYX/FEDTXX)).$$

In the above example, a problem with disclosure may arise when neither ANFEDTXM, GROSPAYX, nor FEDTXX (calculation components) are topcoded, *but WAGEXM is.* In this situation WAGEXM can be recalculated to obtain its original value by inserting the non-topcoded values into equation (2) and solving it. In order to prevent this, the non-topcoded terms in equation (2) will be suppressed (blanked out) and their associated flags will be assigned a value of 'T.'

The following chart describes in detail the specific rules that are applied to prevent the potential disclosure outlined above.

- If WAGEXM is greater than the critical value but ANFEDTXM, GROSPAYX, and FEDTXX are not, then the values for ANFEDTXM, GROSPAYX, and FEDTXX are suppressed and their flag variables are assigned a value of 'T.'

- If WAGEXM is greater than the critical value but ANGVXM, GROSPAYX, and GVX are not, then the values for ANGVXM, GROSPAYX, and GVX are suppressed and their flag variables assigned a value of 'T.'
- If WAGEXM is greater than the critical value but ANPVTXM, GROSPAYX, and PVTX are not, then the values for ANPVTXM, GROSPAYX, and PVTX are suppressed and their flag variables assigned a value of 'T.'
- If WAGEXM is greater than the critical value but ANRRXM, GROSPAYX, and RRX are not, then the values for ANRRXM, GROSPAYX, and RRX are suppressed and their flag variables assigned a value of 'T.'
- If WAGEXM is greater than the critical value but ANSTATXM, GROSPAYX, and STATXX are not, then the values for ANSTATXM, GROSPAYX, and STATXX are suppressed and their flag variables assigned a value of 'T.'

The same special suppression for MEMD file variables occurs with the original (pre-income imputation) variables that correspond to the variables noted above (WAGEX, ANFEDTXX, etc.).

C. Detailed Expenditure File (EXPD)

The following table lists UCCs for which the EXPD variable COST is subject to topcoding as well as their associated critical values and topcode values (rounded to the nearest dollar). If the value of COST is greater (less) than the designated critical values for the above UCCs, COST is set to the topcode value and the associated flag variable, COST_, is set to 'T.'

Variable	Description	2015 Upper Critical Value	2015 Lower Critical Value	2015 Upper Topcode Value	2015 Lower Topcode Value
001000	Purchase price of stocks, bonds, mutual funds	494.89	.	2,360.35	.
009000	Mortgage payment including coop	2,738.20	.	3,490.44	.
210110	Rent of dwelling	2,271.19	.	3,261.61	.
210210	Lodging away from home	635.40	.	880.17	.
210310	Housing for someone at school	418.28	.	1,893.02	.
210900	Ground rent	.	.	.	.
220400	Purchase of property	-	.	27,758.61	.
550320	Purchase of medical equipment for general use	98.00	.	138.73	.

550330	Purchase of supportive/convalescent medical equipment	94.83	.	1,125.82	.
560110	Physicians' services	255.74	.	647.17	.
560210	Dental services	1,765.50	.	3,532.88	.
560310	Eyecare services	580.43	.	1,748.21	.
560330	Lab tests, x-rays	218.88	.	272.52	.
560400	Serv by pros oth than physicians	215.04	.	921.14	.
570000	Hospital care, not specified	530.00	.	2,571.36	.
570220	Care in convalescent or nursing home	100.00	.	4,771.90	.
570230	Other medical care service	.	.	.	.
570901	Rental of medical equipment	14.81	.	19.07	.

D. Income File (DTBD)

The DTBD variable AMOUNT is subject to topcoding for some UCCs. The AMOUNT variable is not topcoded by the conventional method of replacement with a topcode value. First, variables are topcoded in the FMLD files. Then those variables are mapped to their appropriate UCC. If the variable was topcoded in the FMLD files, then the associated UCC will have a topcoded AMOUNT value, and the value of AMOUNT_ is set to 'T.' All the FMLD variables that are topcoded are listed in Section IV, A of this documentation. To obtain the concordance file that lists what FMLD variables are mapped to which UCC, please contact the Consumer Expenditure Survey via the phone number or email address listed on the last page of this documentation.

Note: For some UCCs multiple topcode values should be expected based on where the original value is mapped from.