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CRSP US Stock Databases Metadata Guide

for Flat File Format 2.0 (CIZ)

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Chapter 1: Overview

With the CRSP Stock and Index Flat File Format 2.0 (CIZ), CRSP has included ten metadata files. Three schema files contain information about the files, items, and columns of all the files and can help speed up the importing of the ASCII files.

Two files provide easy access to the flag values, descriptions, and definitions used throughout the file rather than having them only in online PDF documents.

Two coverage files contain the results of data profiling done by CRSP that are intended to help provide a more three-dimensional description of the data than a text-only explanation provides.

Two calendar files are intended to improve transparency related to exchange holidays, closures, and ease of use by supplementing and complementing date arithmetic functions with pre-calculated information about the CRSP periods.

The tenth metadata file is helpful for those familiar with the Flat File Format 1.0 (SIZ) files or the CRSPAccess files by providing a mapping between the previous item names and the new item names.

File, Item, and Column (Schema) Information

There are three metadata files that describe the Flat File Format 2.0 (CIZ) files, items, and columns (i.e. schema). These files are MetaFileInfo, MetaItemInfo, and MetaColumnInfo. There are three primary uses for these files:

- For those using the ASCII format files, these files provide the information necessary to create an appropriate database schema or data structure to load the data. For example, is a column an integer, date, string, floating point number, or character string. If a string, what is its maximum width and is it a fixed width field or a variable width field. It should be possible to use these metadata files as input to reduce the time needed for "create table" scripts. In addition, the MetaFileInfo includes information about the columns used to sort the file and uniquely identify a row.
- While the CRSP Stock & Indexes Databases: Flat File 2.0 Guide provides much of the same information, these files allow a user to do more complex searches of the item names, descriptions, and definitions in their tool of choice (SAS, 'R', SQL Server, etc.) to more accurately and quickly identify the columns of interest from more than 500 columns among all the files. These files can also be used to automate report headers or variable labels.
- The Item Category and Item Class along with some columns in the MetaColumnInfo provide useful information about the content of a column to better determine how to use or output the data.

Flag Files

CRSP provides nearly 300 distinct items in more than 400 columns where the value is a flag. The MetaFlagInfo and the MetaFlagType files provide the supporting information about these flags. When the ItemFlagType column in the MetaItemInfo file is not NULL, it contains a Flag Type.

These Flag Types can be looked up in MetaFlagType for information about the type and in MetaFlagInfo to find all the valid Flag Values for this Flag Type. These flags help describe or qualify the entity or value and may be used to subset or group the data in queries.

Some of these flags are self-explanatory. For example, a YES/NO flag with values of 'Y' and 'N' or a data frequency flag of 'A' for Annual, 'Q' for quarterly, 'M' for monthly, and 'D' for daily. Others are less mnemonic and intuitive, and all but the most frequent user of the data will need to look up the flag values to ensure they understand the data. There are three uses of the files:

- While the Flag Value Table on the CRSP website provides much of the same information, these two files allow a user to do more complex searches of the flag values, descriptions, and definitions in their tool of choice (SAS, 'R', SQL Server, etc.) to more accurately and quickly identify the flags of interest out of the nearly 1,000 unique FlagType/FlagValue combinations than is possible from PDF documents or website tables.
- These files may also be used to include flag descriptions into report output to make it more understandable to a reader not familiar with CRSP flags.
- For database administrators or application creators, the Flag Types and/or Flag Values and their corresponding descriptions and definitions can be used to populate selection options (e.g., drop-down menus) in query tools.

Coverage Files

Two metadata files in the Flat File Format 2.0 (CIZ) provide coverage information. These files are MetaColumnCoverage and MetaFlagCoverage. The coverage file values are calculated from the 1925 US Stock and Index File (CIZ) and for some items and flags do not represent what is found in the subset files (e.g. C6Z – 1962 US Stock File). The stock and index data files may be used without reviewing the new coverage files, especially for those already familiar with CRSP data; however, the coverage files are being introduced to improve ease-of-use and save user's time. There are three primary uses for these files:

- Help determine which column(s) might be most beneficial before running potentially time-consuming queries on the data, especially the very large daily data files.
- Help determine which, if any, flag values may impact the design of a query.
- Profiling information that could be useful for improving query performance or reducing storage.

A row exists in MetaColumnCoverage for any column with ColCoverageFlg in the MetaColumnInfo file set to 'Y'. The MetaColumnCoverage file includes more than 100 columns and almost all non-key, non-flag, and non-metadata columns.

A row exists in MetaFlagCoverage for any FlagType/FlagValue combination in the MetaFlagInfo file where FlagCoverageFlg = 'Y'. The MetaFlagCoverage file includes over 300 FlagType/FlagValue combinations and is all non-metadata items that are Item Category of FLAG.

Column Coverage and Usefulness of Columns

There are more than 500 columns in the Flat File Format 2.0 (CIZ) files; some have very similar names and descriptions but very different characteristics. The MetaColumnCoverage file can provide easy-access information to determine which column(s) are most appropriate for the intended use. For example, DlyPrc has 98% non-missing values and at least one non-missing value for 100% of the securities (PERMNOs) in the file, but DlyClose has only 81% non-missing values and at least one non-missing value for only 88% of the securities, and DlyOpen only has 60% non-missing and at least one-non-missing value for only 77% of the securities. If a closing price versus a bid-ask average is not an important distinction to study, then DlyPrc has significantly more (about 17,000,000) non-missing values. A study comparing opening and closing prices will be limited by the availability of the DlyOpen.

Similarly, the number of trades (DlyNumTrd) might be helpful for a study but knowing that its first non-missing data is on 11/1/1982 and has at least one non-missing value for only 48% of the securities could impact the study design.

Flag Coverage and Data Restrictions or Groupings

There are more than 300 distinct FlagType/FlagValue combinations. Some combinations indicate outliers, and some queries will often exclude them because they are not relevant or material to the study. Excluding those rows will keep the data cleaner and simplify the coding and analysis.

Conversely, sometimes those very same outlier combinations are of particular interest to a study and knowing the magnitude of those outliers can determine if enough data exists for robust analysis. For example, SecuritySubType (FlagType='S2') has rows for its five values indicating about 31,000 Common (starting in 1925), 4,000 Exchange Traded Funds (starting in 2002), 1,300 Closed-End Funds (starting in 1962), 81 Americus Trusts (only from 1983 to 1992), and 54 Exchange Trade Vehicles (starting in 1987). Some studies may restrict data to Common only. In contrast, others might want to compare the performance broken down by SecuritySubType, while others may view SecuritySubType as an unimportant distinction and ignore it.

Profiling Information for Improving Query Performance or Reduce Storage

While the coverage files are not intended to replace advanced data profiling needed for sophisticated database tuning, the coverage files may be helpful as a starting point for database administrators trying to improve query performance or reduce storage. For example, more sparsely populated columns could be identified and, if appropriate, be moved from commonly used tables to supplemental tables to reduce the size of the widely used table and speed access but not significantly reduce the table's usefulness. Flag values that are commonly used and that effectively split up the file could be indexes to speed queries access that table.

Calendar Files

Two metadata calendar files, MetaExchangeCalendar and MetaCalendarPeriod, are included in the Flat File Format 2.0 (CIZ) files. These files provide information that complements and supplements the date functionality of SAS, 'R', and SQL-based databases.

MetaExchangeCalendar – Trading Day, Holiday, and Weekend Flags

The MetaExchangeCalendar file contains every day from the start of the CRSP data file from December 31, 1925, to the last trading of the files. In addition, it provides flags for whether the day is a trading day, a holiday, or a weekend. It also has a code that combines the flags and details the reasons for the holiday.

While trading days in recent years follow a regular pattern, over the nearly one hundred years CRSP tracks, there is much more variability than most remember, including Saturday trading, Thanksgiving not always being the fourth Thursday of November, the standardization of observing several holidays on Monday, the recent addition of Juneteenth, etc. In addition to the planned changes to trading days, there were unexpected closures, including the multi-day closure in September 2001, the single-day closures for hurricanes, presidential funerals, bank runs, and other unforseen events. While most studies do not need to control for weekends and holidays, the flags in the MetaExchangeCalendar are available to provide transparency. They can be a time saver in identifying an external cause of anomalous days.

MetaCalendarPeriod – Information for Daily, Monthly, Quarterly & Annual Periods

The MetaCalendarPeriod file provides information about the Daily (is daily going to be added in, if not do we document it eventual and footnote the initial deficiency or change the doc and then change it again after it is fixed), Monthly, Quarterly, and Annual Calendar periods that can be used to complement and supplement the default date arithmetic functions.

The file contains the calendar and CRSP trading day start and end dates for a period. For example, the annual period for 1994 has the expected calendar range of 1/1/1994 to 12/31/1994, but its CRSP trading range is from 1/3/1994 to 12/30/1994. In addition, it contains the next and previous periods, which for years is a simple +1 or -1 (e.g., next and previous year for 1994 is 1995 and 1993 respectively), but for months and quarters are not as simple to calculate. This allows an easy join.

It also contains deformalized data such as CRSPPeriodPrevCRSPEndDt and has counts of both the number of calendar days in the period and the number of trading days and a CalPeriodNbr so that it is easy to calculate the number of periods between two dates. The information in the MetaCalendarPeriod file is not needed for most queries. It can be derived from other CRSP data, but having it pre-calculated and available can be a great time saver when needed.

Chapter 2: SIZ to CIZ Mapping Information

With The MetaSIZtoCIZ file is designed to provide detailed information about how the CRSP Flat File Format 1.0 (SIZ format) maps to the CRSP Flat File Format 2.0 (CIZ format). The complete list of columns in this file are in the CRSP US Stock & Indexes Database Guide: Flat File Format 2.0. This document section summarizes the data's potential uses in the MetaSIZtoCIZ file.

The MetaSIZtoCIZ file contains more detail than what is available in this guide, but serves a similar purpose. This file contains multiple types of information, including primary and supplemental join information and column mapping details.

The SIZColPosition (SIZ Column Position number) and SIZColMapSeq (SIZ Column Mapping Sequence number) are the columns that provide the information needed to determine which type of information the row in the MetaSIZtoCIZ file contains, and along with the SIZFileName make up the sort order and natural key of this file. The SIZtoCIZType (SIZ to CIZ mapping Type) and SIZtoCIZSubType (SIZ to CIZ mapping Sub-Type) columns then provide detailed information on the map specific to that row.

There are three primary uses for this file:

- A more detailed and filterable way to look up an existing SIZ column to determine the CIZ column(s) that are the closest match to a SIZ column than what is available in this guide. The file is in SIZFileName, SIZColPosition order to efficiently facilitate the review of all the columns for one SIZ file. While many SIZ columns map to one and only one CIZ column, SIZ contain several overloaded values that have been split into multiple CIZ columns for a more modern database design.
- Information about the relationships of rows in the SIZ file compared to the rows in the corresponding CIZ file. While most of the largest files SIZ map one-to-one with CIZ files and substituting one for the other should require no change in code logic, there are others where there are differences in implementations that might require some modification of code.
- Information about some new columns or files in CIZ and what is its closest SIZ match.

The remainder of this section describes the four columns (SIZColPosition, SIZColMapSeq, SIZtoCIZType, SIZtoCIZSubType) that are most important in understanding the contents of the MetaSIZtoCIZ mapping file. Appendix XXXX has a complete layout and column description of this file.

SIZColPosition – SIZ Column Position Number

The SIZColPosition (SIZ Column Position number) is used along with SIZFileName to sort the file. Therefore, the rows will match the layout of the SIZ file, rather than an alphabetical listing of items, and hopefully make it easy to review the changes on a file-by-file basis.

Most commonly, the SIZ Column Position Number is between 1 and 99 and is simply the column position number within the SIZ file; 1 indicates the first column, 2 the second column, etc. When the SIZColumnPosition number equals zero or exceeds 900, the row contains join information or added value, respectively.

Column Mapping – SIZColPosition between 1 and 99 (current maximum 31)

These rows are the most common and most straightforward use of the file. For example, the 4th column of the SFZ_AGG_MTH file (MTHPRC) maps to the MthPrc column in the StkMthSecurityData file. Therefore, for this row, the corresponding mapping type and sub type (see sections below) indicate that it is an exact match within machine precision. However, some columns have more complicated mappings, including some columns having multiple mappings (see SIZColMapSeq section below).

Join Mapping – SIZColPosition equal to 0

These rows indicate how the key value(s) in the SIZ file align with the key value(s) in the corresponding CIZ file and help determine how to join or merge the files. For these rows, the SIZItemName has two valid values with more details in the SIZItemDesc and CIZFileName, CIZItemDesc

Key – the join will be a single column key (e.g. KYPERMNO to PERMNO)

KeyCombo – the join will be a combination of columns (e.g. KYPERMNO, YYYY to PERMNO, YYYY)

Join Information – SIZColPosition equal to 0

These rows indicate how the key value(s) in the SIZ file align with the key value(s) in the corresponding CIZ file and help determine how to join or merge the files. For these rows, the SIZItemName has two valid values with more details in the SIZItemDesc and CIZFileName, CIZItemDesc

- Key – the join will be a single column key (e.g. KYPERMNO to PERMNO)
- KeyCombo – the join will be a combination of columns (e.g. KYPERMNO, YYYY to PERMNO, YYYY)

The SIZtoCIZType (see page 8) provides information on what type of relationship the files have (one-to-one, ZeroOne-to-One, etc.). The SIZtoCIZSubType (see page 8) includes additional information to help understand the relationship.

CIZ Added Value for Ease of Use – SIZColPosition greater than 900

When ColPosition > 900, the SIZtoCIZType is either "Denormalized" or "Documentation". The "Denormalized" columns (COMNAM, INDFAM, and PORTNUM) are columns that exist in SIZ but had to be found in another SIZ file.

These rows indicate columns that were included in the corresponding CIZ file for ease of use and to reduce the need to join multiple SIZ files.

Similarly, the rows where SIZtoCIZType is "Documentation" type are for columns that were implicit in the SIZ file because the information was contained in the PDF document. For example, IndexStatType (Index Statistic Type) – the Index Calculation section of the PDF Data Description had the relationships between INDNOs and Index Statistic Type. Still, that information has been moved to the CIZ file to reduce the need to look up information in the PDF guides to improve ease of use. These rows are also helpful for determining the closest equivalent in SIZ to a new CIZ column.

SIZColMapSeq – SIZ Column Mapping Sequence number

The SIZCoMapSeq (SIZ Column Mapping Sequence number) handles cases where a single SIZ column is split into two or more CIZ columns, or a single SIZ column has two or more different mappings to the CIZ or both situations. It also indicates multiple join possibilities: the lower the sequence number, the more common the mapping usage.

As a general rule, if in doubt, the row with SIZColMapSeq=1 is the best default mapping, but where there are multiple rows, it is best to review the additional rows to ensure that the best default mapping is, in fact, the best mapping for a specific application.

Single Column Split to Two or More CIZ Columns

For example, SFZ_DEL file's 3rd column DLSTCD is three-digit code numeric code that is split into four CIZ fields: DelActionType; DelStatusType; DelReasonType; and DelPaymentType. See the Numeric Code split section in the Summary of Changes document for more information about these types of splits.

Single Column to Two or More Mappings

For instance, the SFZ_DP_DLY file's 4th column RET is a very commonly used item, but there are two mappings. The SIZColMapSeq = 1 has the most direct mapping to CIZ column DlyRet in the StkDlySecurityPrimaryData file, but it also maps to DlyRet in StkDlySecurityData (SIZColMapSeq=2). These two versions of DlyRet are identical and which to use depends on what other data are needed. StkDlySecurityPrimaryData has fewer columns, providing faster access, and is most analogous to SFZ_DP_DLY. However, if data from StkDlySecurityData is needed, it is possible to get at it using that only one file with no need to merge or join.

Both Situations

For instance, the SFZ_DP_DLY file's 3rd column PRC is a very commonly used item, with seven mappings. Like DlyRet, DlyPrc is available in two different files: StkDlySecurityPrimaryData (SIZColMapSeq=1) and in StkDlySecurityData (SIZColMapSeq=2). Also, the convention is SIZ for PRC was to set it to a negative value to indicate a bid-ask average and positive when it was a closing trade. This forced the use of an absolute value function before calculating.

In CIZ, the DlyPrc is the absolute value of PRC, and a new field, DlyPrcFlg (SIZColdSeqMap=4 and 5), was added to more easily allow users to differentiate and filter among a closing trade, a bid-ask average, and a missing value if desired. Still, the absolute value function is no longer necessary.

The SFZ_DP_DLY PRC column is also the basis for the new DlyClose (SIZColSeqMap=3, DlyPrevPrc (SIZColSeqMap=6), and DlyPrevPrcFlg (SIZColSeqMap=7), columns.

Multiple Join Possibilities

There are a few broad cases where multiple joins exist. One case is when there are two or more natural keys because of redundant keys. For example, SFZ_AGG_MTH could be joined to StkMthSecurityData on either KYPERMNO, YYYYMM to PERMNO to YYYYMM (SIZColSeqMap=1) or on KYPERMNO, MCALDT to PERMNO to MthCalDt (SIZColSeqMap=2). The YYYYMM and MthCalDt are redundant, and which to use is dependent on the implementation of indexing (if any) in the environment, and the key columns of other data (if any) that will also be looked at. A second case is where different tables exist. For example, the SFZ_HDR file joins on KYPERMNO to CIZ's StkSecurityInfoHdr's PERMNO (SIZColSeqMap=1) but also joins PERMCO to the new CIZ StkIssuerInfoHdr's PERMCO (SIZColSeqMap=2).

SIZtoCIZType – SIZ to CIZ Mapping Type

The SIZtoCIZType (SIZ to CIZ mapping Type) is flag type 'MT' and values for this column can be found in MetaFlagInfo. The row type (see SIZColPosition section above) indicates the type, and the SIZtoCIZTypes are specific to the row type.

SIZtoCIZSubType – SIZ to CIZ Mapping Sub-Type

The SIZtoCIZSubType (SIZ to CIZ mapping Sub-Type) is flag type 'MU' and values for this column can be found in MetaFlagInfo. The SIZtoCIZSubType, as its name implies, provides additional information about the SIZtoCIZType and should be looked at in combination.

MetaSIZtoCIZ – SIZ to CIZ Column Mapping

File includes information about the SIZ to CIZ Column Mapping and is useful to translate from SIZ columns to CIZ columns and conventions.

Item Name	Item Description	Item Definition
SIZFileName	SIZ File Name	Name of the SIZ File

Item Name	Item Description	Item Definition
SIZColPosition	SIZ Column Position	Column Position of the item within the SIZ file
SIZColMapSeq	SIZ Column Mapping Sequence	Sequence number to distinguish when there is a one-to-many mapping between an SIZ Item and a CIZ Item
SIZItemName	SIZ Item Name	Name of the SIZ Item
SIZItemDesc	SIZ Item Description	Short Descripton of the SIZ Item
CIZFileName	CIZ File Name	Name of the CIZ File, if a mapping is available
CIZItemName	CIZ Item Name	Name of the CIZ Item, if a mapping is available
CIZItemDesc	CIZ Item Description	Short Descripton of the CIZ Item, if a mapping is available
SIZMappingType	SIZ to CIZ Mapping Type	Mapping Type provides information on how the SIZ column could be mapped to the CIZ column(s), if applicable
SIZMappingSubType	SIZ to CIZ Mapping Sub Type	Mapping Sub Type provides additional information on how the SIZ column could be mapped to the CIZ column(s), if applicable
CIZColumnKey	CIZ Column Key	CIZ Column Key is a unique key for the Metadata Column Information File
CIZFileKey	CIZ File Key	CIZ File Key is a unique key for the Metadata File Information File
CIZItemKey	CIZ Item Key	CIZ Item Key is a unique key for the Metadata Item Information File
SIZColumnMappingKey	SIZ to CIZ Mapping Key	SIZ to CIZ Mapping Key is a unique surrogate integer key to the MetaSIZtoCIZ file

Appendix A: MT Flag Type

Obs	FlagType	FlagValue	FlagTypeDesc	FlagDesc	FlagDef	FlagCoverageFlg	FlagKey
1	MT	Closest	SIZ to CIZ Mapping Type	Closest Match - non-exact	A use of an SIZ column that doesn't have a direct match, because of a change in algorithm, but it has one or more highly correlated CIZ columns where one of them is expected to be an acceptable replacement.	N	2590001
2	MT	Combined	SIZ to CIZ Mapping Type	SIZ columns combine to form a CIZ column	Two or more SIZ columns combine to form a single CIZ columns. For example, SIZ items COMNAM and SHRCLS combine to form CIZ item SecurityNm	N	2590005
3	MT	ConvChange	SIZ to CIZ Mapping Type	Convention Change	An SIZ column has a fairly direct match to a CIZ column, but there is convention change that prevents it from being a direct mapping. There is more detail about the convention change in SIZtoCIZSubType.	N	2590009
4	MT	DateToYYYY	SIZ to CIZ Mapping Type	Date to YYYY	SIZ has the value stored as the last trading day of the year in date format, but CIZ has the year portion stored as an integer in YYYY format. More information about the annual period can be found in the MetaCalendarPeriod file.	N	2590013
5	MT	DateToYYYYMM	SIZ to CIZ Mapping Type	Date to YYYYMM	SIZ has the value stored as the last trading day of the month in date format, but CIZ has the year and month portion stored as an integer in YYYY format. More information about the monthly period can be found in the MetaCalendarPeriod file.	N	2590017
6	MT	DateToYYYYMMDD	SIZ to CIZ Mapping Type	Date to YYYYMMDD	SIZ has the value stored as the trading day stored in date format, but CIZ has the year portion stored the value in integer YYYYMMDD format. More information about the daily period can be found in the MetaCalendarPeriod file.	N	2590021
7	MT	DateToYYYYQ	SIZ to CIZ Mapping Type	Date to YYYYQ	SIZ has the value stored as the last trading day of the quarter in format, but CIZ stores an integer in YYYYQ format (e.g. July-Sep 1995 is 19953). More information about the quarterly period can be found in the MetaCalendarPeriod file.	N	2590025
8	MT	Denormalized	SIZ to CIZ Mapping Type	Denormalized (duplicated) Data	SIZ value has been stored in a secondary place in CIZ to reduce the need for joining tables. For example, the previous TCAP value is copied and stored in DlyPrevCap column so that the single row in StkDlySecurityInfo now has both current and previous cap.	N	2590029

Obs	FlagType	FlagValue	FlagTypeDesc	FlagDesc	FlagDef	FlagCoverageFlg	FlagKey
9	MT	Documentation	SIZ to CIZ Mapping Type	Columns from Documentation	The SIZ equivalent value was available only in the documentation. It is now included in the CIZ file.	N	2590033
10	MT	Exact	SIZ to CIZ Mapping Type	Exact Match	SIZ column is an exact match to the CIZ column	N	2590037
11	MT	ManyToOne	SIZ to CIZ Mapping Type	Many to One	Row-Mapping-Type - One or more SIZ rows are summarized into a single CIZ row. For example, one or more SIZ SFZ_DIS rows are summarized to form a couple of columns in a single row of CIZ's StkDlySecurityInfo. The SIZtoCIZSubType points to more details.	N	2590041
12	MT	Mapped	SIZ to CIZ Mapping Type	Mapped from Integer to Flag	A numeric code in SIZ is mapped to a mnemonic character flag in CIZ. The SIZtoCIZSubType points to the mapping table.	N	2590045
13	MT	NameCleanup	SIZ to CIZ Mapping Type	Name Column Cleanup	The SIZ to CIZ mapping is not an exact match because the name column was edited for clarity. For example, the Index Name was expanded. (should we just change these in legacy - is there space?)	N	2590049
14	MT	Normalized	SIZ to CIZ Mapping Type	Normalized Data	Row-Mapping-Type - One or more SIZ rows have been normalized to a single CIZ row. For example, Issuer and Index Family tables have been created and simplifies access when only one value per issue is desired	N	2590053
15	MT	OneToMany	SIZ to CIZ Mapping Type	One to Many	Row-Mapping-Type - One SIZ rows requires many CIZ rows. For example, some columns of the SIZ's SFZ_MTH table require every row from CIZ's StkDlySecurityInfo for the PERMNO and the month to get an equivalent item. (do we need this case?)	N	2590057
16	MT	OneToOne	SIZ to CIZ Mapping Type	One to One	Row-Mapping-Type - One SIZ row maps to one CIZ row. This is the most common row mapping type in SIZtoCIZ.	N	2590061
17	MT	Reassign	SIZ to CIZ Mapping Type	Reassignment Process	Reassignment is analogous to recalculation. This is used for portfolio numbers and assigned INDNOs and indicates that the recalculation of statistics and breakpoints will result in a relatively small number of reassignments rather than an exact match.	N	2590065
18	MT	Recalc	SIZ to CIZ Mapping Type	Recalculation Process	The SIZ values were built from CRSPAccess data, where many items were stored in single precision. In CIZ, the values are stored double precision. The recalculated values will not match the original values exactly.	N	2590069

Obs	FlagType	FlagValue	FlagTypeDesc	FlagDesc	FlagDef	FlagCoverageFlg	FlagKey
19	MT	Split	SIZ to CIZ Mapping Type	Split Code	A numeric code in SIZ is mapped to multiple mnemonic character flags in CIZ. The SIZtoCIZSubType points to more detail about the mapping.	N	2590073
20	MT	SplitToOne	SIZ to CIZ Mapping Type	Split Rows to One	Row-Mapping-Type - One SIZ row maps to one CIZ row, but it is split between two different files depending on the key. This is used for the SIZ SFZ_RB file, where some INDNOs are now in IndIssRebalanceSummary and some are in IndSecRebalanceSummary	N	2590077
21	MT	Zero-ManyToMany	SIZ to CIZ Mapping Type	Zero-Many to One	Row-Mapping-Type - Zero, one, or many SIZ rows maps to one or many CIZ rows. This is an unusual case for SIZ's SFZ_NDI file mapping to the CIZ's StkDlySecurityInfo for some columns. See in SIZtoCIZSubType for more information.	N	2590081
22	MT	Zero-ManyToNormalize	SIZ to CIZ Mapping Type	Zero-OneToNormalized	Row-Mapping-Type - Zero, one, or many SIZ rows to one normalized CIZ row. This is specific to SIZ's SFZ_PORTM mapping to CIZ's StkIndIssStatistic. See SIZtoCIZSubType for more detail	N	2590085
23	MT	Zero-ManyToOne	SIZ to CIZ Mapping Type	Zero-Many to Many	Row-Mapping-Type - Zero, one, or many SIZ rows to One CIZ rows. This is specific to SIZ's SFZ_NDI mapping to CIZ's StkIssuerInfoHist and StkDlySecurityInfo for some columns. See SIZtoCIZSubType for more details.	N	2590089
24	MT	Zero-OneToMany	SIZ to CIZ Mapping Type	Zero-One to Many	Row-Mapping-Type - Zero or one SIZ rows maps to one or many CIZ rows. This is an unusual case for SIZ's SFZ_NDI file mapping to the CIZ's StkDlySecurityInfo for some columns. See in SIZtoCIZSubType for more information.	N	2590093
25	MT	Zero-OneToOne	SIZ to CIZ Mapping Type	Zero-OneToOne	Row-Mapping-Type - Zero or One SIZ row maps to one CIZ row. This applies to SIZ's SFZ_DP_DLY and SFZ_DS_DLY that map one to one to CIZ's StkDlySecurityData and StkDlyPrimarySecurityData except for when DlyDelFlg = 'Y' when the rows don't exist in SIZ.	N	2590097

Appendix B: MU Flag Type

Obs	FlagType	FlagValue	FlagTypeDesc	FlagDesc	FlagDef	FlagCoverageFlg	FlagKey
1	MU	AddedIndDaily	Siz to CIZ Mapping Sub-Type	Additional Daily Index Rows	Additional daily index rows for the CRSP Market Indexes (INDOs between 1001000 and 1001999) are now available in the CIZ file.	N	2630001
2	MU	AddedIndHeader	Siz to CIZ Mapping Sub-Type	Additional Index Header Rows	Additional index series header rows for the CRSP Market Indexes (INDOs between 1001000 and 1001999) are now available in the CIZ file, as are the corresponding INDFAM rows in the index family header file.	N	2630005
3	MU	AddedIndIssSecRB	Siz to CIZ Mapping Sub-Type	Additional Rebalancing Summary Rows	Additional rebalancing summary rows exists from new index availability. Future Use.	N	2630009
4	MU	AddedIndMember	Siz to CIZ Mapping Sub-Type	Additional Index Membership Rows	Additional index membership rows. In preview with Pass-Through, these extra rows are the CRSP Market Index Membership rows.	N	2630013
5	MU	AddedIndMonthly	Siz to CIZ Mapping Sub-Type	Additional Monthly Index Series Data Rows	Additional monthly index series data rows exists from new index availability. Future Use.	N	2630017
6	MU	AddedIndPortDaily	Siz to CIZ Mapping Sub-Type	Additional Index Portfolio Daily Assignment Rows	Additional index portfolio security (daily) assignment rows exist. Future Use.	N	2630021
7	MU	AddedIndPortMonthly	Siz to CIZ Mapping Sub-Type	Additional Index Portfolio Monthly Assignment Rows	Additional index portfolio issuer (monthly) assignment rows exist. Future Use.	N	2630025
8	MU	AddedIndStatDaily	Siz to CIZ Mapping Sub-Type	Additional Index Portfolio Daily Statistics Rows	Additional index portfolio security (daily) statistics rows exist. Future Use.	N	2630029
9	MU	AddedIndStatMonthly	Siz to CIZ Mapping Sub-Type	Additional Index Portfolio Monthly Statistics Rows	Additional index portfolio issuer (monthly) statistics rows exist. Future Use.	N	2630033

Obs	FlagType	FlagValue	FlagTypeDesc	FlagDesc	FlagDef	FlagCoverageFlg	FlagKey
10	MU	BidAsk	Siz to CIZ Mapping Sub-Type	Bid Ask Convention Change	DlyBid and DlyAsk are now populated anytime that DlyPrcFlg indicates Bid-Ask Average (BA)	N	2630037
11	MU	CAP	Siz to CIZ Mapping Sub-Type	Capitalization Change	Capitalization usually matches exactly between the SIZ and CIZ, but precision limitations and two known differences (share with two adjacent factors and Fractional to Decimal prices changes.	N	2630041
12	MU	CNUM6	Siz to CIZ Mapping Sub-Type	CNUM Issuer CUSIP	CNUM contains the first six characters (the issuer component) of the CUSIP. There are a few exceptions to this, when an issuer has too multiple simultaneous securities.	N	2630045
13	MU	DailyPrev	Siz to CIZ Mapping Sub-Type	Daily Previous Convention	The previous non-missing trading days information, when available, has been added to the daily record for ease of use. Fields include DlyPrevDt, DlyPrevPrc, DlyPrevPrcFlg, and DlyPrevCap	N	2630049
14	MU	DateToYYYY	Siz to CIZ Mapping Sub-Type	Date to YYYY	The keys listed for the SIZ and CIZ files join one-to-one and will result in the exact same number of rows, but require the SIZ date field to be converted to a YYYY (annual) period field	N	2630053
15	MU	DateToYYYYMM	Siz to CIZ Mapping Sub-Type	Date to YYYYMM	The keys listed for the SIZ and CIZ files join one-to-one and will result in the exact same number of rows, but require the SIZ date field to be converted to a YYYYMM (monthly) period field	N	2630057
16	MU	DateToYYYYMMwithJoin	Siz to CIZ Mapping Sub-Type	Date to YYYYMM with Join	The keys listed for the SIZ and CIZ files join one-to-one and will result in the exact same number of rows, but require the SIZ date field to be converted to a YYYYMM (monthly) period field after doing a join.	N	2630061
17	MU	DateToYYYYQ	Siz to CIZ Mapping Sub-Type	Date to YYYYQ	The keys listed for the SIZ and CIZ files join one-to-one and will result in the exact same number of rows, but require the SIZ date field to be converted to a YYYYQ (quarterly) period field	N	2630065
18	MU	DelistCd	Siz to CIZ Mapping Sub-Type	Delisting Numeric Code to Mnemonic Fields	The single three-digit numeric DLSTCD field has been transformed to four alphanumeric mnemonic fields: DelActionType, DelStatusType, DelReasonType, and DelPaymentType	N	2630069

Obs	FlagType	FlagValue	FlagTypeDesc	FlagDesc	FlagDef	FlagCoverageFlg	FlagKey
19	MU	DelistConv	Siz to CIZ Mapping Sub-Type	Delisting Convention Changes	StkDelists no longer contains records for active securities.	N	2630073
20	MU	DelistConvDaily	Siz to CIZ Mapping Sub-Type	Delisting Convention Daily Changes	For ease of access, several delisting fields are now stored in the daily time series files and stored, by convention, on the trading day immediately after the delisting date. Note this may not be the DLPDT.	N	2630077
21	MU	DelistConvDaily_Date	Siz to CIZ Mapping Sub-Type	Delisting Convention Daily Changes Date	For ease of access, several delisting fields are now stored in the daily time series files and stored, by convention, on the trading day immediately after the delisting date - joined by date rather than period (YYYYMMDD). Note this may not be the DLPDT.	N	2630081
22	MU	DelistConvMonthly	Siz to CIZ Mapping Sub-Type	Delisting Convention Change Monthly	An exact equivalent of the SFZ_MDEL file holding period delisting return is no longer available.	N	2630085
23	MU	DelistConvSlicing	Siz to CIZ Mapping Sub-Type	Delisting Convention Slicing	Delisted securities will have an extra name row associated with the time from after the DLSTDT to the DLPDT. Therefore, an inner join to names to distribution and delists will now return a single row.	N	2630089
24	MU	DistCd	Siz to CIZ Mapping Sub-Type	Distribution Numeric Code to Mnemonic Fields	The single four-digit numeric DISTCD field has been transformed to seven alphanumeric mnemonic fields: DisOrdinaryFlg, DisType, DisFreqType, DisPaymentType, DisDetailType, DisTaxType, and DisOrigCurType	N	2630093
25	MU	DistConversion	Siz to CIZ Mapping Sub-Type	Distribution Key Field Conversion	SIZ used PERMNO, EXDT, DISTCD, and ACPERM as its natural key, while CIZ uses PERMNO, DisExDt, and DisSeqNbr	N	2630097
26	MU	Exact	Siz to CIZ Mapping Sub-Type	Exact Match	Exact Match	N	2630101
27	MU	Exchcd	Siz to CIZ Mapping Sub-Type	Exchange Numeric Code to Mnemonic Fields	The single two-digit (with negative values) numeric EXCHCD field has been transformed to two alphanumeric mnemonic fields: PrimaryExch and ConditionalType which map one to one with SIZ fields of PRIMEXCH and SECSTAT	N	2630105

Obs	FlagType	FlagValue	FlagTypeDesc	FlagDesc	FlagDef	FlagCoverageFlg	FlagKey
28	MU	IndexBreakStat	Siz to CIZ Mapping Sub-Type	Index Breakpoint Statistic Levels	Index Breakpoint Statistics High and Low Values have been added which are very similar to min and max values, but are slightly different for Issuer Cap Based Indexes. Check the index calculation descriptions for more details.	N	2630109
29	MU	IndexCount	Siz to CIZ Mapping Sub-Type	Index Counts Fields	Index used and total counts have been recalculated and may differ slightly.	N	2630113
30	MU	IndexCountValue	Siz to CIZ Mapping Sub-Type	Index Count Value	The index weight item will contain either the index used count (USDCNT/MUSDCNT) or the index used value (USDVAL/MUSDVAL) depending on whether the index Equal-Weighted or Market-Cap (Value) Weighted, respectively.	N	2630117
31	MU	IndexDescription	Siz to CIZ Mapping Sub-Type	Index Description Fields	Index Series and Index Family descriptions have be reorganized. See Index methodology for more information.	N	2630121
32	MU	IndexEligCnt	Siz to CIZ Mapping Sub-Type	Index Eligible Count	The index eligible count is a new field in CIZ and is highly correlated with TOTCNT/MTOTCNT, but includes a count of all securities that are eligible for the index, even if price or shares data is missing.	N	2630125
33	MU	IndexInfo	Siz to CIZ Mapping Sub-Type	Index Information Split	Several of the values in the SIZ INDHDR file have been reorganized and rationalized between the IndSeriesInfoHdr and IndFamilyInfoHdr files in CIZ. If details of changes are desired, please see (URL to be provided).	N	2630129
34	MU	IndexIssuerAllCnt	Siz to CIZ Mapping Sub-Type	Index Issuer All Count	Index Breakpoint summaries have additional security and issuer count fields. See Index Methodology for more information about the nuanced differences of these fields.	N	2630133
35	MU	IndexLevel	Siz to CIZ Mapping Sub-Type	Index Level Fields	Index levels have been recalculated and may differ slightly. See known difference documentation for more information.	N	2630137
36	MU	IndexMinMaxId	Siz to CIZ Mapping Sub-Type	Index Minimum and Maximum ID Fields	Index Breakpoint summaries have been split between Issuer-based indexes and security-based Indexes, and recalculated. See known differences documentation for more information.	N	2630141

Obs	FlagType	FlagValue	FlagTypeDesc	FlagDesc	FlagDef	FlagCoverageFlg	FlagKey
37	MU	IndexMinMaxStat	Siz to CIZ Mapping Sub-Type	Index Minimum and Maximum Statistic Fields	Index Breakpoint summaries have been split between Issuer-based indexes and security-based Indexes, and recalculated. See known differences documentation for more information.	N	2630145
38	MU	IndexRebalCnt	Siz to CIZ Mapping Sub-Type	Index Rebalance Summary Count	Index Breakpoint summaries have additional security and issuer count fields. See Index Methodology for more information about the nuanced differences of these fields, and known differences.	N	2630149
39	MU	IndexReturn	Siz to CIZ Mapping Sub-Type	Index Return Fields	Index levels have been recalculated and may differ slightly. See known difference documentation for more information.	N	2630153
40	MU	IndexValue	Siz to CIZ Mapping Sub-Type	Index Value Fields	Index used and total values (market capitalizations) have been recalculated and may differ slightly.	N	2630157
41	MU	MachinePrecision	Siz to CIZ Mapping Sub-Type	Machine Precision Limitations	Limitations of internal storage structures and ASCII to binary conversions can result in the values not being exactly equal, but there differences are typically less than 1E-10.	N	2630161
42	MU	MbrFlg	Siz to CIZ Mapping Sub-Type	Member Flag	Member Flag has been converted from an Integer Flag to a mnemonic code and expanded to support CRSP Market Indexes. See the index methodology guide for more information.	N	2630165
43	MU	Minus5Conv	Siz to CIZ Mapping Sub-Type	Minus 5 Convention	ACPERM, ACCOMP, NWPERM, and NWCOMP previously had PERMNOs and PERMCOs that were not part of the CRSP subscriber universe. To accommodate this convention change, a PERMNO and PERMCO record with a -5 values have been added to the corresponding tables.	N	2630169
44	MU	MthToAgg	Siz to CIZ Mapping Sub-Type	Monthly To Aggregate	The legacy SFZ_MTH file was a holding period-based file, the new StkMthSecurityData file is an aggregate file that matches the legacy SFZ_AGG_MTH. These variables are nearly identical, but the convention change can result in subtle differences.	N	2630173
45	MU	MthToAggDateToYYYYMM	Siz to CIZ Mapping Sub-Type	Monthly To Aggregate with YYYYMM	The legacy SFZ_MTH file was a holding period-based file, the new StkMthSecurityData file is an aggregate file that matches the legacy SFZ_AGG_MTH and the period variable in YYYYMM format is a better key value than the month-end calendar date.	N	2630177

Obs	FlagType	FlagValue	FlagTypeDesc	FlagDesc	FlagDef	FlagCoverageFlg	FlagKey
46	MU	MthToAggPrice	Siz to CIZ Mapping Sub-Type	Monthly To Aggregate Price	The legacy SFZ_MTH file was a holding period-based file, the new StkMthSecurityData file is an aggregate file that matches the legacy SFZ_AGG_MTH. In addition, the MPRC has been split into a price value and a price flag.	N	2630181
47	MU	NDIToDly	Siz to CIZ Mapping Sub-Type	Nasdaq Information to Daily	The number of market maker field in the SFZ_NDI file has been moved to the StkDlySecurityData file	N	2630185
48	MU	NDIToInfoHIst	Siz to CIZ Mapping Sub-Type	Nasdaq Information to Security Info Hist	The NMS Indicator field in the SFZ_NDI file has been moved the Exchange Tier field of the StkSecurityInfoHist file	N	2630189
49	MU	NMSIND	Siz to CIZ Mapping Sub-Type	NMS Indicator Convention	The NMS Indicator integer code field in the SFZ_NDI file has been moved the Exchange Tier mnemonic field of the StkSecurityInfoHist file	N	2630193
50	MU	PeriodEndToDaily	Siz to CIZ Mapping Sub-Type	Period End to Daily	Some values in associated with the Period End of the SFZ_MTH file, such as MBID and MASK that are not in the monthly aggregate file can be found in the Daily (StkDlySecurityData) file.	N	2630197
51	MU	PeriodEndToPeriodEnd	Siz to CIZ Mapping Sub-Type	Period End to Period End	The legacy SFZ_MTH file maps to the new StkMthSecurityData file, but the period variable in YYYYMM format is a better key value than the month-end calendar date, but the period end date can be used as an alternate key.	N	2630201
52	MU	Plus1Port	Siz to CIZ Mapping Sub-Type	Plus One Port for YYYY	The legacy SFZ_PORTD and SFZ_PORTM files used the ANNUAL field for two different meanings. The new IndSecStatistics file separates them out to YYYY and SecAssignYYYY for increased clarity.	N	2630205
53	MU	Price	Siz to CIZ Mapping Sub-Type	Price Convention Change	In legacy, the prices were stored as a negative number to indicate that it was an average of the bid and ask. In the current files, price and price flag are separate fields.	N	2630209
54	MU	Rename	Siz to CIZ Mapping Sub-Type	Rename of Item	The item name has changed between SIZ and CIZ to align with the new item naming conventions. The SIZtoCIZType explains the changes, if any, between the value of the original field and the renamed field.	N	2630213

Obs	FlagType	FlagValue	FlagTypeDesc	FlagDesc	FlagDef	FlagCoverageFlg	FlagKey
55	MU	Rename/NextTrdDay	Siz to CIZ Mapping Sub-Type	Renamed Field and Next Trading Day Convention	The legacy rebalancing summary (SFZ_RB) had the beginning date being the end of the previous period. The field has been renamed and the start date is now the first trading date of the current period.	N	2630217
56	MU	Rename/PrevQtr	Siz to CIZ Mapping Sub-Type	Renamed Field and Previous Quarter	The legacy rebalancing summary (SFZ_RB) had the beginning date being the end of the previous period. There is now a previous quarter field that and for mapping a field is renamed and converted from a date format to a YYYYQ Period field.	N	2630221
57	MU	Rename/PrevYr	Siz to CIZ Mapping Sub-Type	Renamed Field and Previous Year	The legacy rebalancing summary (SFZ_RB) had the beginning date being the end of the previous period. There is now s a previous year field that and for mapping a field is renamed and converted from a date format to a YYYY Period field.	N	2630225
58	MU	RenameMinus5	Siz to CIZ Mapping Sub-Type	Minus 5 Convention	ACPERM, ACCOMP, NWPERM, and NWCOMP previously had PERMNOs and PERMCOs that were not part of the CRSP subscriber universe. These fields have been renamed and have been changed by convention to -5.	N	2630229
59	MU	SAME	Siz to CIZ Mapping Sub-Type	Same Name	The SIZ and CIZ files both use the same item name, and there is an exact match of the values.	N	2630233
60	MU	SECurityNm	Siz to CIZ Mapping Sub-Type	Security Name Convention	In legacy, CRSP only had a Company (Issuer) Name. In the new ,there is both an Issuer Name and a Security Name. The security name has information about the share type (e.g. COM) and share class (e.g. CL A)	N	2630237
61	MU	SECurityRet	Siz to CIZ Mapping Sub-Type	Security Return Changes	Security Returns have been recalculated. The vast majority are within machine precision, but there are some known differences. See the known differences document.	N	2630241
62	MU	SFZ_HDR-PERMCO	Siz to CIZ Mapping Sub-Type	SFZ Header PERMCO convention	The SFZ_PORTM statistics files, including PERMNOs for Issuer-Based statistics that should have been stored at the PERMCO level. This have been normalized. See the Index Methodology guide for more information.	N	2630245

Obs	FlagType	FlagValue	FlagTypeDesc	FlagDesc	FlagDef	FlagCoverageFlg	FlagKey
63	MU	SFZ_INDHDR-INDFAM	Siz to CIZ Mapping Sub-Type	SFZ Index Header to Index Family	The Membership table previously did not include INDFAM, but only had INDNO. The INDFAM was able to be looked up via SFZ_INDHDR. It has been denormalized for convenience.	N	2630249
64	MU	SFZ_INDHDR-INDNO	Siz to CIZ Mapping Sub-Type	SFZ Index Header to INDNO Characteristics	The Index Rebalancing files previously did not include index family or Index Portfolio number, but could have been looked up in the SFZ_INDHDR file. They have been denormalized into these rebalancing files for convenience.	N	2630253
65	MU	SFZ_NAM-PERMCO_DT	Siz to CIZ Mapping Sub-Type	SFZ Names to PERMCO and Date	The Index Rebalancing files previously did not include the issuer name for the min and max IDs, but they could have been looked up in the SFZ_NAM file. They have been denormalized into these rebalancing files for convenience.	N	2630257
66	MU	SFZ_NAM-PERMNO_DT	Siz to CIZ Mapping Sub-Type	SFZ Names to PERMNO and Date	The Index Rebalancing files previously did not include the issuer name for the min and max IDs, but they could have been looked up in the SFZ_NAM file. They have been denormalized into these rebalancing files for convenience.	N	2630261
67	MU	ShareConversion	Siz to CIZ Mapping Sub-Type	Share Conversion Changes	The rows for shares outstanding do not exactly match between legacy SFZ_SHR file and the new StkShares file, because of the changes to name fields. See known differences for more information.	N	2630265
68	MU	ShrCd	Siz to CIZ Mapping Sub-Type	Share Code Convention Change	In legacy, Share Code was a two-digit numeric code. In the new files, it has been expanded five alpha-numeric fields - Share Type, Security Type, Security Sub-Type, US Incorporation Flag, and Issuer Type.	N	2630269
69	MU	ShrFlg	Siz to CIZ Mapping Sub-Type	Share Flag Convention Change	In legacy, Share Flag had three values, zero (Shares Observation) one (Distribution Event), and two (Name Change). In the new files, it has been converted to a mnemonic field with OBS, EVS, and NC respectively.	N	2630273
70	MU	SICCD	Siz to CIZ Mapping Sub-Type	SICCD Convention Change	The SICCD was moved to the issuer level and this resulted in some minor changes. See the known differences document.	N	2630277

Obs	FlagType	FlagValue	FlagTypeDesc	FlagDesc	FlagDef	FlagCoverageFlg	FlagKey
71	MU	StatFlg	Siz to CIZ Mapping Sub-Type	Statistic Flag Convention Change	In legacy, Stat Flag had only one value. It has been expanded. See known differences for more information.	N	2630281
72	MU	Ticker	Siz to CIZ Mapping Sub-Type	Ticker Convention Change	There have been minor changes to the conventions for storing tickers. See known differences for more details.	N	2630285
73	MU	YYYYtoYYYYQ	Siz to CIZ Mapping Sub-Type	YYYYMM to YYYYQ	The legacy SFZ_PORTM files used the ANNUAL field stored quarter-end values as YYYYMM. The new IndIssStatistics file uses a YYYYQ period key. For example, the first quarter of 2010 was 201003 and is now 20101.	N	2630289
74	MU	YYYYtoYYYYQPlus1Port	Siz to CIZ Mapping Sub-Type	YYYYMM to YYYYQ and Plus One Port	The legacy SFZ_PORTM files used the ANNUAL field for two different meanings and stored quarter-end values as YYYYMM. The new IndIssStatistics file uses a YYYYQ period key, and it separates the uses out to YYYYQ and IssAssignYYYYQ for increased clarity.	N	2630293
75	MU	ExactRows	Siz to CIZ Mapping Sub-Type	Exact Rows	The keys listed for the SIZ and CIZ files join one-to-one, without modification, and result in the exact same number of rows.	N	2630295
76	MU	IndexCountValuePT	Siz to CIZ Mapping Sub-Type	Index Count Value Pass-Through	The index weight item will contain either the index used count (USDCNT/MUSDCNT) or the index used value (USDVAL/MUSDVAL) depending on whether the index Equal-Weighted or Market-Cap (Value) Weighted, respectively. The values are Pass-Through weights.	N	2630297
77	MU	IndexEligCntPT	Siz to CIZ Mapping Sub-Type	Index Eligible Count Pass-Through	The index eligible count is a new field in CIZ. During Pass-Through processing, it is only non-missing for CRSP calculated versions of the S&P500 - INDNOs 1000500, 1000501, 1000510, and 1000511 and will be exactly equal to TOTCNT/MUSDCNT.	N	2630299
78	MU	PassThrough	Siz to CIZ Mapping Sub-Type	Pass Through Index Values	CRSP calculated indexes are passed through from the legacy calculations and will match the SIZ values, but, in some cases, will therefore not exactly match an index value recalculated from the CIZ values.	N	2630301

Appendix C: CY Flag Type

Obs	FlagType	FlagValue	FlagTypeDesc	FlagDesc	FlagDef	FlagCoverageFlg	FlagKey
1	CY	CODE	Item Category	Integer Code	Integer field that represents one or more characteristics	N	1750001
2	CY	DATE	Item Category	Date Field	Date field stored in the date data type of the format	N	1750005
3	CY	DESCRIPTION	Item Category	Wide Character Description Field	Wide character field that contains a text description of varying length	N	1750009
4	CY	FLAG	Item Category	Character Flag Field	Alphanumeric character field that has more information stored in the FlagInfo File and FlagCoverage File	N	1750013
5	CY	ID	Item Category	Character Identifier Field	Alphanumeric Identifier field that is it usual a foreign key to either a CRSP file or a third-party published ID (e.g. CUSIP, NAICS)	N	1750017
6	CY	KEY	Item Category	Integer Field used as a Unique Key	Integer field that is used as a unique key in one file and is often a foreign key in other files.	N	1750021
7	CY	NAME	Item Category	Medium width character field	Medium width character field that contains a name.	N	1750025
8	CY	NUMBER	Item Category	Integer value < 2,000,000,000	Integer value that is less than two billion and can therefore be stored in a standard (32-bit) integer	N	1750029
9	CY	PERIOD	Item Category	Integer field used for a Calendar Period	Integer field used to uniquely describe a calendar period and is the unique key to the Calendar Period File and is a foreign key contained in several other files and is a special case of KEY	N	1750033
10	CY	QUANTITY	Item Category	Integer with values that can exceed 2,000,000	Integer field where values can exceed two billion, and therefore, dependent on software data types available, should be implemented as either a bigint (64-bit integer) or as a 64-bit floating point number.	N	1750037
11	CY	RATIO	Item Category	Calculated floating point number	Calculated floating point number that is often displayed as a percent and has a relatively low maximum value and does not have an exact decimal representation	N	1750041
12	CY	VALUE	Item Category	Field with a wide range of numeric values	Non-Integer numeric field where values sometime vary greatly, therefore, dependent on software data types available and intended use, could be implemented as a 64-bit floating point number or a decimal data type.	N	1750045

Appendix D: CL Flag Type

Obs	FlagType	FlagValue	FlagTypeDesc	FlagDesc	FlagDef	FlagCoverageFlg	FlagKey
1	CL	CodeSICCD	Item Class	SIC - Standard Industrial Classification Code	US Government created Standard Industrial Classification Code. It is a four-digit code, and CRSP uses 0 and 9999 for unknown or unavailable. CRSP does not differentiate among the SIC Code editions	N	1550001
2	CL	DateAnnual	Item Class	Annual Year-End Date	Date restricted to last trading days of the year and cannot be null and can be found in the PeriodEndDt in the Calendar Period file where period type = A	N	1550005
3	CL	DateDaily	Item Class	Daily Calendar Date	Daily Calendar Date that can be found in the Exchange Calendar File up to and including the final trading day covered by the CRSP snapshot and cannot be null	N	1550009
4	CL	DateDaily14	Item Class	Daily Calendar Date - 14 days	Daily Calendar Date that can be found in the Exchange Calendar File up to and including up to two weeks (14 calendar days) past the final trading day covered by the CRSP snapshot and can be null	N	1550013
5	CL	DateDaily180	Item Class	Daily Calendar Date - 180 days	Daily Calendar Date that can be found in the Exchange Calendar File up to and including up to 180 calendar days past the final trading day covered by the CRSP snapshot and can be null	N	1550017
6	CL	DateDlyEnd	Item Class	Daily Calendar End Date	Daily Calendar Date that is the end of a range and is always paired with a DateDlyStart field and cannot be null	N	1550021
7	CL	DateDlyStart	Item Class	Daily Calendar Start Date	Daily Calendar Date that is the start of a range and is always paired with a DateDlyEnd field and cannot be null	N	1550025
8	CL	DateDlyWNull	Item Class	Daily Calendar Date With Null	Daily Calendar Date that can be found in the Exchange Calendar File up to and including the final trading day covered by the CRSP snapshot, but it can be null	N	1550029
9	CL	DateMonth	Item Class	Month-End Date	Date restricted to last trading days of a month and cannot be null and can be found in the PeriodEndDt in the Calendar Period file where period type = M	N	1550033
10	CL	DateQuarter	Item Class	Quarter-End Date	Date restricted to last trading days of a quarter and cannot be null and can be found in the PeriodEndDt in the Calendar Period file where period type = Q	N	1550037

Obs	FlagType	FlagValue	FlagTypeDesc	FlagDesc	FlagDef	FlagCoverageFlg	FlagKey
11	CL	DateTrade	Item Class	Daily Trading Date	Daily Trading Date that can be found in the Exchange Calendar File with Trading Day = Y and can be found in the PeriodEndDt in the Calendar Period file where period type = D	N	1550041
12	CL	DateTrdEnd	Item Class	Daily Trading End Date	Daily Trading Date that is the end of a range and is always paired with a DateTrdStart field and cannot be null	N	1550045
13	CL	DateTrdStart	Item Class	Daily Trading Start Date	Daily Calendar Date that is the start of a range and is always paired with a DateTrdEnd field and cannot be null	N	1550049
14	CL	DescVar-255	Item Class	Description field - 255 characters wide	Description field that is up to 255 characters wide and is restricted to the Alphanumeric, a space, and seven special characters +,-.()=	N	1550053
15	CL	DescVar-50	Item Class	Description field - 50 characters wide	Description field that is up to 50 characters wide and is restricted to the Alphanumeric, a space, and a hyphen	N	1550057
16	CL	FlagFix-1	Item Class	Flag that is exactly 1 character	Flag that is exactly 1 character and more information can be found in the Flag Info File and, if appropriate, the Flag Coverage File	N	1550061
17	CL	FlagFix-2	Item Class	Flag that is exactly 2 characters	Flag that is exactly 2 characters and more information can be found in the Flag Info File and, if appropriate, the Flag Coverage File	N	1550065
18	CL	FlagFix-3	Item Class	Flag that is exactly 3 characters	Flag that is exactly 3 characters and more information can be found in the Flag Info File and, if appropriate, the Flag Coverage File	N	1550069
19	CL	FlagFix-4	Item Class	Flag that is exactly 4 characters	Flag that is exactly 4 characters and more information can be found in the Flag Info File and, if appropriate, the Flag Coverage File	N	1550073
20	CL	FlagVar-16	Item Class	Flag that can be up to 16 characters	Flag that can be up to 16 characters and more information can be found in the Flag Info File and, if appropriate, the Flag Coverage File	N	1550077
21	CL	FlagVar-20	Item Class	Flag that can be up to 20 characters	Flag that can be up to 20 characters and more information can be found in the Flag Info File and, if appropriate, the Flag Coverage File	N	1550081
22	CL	FlagVar-3	Item Class	Flag that can be up to 3 characters	Flag that can be up to 3 characters and more information can be found in the Flag Info File and, if appropriate, the Flag Coverage File	N	1550085
23	CL	FlagVar-4	Item Class	Flag that can be up to 4 characters	Flag that can be up to 4 characters and more information can be found in the Flag Info File and, if appropriate, the Flag Coverage File	N	1550089
24	CL	FlagVar-5	Item Class	Flag that can be up to 5 characters	Flag that can be up to 5 characters and more information can be found in the Flag Info File and, if appropriate, the Flag Coverage File	N	1550093

Obs	FlagType	FlagValue	FlagTypeDesc	FlagDesc	FlagDef	FlagCoverageFlg	FlagKey
25	CL	FlagVar-6	Item Class	Flag that can be up to 6 characters	Flag that can be up to 6 characters and more information can be found in the Flag Info File and, if appropriate, the Flag Coverage File	N	1550097
26	CL	FlagVar-7	Item Class	Flag that can be up to 7 characters	Flag that can be up to 7 characters and more information can be found in the Flag Info File and, if appropriate, the Flag Coverage File	N	1550101
27	CL	IdCNUM	Item Class	CNUM - CUSIP Bureau Issuer - Exactly 6 characters	CNUM - CUSIP Bureau Issuer - Exactly 6 characters wide - See CUSIP Bureau for additional information about the conventions used for this field.	N	1550105
28	CL	IdCUSIP	Item Class	CUSIP Bureau Security - Exactly 8 characters wide	CUSIP Bureau Security - Exactly 8 characters wide - See CUSIP Bureau for additional information about the conventions used for this field.	N	1550109
29	CL	IdCUSIP9	Item Class	CUSIP Bureau Security with Check Digit - width 9	CUSIP Bureau Security with Check Digit - Exactly 9 characters wide - See CUSIP Bureau for additional information about the conventions used for this field. Note - user defined CUSIPs (nnn99nnn or nnnnnn9n) CRSP uses an X for the check digit	N	1550113
30	CL	IdFileName	Item Class	CRSP File Name	CRSP File Name that uniquely identifies a row in MetaFileInfo	N	1550117
31	CL	IdFlagValue	Item Class	CRSP Flag Value	CRSP Flag Value with more information in the Flag Info File and, if appropriate, the Flag Coverage File. When accessing the Flag Info File, Flag Type must also be used. File Name and Column Position must be used when accessing the Flag Coverage File	N	1550121
32	CL	IdItemName	Item Class	CRSP Item Name	CRSP Item Name that uniquely identifies a row in MetaItemInfo	N	1550125
33	CL	IdNAICS	Item Class	NAICS - North Amer Industry Classification System	US Government created North American Industry Classification System (NAICS). It is a six-digit code, and CRSP uses an empty string/NULL or 999990 to indicate unknown or unavailable. CRSP does not differentiate among NAICS editions	N	1550129
34	CL	IdR	Item Class	R code for the data type	R language code for setting to the recommended data type	N	1550133
35	CL	IdSAS	Item Class	SAS code for the data type	SAS language code used in the SAS length statement for setting to the recommended data type	N	1550137
36	CL	IdSASForm	Item Class	SAS code for the data format	SAS language code used in the SAS format statement for setting to the recommended SAS format for either display or export	N	1550141

Obs	FlagType	FlagValue	FlagTypeDesc	FlagDesc	FlagDef	FlagCoverageFlg	FlagKey
37	CL	IdSQL	Item Class	SQL code for the data type	SQL language code used in the table creation to set to the recommended datatype	N	1550145
38	CL	IdTicker	Item Class	Ticker - up to 5 upper case letters	Exchange ticker that is up to five upper case letters and contains no spaces or lower-case letters. An empty string/NULL is used for a missing ticker	N	1550149
39	CL	IdTradingSymbol	Item Class	Trading Symbol - up to 7 upper case letters	Exchange trading symbol that is between one and seven upper case letters and contains no spaces or special characters. An empty string/null is used for a missing Trading Symbol.	N	1550153
40	CL	KeyColCov	Item Class	Column Coverage Key	Column Coverage Key is the unique surrogate integer key for the MetaColumnCoverage file.	N	1550157
41	CL	KeyColumn	Item Class	Column Key	Column Key is the unique surrogate integer key for the MetaColumnInfo file	N	1550161
42	CL	KeyCompno	Item Class	NASDAQ Compno	NASDAQ Compno is a third-party foreign key provided by NASDAQ for a company (Issuer). It is not used as a key by CRSP.	N	1550165
43	CL	KeyFile	Item Class	File Key	File Key is the unique surrogate integer key for the MetaFileInfo file.	N	1550169
44	CL	KeyFlag	Item Class	Flag Key	Flag Key is the unique surrogate integer key for the MetaFlagInfo file.	N	1550173
45	CL	KeyFlagCov	Item Class	Flag Coverage Key	Flag Coverage Key is the unique surrogate integer key for the MetaFlagCoverage file.	N	1550177
46	CL	KeyFlagType	Item Class	Flag Type Key	Flag Type Key is the unique surrogate integer key for the MetaFlagType file	N	1550181
47	CL	KeyINDFAM	Item Class	INDFAM	INDFAM is the unique CRSP integer key for the IndFamilyInfoHdr file	N	1550185
48	CL	KeyINDNO	Item Class	INDNO	INDNO is the unique CRSP integer key for the IndSeriesInfoHdr file	N	1550189
49	CL	KeyIssueno	Item Class	NASDAQ Issuno	NASDAQ Issuno is a third-party foreign key provided by NASDAQ for an issue (security). It is not used as a key by CRSP.	N	1550193
50	CL	KeyItem	Item Class	Item Key	Item Key is the unique surrogate integer key for the MetaItemInfo file.	N	1550197
51	CL	KeyPERMCO	Item Class	PERMCO	PERMCO is the unique CRSP issuer (company) integer key for the StkIssuerInfoHdr file	N	1550201
52	CL	KeyPERMNO	Item Class	PERMNO	PERMNO is the unique CRSP security integer key for the StkSecurityInfoHdr file	N	1550205
53	CL	KeySIZtoCIZ	Item Class	SIZ to CIZ Key	SIZtoCIZ Key is the unique surrogate integer key for the MetaSIZtoCIZ file.	N	1550209

Obs	FlagType	FlagValue	FlagTypeDesc	FlagDesc	FlagDef	FlagCoverageFlg	FlagKey
54	CL	Name100	Item Class	Name Field 100	A field used as a name with up to 100 characters that include alphanumeric and some special characters, including .,(). CRSP does not use name fields as keys fields, but they are available for searching and reporting.	N	1550213
55	CL	Name50	Item Class	Name Field 50	A field used as a name with up to 50 characters that include alphanumeric and some special characters, including .,(). CRSP does not use name fields as keys fields, but they are available for searching and reporting.	N	1550217
56	CL	Name60	Item Class	Name Field 60	A field used as a name with up to 60 characters that include alphanumeric and some special characters, including .,(). CRSP does not use name fields as keys fields, but they are available for searching and reporting.	N	1550221
57	CL	Num1to10	Item Class	Number from 1 to 10	A numeric field that will only contain the numbers from 1 to 10, and, if appropriate, a missing/NULL value.	N	1550225
58	CL	Num1to4	Item Class	Number from 1 to 4	A numeric field that will only contain the numbers from 1 to 4, and, if appropriate, a missing/NULL value.	N	1550229
59	CL	Num1to7	Item Class	Number from 1 to 7	A numeric field that will only contain the numbers from 1 to 7, and, if appropriate, a missing/NULL value.	N	1550233
60	CL	NumCnt100	Item Class	Count from 0 to 100	A numeric field used as a count that will only contain the numbers from 0 to 100, and, if appropriate, a missing/NULL value.	N	1550237
61	CL	NumCnt100K	Item Class	Count from 0 to 100,000	A numeric field used as a count that will only contain the numbers from 0 to 100,000, and, if appropriate, a missing/NULL value.	N	1550241
62	CL	NumCnt10K	Item Class	Count from 0 to 10,000	A numeric field used as a count that will only contain the numbers from 0 to 10,000, and, if appropriate, a missing/NULL value.	N	1550245
63	CL	NumCnt10M	Item Class	Count from 0 to 10,000,000	A numeric field used as a count that will only contain the numbers from 0 to 10,000,000, and, if appropriate, a missing/NULL value.	N	1550249
64	CL	NumCnt1B	Item Class	Count from 0 to 1,000,000,000	A numeric field used as a count that will only contain the numbers from 0 to 1,000,000,000, and, if appropriate, a missing/NULL value.	N	1550253
65	CL	NumCnt1K	Item Class	Count from 0 to 1,000	A numeric field used as a count that will only contain the numbers from 0 to 1,000, and, if appropriate, a missing/NULL value.	N	1550257
66	CL	NumCnt1M	Item Class	Count from 0 to 1,000,000	A numeric field used as a count that will only contain the numbers from 0 to 1,000,000, and, if appropriate, a missing/NULL value.	N	1550261

Obs	FlagType	FlagValue	FlagTypeDesc	FlagDesc	FlagDef	FlagCoverageFlg	FlagKey
67	CL	NumCnt20	Item Class	Count from 0 to 20	A numeric field used as a count that will only contain the numbers from 0 to 20, and, if appropriate, a missing/NULL value.	N	1550265
68	CL	NumCnt200	Item Class	Count from 0 to 200	A numeric field used as a count that will only contain the numbers from 0 to 200, and, if appropriate, a missing/NULL value.	N	1550269
69	CL	NumCnt350	Item Class	Count from 0 to 350	A numeric field used as a count that will only contain the numbers from 0 to 350, and, if appropriate, a missing/NULL value.	N	1550273
70	CL	PctShares	Item Class	Shares Percentage	A number calculated by dividing two numbers and it is sometimes expressed as a percent. These fields are often used in other calculations, and care should be taken to ensure sufficient precision.	N	1550277
71	CL	PerAny	Item Class	Period Value - Any Frequency	A period value of any frequency (annual, quarterly, monthly, weekly, daily) found and defined in the MetaCalendarRanges file	N	1550281
72	CL	PerDay	Item Class	Daily Period Value - YYYYMMDD	A daily period value found and defined in the MetaCalendarRanges file and in the integer YYYYMMDD format with values between 19251231 and the current cut-date.	N	1550285
73	CL	PerMonth	Item Class	Monthly Period Value - YYYYMM	A monthly period value found and defined in the MetaCalendarRanges file and in the integer YYYYMM format with values between 192512 and the current cut-month	N	1550289
74	CL	PerQuarter	Item Class	Quarterly Period Value - YYYYQ	A quarterly period value found and defined in the MetaCalendarRanges file and in the integer YYYYQ format with values between 19254 and the current cut-quarter	N	1550293
75	CL	PerYear	Item Class	Annual (Yearly) Period Value - YYYY	A annual (yearly) period value found and defined in the MetaCalendarRanges file and in the integer YYYY format with values between 1925 and the current cut-year.	N	1550297
76	CL	QtyShares	Item Class	Quantity Shares	A field used to store shares which are an integer field.	N	1550301
77	CL	QtyVolume	Item Class	Quantity Volume	A field used to store volumes which are an integer field that has exceeded at time 2,000,000,000 and therefore cannot be stored as a 32-bit integer.	N	1550305
78	CL	RatioCount	Item Class	Ratio of Counts	A number calculated by dividing one count by another count and usually expressed as a percent. This fields are more often used for filters, reporting, and information and not for additional calculations.	N	1550309

Obs	FlagType	FlagValue	FlagTypeDesc	FlagDesc	FlagDef	FlagCoverageFlg	FlagKey
79	CL	RatioFactor	Item Class	Calculation Factors	A number calculated by dividing two numbers and it is sometimes expressed as a percent. These fields are often used in other calculations, and care should be taken to ensure sufficient precision.	N	1550313
80	CL	RatioIncRet	Item Class	Income Return	A number containing an income return and often expressed as a percent. These numbers have a very limited range being greater than or equal to zero and, except in very unusual circumstances is less than 0.05.	N	1550317
81	CL	RatioReturn	Item Class	Return	A number containing an index or security return that is often expressed as a percent. These numbers have a limited left tail (all values are greater than or equal to -1) and usually are less than 1.0, and are often used in other calculations and analyses	N	1550321
82	CL	ValBaseLvl	Item Class	Base Index Level	A number containing the base value for an index, usual a number that is easy to express and remembers, (e.g. 1, 10, 100, 1000).	N	1550325
83	CL	ValCap	Item Class	Security or Issuer Capitalization	A number containing a security or issuer capitalization. These numbers contain a wide range of values and with prices in the 1000th and some values in the trillions, a large number of digits can be needed, and are often used in calculations.	N	1550329
84	CL	ValDivAmt	Item Class	Distribution or Dividend Amount	A number containing a dividend or distribution amounts. While these are most commonly small round numbers (e.g. 0.10, 0.25), this fields can also contain merger terms that can be very large and are often used in calculation .	N	1550333
85	CL	ValLevel	Item Class	Index Level	A number containing an index level that reflects an indexes cumulative returns from the base date. This numbers, for some indexes, can get exceptionally large.	N	1550337
86	CL	ValMktVal	Item Class	Market Value for an Index	A number containing the market value of an indexes. These numbers contain a wide range of values because micro-cap indexes have lower value, while entire market indexes have values in the trillions..	N	1550341
87	CL	ValPrc	Item Class	Security Price	A number containing a security price. Prices are always positive, but there are individual securities close to half a million and stocks well under a dollar. The switch from factional prices to decimal pricing also needs to factored into storage..	N	1550345
88	CL	ValPrcVol	Item Class	Security Price times Volume	A number containing the value a very wide range of values, but all great than zero, but can be in the billions and trillions.	N	1550349

Obs	FlagType	FlagValue	FlagTypeDesc	FlagDesc	FlagDef	FlagCoverageFlg	FlagKey
89	CL	ValSecStat	Item Class	Security Statistics	A number containing a security statistic. Storage needs to be flexibility enough that it can handle values in the billions or trillions when market capitalization, quite small when it is a standard deviation, and even negative when a beta.	N	1550353

About CRSP Research Data Products

Center for Research in Security Prices (CRSP), originally established at the University of Chicago in 1960, is widely recognized as a leading provider of research quality historical market and returns data. Built on rigorous academic standards, its research data products are trusted by academic, commercial, and government institutions worldwide that rely on accurate, transparent data for meticulous financial analysis, economic research, and policy development where precision and historical continuity are essential.

In February 2026, Morningstar completed the acquisition of CRSP, integrating CRSP's research data products—renowned for their academic rigor, historical depth, and accuracy—into Morningstar's global data and research platform. This combination enhances Morningstar's equity research capabilities while continuing CRSP's legacy of providing high quality data to support institutional research, benchmarking, and investment decision making.

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