# **CRSP U.S. STOCK & INDEX RELEASE NOTES**

APRIL 2020 MONTHLY UPDATE

These release notes pertain to the April 2020 Monthly release of the CRSP US Stock and Index databases, available in May 2020.

# NEW CALENDAR FREQUENCY FILES COMING SOON

CRSP has created a new set of tables that will accompany all SAS, ASCII, and R Stock database files. Monthly, Quarterly, and Annual frequency tables are built from aggregated daily time series data to facilitate ease of use for subscribers.

These aggregate tables include new reference flag to provide insights into prices, returns, delisting data, and volumes.

New tables are automatically included when downloading the Stock databases from the CRSP MOVEit site. Files will be available with the May 2020 databases released in June 2020.

Details can be found in the CRSP US Stock and Indexes Databases for SAS, ASCII, and R.

For more information, contact <a href="mailto:support@crsp.org">support@crsp.org</a>.

# ANNOUNCING CRSP10!

CRSP is pleased to introduce CRSP10, a variation of our research-quality stock database. CRSP10 holds 10 years of monthly history for active and inactive securities and is ideal for use in the classroom and for training. The full dataset, delivered in a single Excel workbook, contains the time series and event history data for which CRSP is renowned. All existing stock database subscribers are entitled to access to this database! <u>Click here for more information</u>.

# **ANNOUNCING 'R' FORMAT DATASETS**

Starting with the December 2019 data release, the CRSP USE Stock and Index Family of Database products became available in 'R' format datasets. The 'R' datasets are in the zip file s\*z20\*\_r. zip in the same folder on MOVEit Cloud as the other formats of the data. The first release of these files was January 31, 2020.

# **PRECISION CHANGES**

CRSP is in the process of re-engineering our back office to remove phantom precision and increase the real precision throughout the Stock and Indexes flat files. Phantom precision from SAS was removed. For example, IBM's price on 11/27/2015 of \$138.46 was internally in SAS as 138.460006713867. It is now internally 138.460000000000. Second, in preparation for expanded precision in the future any floating point field in ASCII that was previously seven significant digits (e.g. 1.384600E+02) has been expanded to ship with 14 significant digits (the limit of the a 8-byte floating point number) in scientific notation (e.g. 1.384600000000E+02).

# **APRIL 2020 DATA EDITS**

#### **GROUP EDITS**

BEGDT	ENDDT	DESC
1962	2020	RESEARCHED SHARES OUTSTANDING DATA WHERE SECURITIES CHANGED EXCHANGES OR HAD SHARES CHANGES ON 19620702. EDITS WERE MADE TO ABOUT 50 SECURITIES AND INCLUDE CHANGES TO SHARES OUTSTANDING AMOUNTS AND CHANGES TO SHARES FLAG RANGING FROM 1962-2020

**CRSP**<sup>°</sup> **CENTER FOR RESEARCH IN SECURITY PRICES, LLC** An Affiliate of the University of Chicago Booth School of Business

# **INDIVIDUAL EDITS**

PERMNO	COMNAM	DESC
15165	VIRGINIA CAROLINA CHEM CORP	CHANGED SECURITY STATUS TO W FROM Q FOR 19251231-19260603
15927	VANECK VECTORS E T F TRUST	CHANGED TICKER TO EINC FROM YMLP FOR 20191202-PRESENT
13744	EXCHANGE TRADED CONCEPTS TR	CHANGED TRADING SYMBOL AND TICKER TO FLAG FROM DUAL ON 20200331
19147	WISEKEY INTERNATIONAL HOLDING AG	CHANGED CLOSING PRICE TO -5.51 FROM 0, ASKHIGH TO 6.07 FROM 0, BIDLOW TO 4.95 FROM 0 AND VOLUME TO 0 FROM 115 ON 20200323
17311	BIOFRONTERA AG	CHANGED CLOSING PRICE TO -7.735 FROM 0, ASKHIGH TO 8.05 FROM 0, BIDLOW TO 7.42 FROM 0 AND VOLUME TO 0 FROM 98 ON 20200316
17080	RHINE WESTPHALIA ELEC PWR CORP	CHANGED SHARE CODE TO 30 FROM 10 FOR ENTIRE HISTORY
68929	LIBERTY ALL STAR GROWTH FD INC	ADDED RIGHTS DISTRIBUTION OF .456 ON EXDATE 20200207.
14575	NEW YORK REIT INC	CHANGED DELIST CODE TO 470 FROM 450, CHANGED DISTRIBUTION CODE TO 2844 FROM 2255 ON EX-DATE 20181105, AND ADDED LIQUIDATION PAYMENTS ON EX-DATES 20190315, 20190513, 20190812 & 20191112
13162	MID CON ENERGY PARTNERS L P	REMOVED REVERSE SPLIT ON EX-DATE 20200324
15962	INVESCO E T F TRUST II	CHANGED DELIST CODE TO 450 FROM 470 AND ADDED FINAL LIQUIDATION PAYMENT ON EX-DATE 20200218
89749	INVESCO EXCHANGETRADED FD TRUST	CHANGED DELIST CODE TO 450 FROM 470 AND ADDED FINAL LIQUIDATION PAYMENT ON EX-DATE 20200218
14931	INVESCO E T F TRUST II	CHANGED DELIST CODE TO 450 FROM 470 AND ADDED FINAL LIQUIDATION PAYMENT ON EX-DATE 20200218
15781	INVESCO E T F TRUST II	CHANGED DELIST CODE TO 450 FROM 470 AND ADDED FINAL LIQUIDATION PAYMENT ON EX-DATE 20200218
89561	INVESCO BLDRS INDEX FDS TRUST	CHANGED DELIST CODE TO 450 FROM 470 AND ADDED FINAL LIQUIDATION PAYMENT ON EX-DATE 20200214
89560	INVESCO BLDRS INDEX FDS TRUST	CHANGED DELIST CODE TO 450 FROM 470 AND ADDED FINAL LIQUIDATION PAYMENT ON EX-DATE 20200214
89563	INVESCO BLDRS INDEX FDS TRUST	CHANGED DELIST CODE TO 450 FROM 470 AND ADDED FINAL LIQUIDATION PAYMENT ON EX-DATE 20200214

# FILE VERSION SPECIFICS

This table contains version specific information for the CRSP Stock Files with data ending April 2020. It contains the number of securities and information about the maximums of the event arrays.

DATA FREQUENCY	<b># OF SECURITIES</b>	MAX NAMES	MAX DISTS	MAX SHARES	MAX DELISTS	MAX GROUPS	MAX NASDIN	FIRST PERMNO	LAST PERMNO
DAILY	33726	28	1538	3221	1	4	2762	10000	93436
MONTHLY	33698	28	1538	3221	1	4	2762	10000	93436

CALENDAR	DATE RANGE	DATE INDEX RANGE
DAILY TRADING CALENDAR	19251231-20200430	1-24876
MONTH-END TRADING CALENDAR	19251231-20200430	1-1133
YEAR-END TRADING CALENDAR	19251231-20201231	1-97
QUARTER-END TRADING CALENDAR	19251231-20201231	1-385
WEEKLY TRADING CALENDAR	19260102-20200430	1-4922

# **CRSPACCESS PRODUCT INFORMATION**

To simplify installation for our subscribers, data are bundled into product groups. Information relevant to each product group is listed in the table below.

PRODUCT NAME	DATABASE	SIZE	INDEXES	PORTFOLIOS	COMPONENTS & DESCRIPTION
CRSP 1925 US STOCK AND INDEX DATABASE	FIZYYYYMM SIZYYYYMM (R/SAS/ASCII)	4.1 GB	ALL CRSP INDEXES AND PORTFOLIO ASSIGNMENTS	ALL PORTFOLIOS	DI - 1925 DAILY US STOCK & INDEX DATABASE MI - 1925 MONTHLY US STOCK & INDEX DATABASE IF - CRSP SUPPLEMENTAL US INDEXES
CRSP 1925 US STOCK	FAZYYYYMM SAZYYYYMM (R/SAS/ASCII)	3.7 GB	CRSP NYSE/ AMEX/ NASDAQ VALUE-WEIGHTED MARKET, CRSP NYSE/ AMEX/ NASDAQ EQUAL-WEIGHTED MARKET, S&P 500 COMPOSITE, NASDAQ COMPOSITE		DA - 1925 DAILY US STOCK MA - 1925 MONTHLY US STOCK IN - CRSP LIMITED US INDEXES
CRSP 1962 US STOCK	A6ZYYYYMM S6ZYYYYMM (SAS/ASCII)	3.3 GB	CRSP NYSE/ AMEX/ NASDAQ VALUE-WEIGHTED MARKET, CRSP NYSE/ AMEX/ NASDAQ EQUAL-WEIGHTED MARKET, S&P 500 COMPOSITE, NASDAQ COMPOSITE		D6 - 1962 DAILY US STOCK M6 - 1962 MONTHLY US STOCK IN - CRSP LIMITED US INDEXES
CRSP 1962 US STOCK AND INDEX DATABASE	AXZYYYYMM SXZYYYYMM (R/SAS/ASCII)	3.6 GB	SEE FIZ	ALL PORTFOLIOS	DX - 1962 DAILY US STOCK & INDEX DATABASE MX - 1962 MONTHLY US STOCK & INDEX DATABASE IF - CRSP SUPPLEMENTAL US INDEXES
CRSP 1925 US INDEXES	IFZYYYYMM SFZYYYYMM	122 MB			IF - CRSP SUPPLEMENTAL US INDEXES
CRSP/COMPUSTAT MERGED DATABASE	CMZYYYYMM CFZYYYYMM (FULL PRODUCT) CLZYYYYMM (LINK PRODUCT) (R/SAS/ASCII)	10.37 GB			CM - COMPUSTAT DATA FORMATTED IN CRSPACCESS DATABASE
DAILY & MONTHLY TREASURIES IN CRSPSIFT	TRZYYYYMM	278 MB			TR - DATABASE FORMAT FOR USE WITH CRSPSIFT
DAILY & MONTHLY TREASURIES FILES	TFZYYYYMM	1.75 GB			TF - EXPANDED DAILY AND MONTHLY FILES IN Excel, SAS, and ascii formats
MUTUAL FUND DATABASE	MFZYYYYMM	10 GB			MF - MUTUAL FUNDS
CRSP/ZIMAN DAILY & MONTHLY REIT	RAZYYYYMM	251 MB			RD - DAILY REITS RM - MONTHLY REITS

# DELIVERY METHOD, INSTALLS, AND DATA FORMATS

#### DELIVERY

CRSP data delivery for all products is available only through the Cloud, utilizing IPSwitch's MOVEit Cloud product. (https:// crsp.moveitcloud.com)

If you have not yet accessed your account, or need assistance, contact support@crsp.chicagobooth.edu, or call 312-263-6400, Option 2.

While DVDs are no longer available from CRSP, you are welcome to create your own once you have downloaded the data, and use as long as you have an active license to do so.

#### **ZIP INSTALLS**

CRSP uses a zip process for data installation. ZIP utilities that are standard on all platforms should work to unzip the databases. On Windows computers, CRSP recommends using 7-ZIP, which can be downloaded from this site: http://www.7-zip.org/

Several important items to note follow:

• All directories are extracted to lower case letters. For example: C:\crspdata\miz201308

- All Windows Users: Extracting a zipped file does not create an installed program in Windows. It will not show in the Windows Control Panel. When uninstalling the data, just delete the directories that contain the detailed files
- Red Hat Linux Users: If your version of Red Hat is earlier than 6.0, you will need to install an updated version of the "File Roller" program in order to install the data

# ZIP FILE STRUCTURE AND PROCESS

# WINDOWS 7/XP PRODUCTS:

PRODUCT LABEL	PRODUCT NAME	FILE NAME
A6Z1_YYYYMM_SLD	CRSP 1962 US STOCK	A6ZYYYYMM_CADB.ZIP
AXZ1_YYYYMM_SLD	CRSP 1962 US STOCK AND INDEX	AXZYYYYMM_CADB.ZIP
FAZ1_YYYYMM_SLD	CRSP 1925 US STOCK	FAZYYYYMM_CADB.ZIP
FIZ1_YYYYMM_SLD	CRSP 1925 US STOCK AND INDEX	FIZYYYYMM_CADB.ZIP
IFZ1_YYYYMM_SGD	CRSP 1925 INDEXES	IFZYYYYMM_CADB.ZIP

# **RED HAT LINUX PRODUCTS:**

PRODUCT LABEL	PRODUCT NAME	FILE NAME
A6Z1_YYYYMM_SLD	CRSP 1962 US STOCK	A6ZYYYYMM_CADB.ZIP
AXZ1_YYYYMM_SLD	CRSP 1962 US STOCK AND INDEX	AXZYYYYMM_CADB.ZIP
FAZ1_YYYYMM_SLD	CRSP 1925 US STOCK	FAZYYYYMM_CADB.ZIP
FIZ1_YYYYMM_SLD	CRSP 1925 US STOCK AND INDEX	FIZYYYYMM_CADB.ZIP
IFZ1_YYYYMM_SGD	CRSP 1925 INDEXES	IFZYYYYMM_CADB.ZIP

#### FLAT FILE PRODUCTS:

PRODUCT NAME	FILE NAME
SAS ZIP	S*ZYYYYMM_SAS.ZIP
ASCII ZIP	S*ZYYYYMM_ASCII.ZIP
R ZIP	S*ZYYYYMM_R.ZIP

#### **STEPS TO INSTALL:**

- From the directory containing your downloaded zip file, right click (in Windows) or run File Roller (in Red Hat)
- Set the extract destination to the current higher level directory where data is normally stored and unzip will add the rest of the path (default is C:\ in Windows or /home in Red Hat)
- For example, in Windows, extracting to C:\ will install the data under C:\crspdata

Contact CRSP Client Services for assistance at: support@crsp.chicagobooth.edu or call 312-263-6400, Option 2.

#### SETTING ENVIRONMENT VARIABLES

The zip process will not automatically set environment variables for use with command line tools. The following steps will do so.

NOTE: CRSPSift does not use and therefore does not require environment variables.

#### LINUX

NOTE: The new zip installs are now saving to directories with lower case letters – for example, ~/crspdata/diz201308

Check the current state of the environment variables by entering this command: env | grep crsp

- If you have admin privileges on your machine, open the .profile file, and make updates to the following lines to update the paths for the new data installed:
  - CRSP\_DSTK=<full path name>/<daily stock directory> (example: CRSP DSTK=~/crspdata/diz201308)

- CRSP\_MSTK==<full path name>/<monthly stock directory> (example: CRSP DSTK=~/crspdata/miz201308)
- o CRSP\_IND=<full path name>/<index directory> (example: CRSP\_IND=~/crspdata/ifz201308)
- If you are using the bash shell (or any Bourne-style shell), enter the same commands above and export each one. This will make changes for your current session only and does not save to the .profile file.
- A shell script is available to make changes that can be reused for each update done. Note that this will only make changes to your current session and does not save to the .profile file.
  - Navigate to where the CUPL tools are loaded and then enter: cd accbin
  - Start the script by entering: ./crsp\_setup.sh
  - The script will prompt for the following:
    - File name (will be appended with .kshrc)
    - Top level directory (this should be where CUPL tools are located (*example:* ~/crsp)
    - Scratch directory for error messages name can be anything
    - Enter path for daily stock directory (*example:* ~/crspdata/diz201308)
    - Enter path for monthly stock directory (*example:* ~/crspdata/miz201308)
    - Enter path for index directory (example: ~/crspdata/ifz201308)
    - Enter path for CCM directory enter to leave blank
    - Enter path for CST directory enter to leave blank
    - Execute script by running: . ./<file name created above>.kshrc (note there is a space between the two dots)

#### WINDOWS:

The CRSP Client Environment utility provides users a way to check the location of the software and to set environment variables. The utility can be started by locating it under installed programs CRSPAccess/CRSP Client Environment, or by navigating to the /accbin folder where the CUPL tools are installed and running: Client\_Environment.exe (screen shot is displayed below). After making any changes, be sure to log off and back into Windows for the settings to be saved.

Note: For subscribers of the CRSP Compustat Merged database, additional CCM database environments will be displayed for the location of the Compustat data.