

These release notes pertain to the December 2014 Annual release of the CRSP US Stock and Index databases, shipped in January 2015.

DELIVERY METHOD

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.

ATTENTION CRSPSIFT USERS!

On August 7, 2014, Sift version 4.2 expired.

New versions of Sift Professional and Enterprise are now available to all CRSP subscribers for downloading and can be found on our MOVEit site, <https://crsp.moveitcloud.com> in the Utilities_Download folder.

Sift Professional 4.3.6 is supported on Windows 7 and Windows 8 computers. Sift Enterprise supports Servers 2008 R2 and 2012 R2. See details in the Sift Release Notes on our website at http://www.crsp.chicagobooth.edu/files/images/release_notes/crpsift_rn_v436.pdf

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

ATTENTION TS_PRINT AND TSQUERY USERS

A defect in converting total dividend amount (TDIVAMT) and factor to adjust price (FACPRC) to a daily time series and their monthly time series equivalents MTDIVAMT and MFACPRC was identified and has been corrected. The defect was introduced in CUPL version 3.86, and CRSPSift Version 4.3.6 and continued into CRSPSift version 4.3.12. If you have installed any of these, a platform specific patch file has been created and is available for download from our MFT site. The patch includes instructions on how to replace the single file; the patch does not require re-installation. The defect impacts only the Time Series Access tools `ts_print` and `TSQuery`, and only the above four items. The defect did not impact the underlying data or access through the Event View Access tools, `crsp_print`, or `StkQuery`.

For those that have not recently installed a version of CUPL or CRSPSift, or would prefer to do a complete installation, full versions of "CUPL Version 3.86 with Updated `ts_print`" and the latest CRSPSift Version 4.3.13, will be available for download by close of business February 2.

For assistance, contact CRSP support at 312-263-6400, Option 2 or email support@crsp.chicagobooth.edu.

DECEMBER 2014 DATA EDITS

GROUP EDITS

| BEGDT | ENDDT | DESCRIPTION |
|-------|-------|---|
| 2013 | 2014 | Reviewed shares outstanding for securities with acquisitions having stock distributions as part of their merger terms for 2013-2014. We used the merger terms to calculate how many additional shares are expected to be added due to the merger and made corrections to our shares outstanding values as needed on over 30 merger events. Some edits were made to shares outstanding values outside this immediate range corresponding to the stock event. |
| 1925 | 1946 | Reviewed the shares outstanding history from 1925-1946 as part of a larger pre-1946 shares review project. Over 4000 edits were made to 400 PERMNOs. Project is 100% complete. |

INDIVIDUAL EDITS

| PERMNO | COMNAM | DESCRIPTION | BEGDT | ENDT |
|--------|----------------------------------|--|-----------|------------|
| 12877 | H C 2 HOLDINGS INC | Added zero nameline for 20140414-20141228 to reflect off-exchange activities. | 4/14/2014 | 12/28/2014 |
| 78955 | AVID TECHNOLOGY INC | Added zero nameline to reflect off-exchange activities for 20140225-20141207. | 2/25/2014 | 12/7/2014 |
| 12485 | 6D GLOBAL TECHNOLOGIES INC | Added zero namelines to reflect off-exchange activities for 20110302-20141211. | 3/2/2011 | 12/11/2014 |
| 87656 | PLASMATECH BIOPHARMACEUTICALS IN | Added zero nameline to reflect off-exchange activities for 20060201-20141218. | 2/1/2006 | 12/18/2014 |
| 13579 | NATIONAL BANK HOLDINGS CORP | Changed the start date from 20120921 to 20120920. | 9/20/2012 | 9/21/2012 |
| 13580 | SPIRIT REALTY CAPITAL INC | Changed the start date from 20120921 to 20120920. | 9/20/2012 | 9/21/2012 |
| 13584 | SUNOCO LP | Changed the start date from 20120921 to 20120920. | 9/20/2012 | 9/21/2012 |
| 13585 | TRULIA INC | Changed the start date from 20120921 to 20120920. | 9/20/2012 | 9/21/2012 |
| 15139 | VIPER ENERGY PARTNERS LP | Added all historical data from PERMNO 93860 | | |
| 15140 | LANDMARK INFRA PARTNERS LP | Added all historical data from PERMNO 93884 | | |
| 15141 | GULF COAST ULTRA DEEP ROYALTY TR | Added all historical data from PERMNO 93859 | | |

NOVEMBER 2014 DATA EDITS

INDIVIDUAL EDITS

| PERMNO | COMPANY NAME | DESCRIPTION | BEGDT | ENDT |
|--------|---------------------------------|--|-----------|------------|
| 34936 | NETWORK 1 TECHNOLOGIES INC | Added zero namelines for 20030326-20141118 to reflect off-exchange activities | 3/26/2003 | 11/18/2014 |
| 14901 | FIRST TR EXCHANGE TRADED FD III | Changed permco to 54860 from 55010 throughout entire history | | |
| 89382 | S A P SE | Changed company name to S A P SE from S A P AG for 20140708-present | 7/8/2014 | 10/31/2013 |
| 13579 | NATIONAL BANK HOLDINGS CORP | Changed the start date to 20120920 from 20120921, and added prices on 20120920 | 9/20/2012 | 9/20/2012 |
| 13580 | SPIRIT REALTY CAPITAL INC | Changed the start date to 20120920 from 20120921, and added prices on 20120920 | 9/20/2012 | 9/20/2012 |
| 13584 | SUNOCO LP | Changed the start date to 20120920 from 20120921 and added prices on 20120920 | 9/20/2012 | 9/20/2012 |
| 13585 | TRULIA INC | Changed the start date to 20120920 from 20120921 and added prices on 20120920 | 9/20/2012 | 9/20/2012 |

INDIVIDUAL EDITS

| PERMNO | COMPANY NAME | DESCRIPTION | BEGDT | ENDDT |
|--------|--------------------------------|---|------------|------------|
| 77569 | APTOSE BIOSCIENCES INC | Added zero nameline for 20081031-20141022 to reflect off-exchange activities. | 10/31/2008 | 10/22/2014 |
| 91376 | ATLAS ENERGY L P | Changed distribution code to 3763 from 1232, declare date to 20120216 from 20120314, acquiring PERMNO to 13204 from 0, acquiring PERMCO to 53980 from 0 for distribution on ex-date 20120314. | 3/14/2012 | 3/14/2012 |
| 93755 | COLLABRIUM JAPAN ACQUISIT CORP | Changed shares outstanding to 5600 from 1533 for 20130930-20141031. | 9/30/2013 | 10/31/2014 |
| 14545 | LIPOCINE INC | Removed all prices and volume history on 20140917 to reflect one-day halt. | | |
| 83827 | MMA CAPITAL MANAGEMENT LLC | Added zero namelines for 20080206-20141008 to reflect off-exchange activities. | 2/6/2008 | 10/8/2014 |
| 80560 | N P S PHARMACEUTICALS INC | Removed all prices and volume history on 20140912 to reflect one-day halt. | | |
| 14835 | VASCULAR BIOGENICS LTD | Removed all data from 20140808-present and added delisting record on 20140807. | | |
| 14835 | VASCULAR BIOGENICS LTD | Changed PERMCO to 55080 from 54979 and org_id to 99995037 from 60074540 throughout entire history | | |
| 77011 | ZOOM TECHNOLOGIES INC | Removed all data from 20140821-present and added delisting record on 20140820. | | |

SEPTEMBER 2014 DATA EDITS

UPDATE ON PRE-1946 SHARES OUTSTANDING RESEARCH

Over the last year we began a comprehensive review of shares outstanding data for all the securities in our Stock database. So far, we have reviewed over 500 PERMNOs and made over 10000 additions and changes to the shares outstanding values from 1925-1946. We are about 40% done with the project and anticipate competing the remaining research before the end of 2014.

GROUP EDITS

| BEGDT | ENDDT | DESCRIPTION |
|-------|-------|--|
| 1925 | 1946 | Reviewed the shares outstanding history from 1925-1946 as part of a larger pre-1946 shares reiew project. Over 5000 edits were made to 282 PERMNOs. Project is 40% complete. |

INDIVIDUAL EDITS

| PERMNO | COMPANY NAME | DESCRIPTION | BEGDT | ENDDT |
|--------|---------------------------------------|--|------------|------------|
| 13500 | AMREIT INC | Removed Class B stock beginning 20130425. | 4/25/2013 | 8/29/2014 |
| 89336 | NUVEEN DIV ADV MUNI INCOME FD | Changed share code to 44 from 14 throughout entire history. | 3/26/2002 | 8/29/2014 |
| 70536 | SIGMA ALDRICH CORP | Removed 325998 from sub-exchange field for 20010824-present. | 8/24/2001 | 8/29/2014 |
| 90842 | NATURAL RESOURCE PARTNERS L P | Removed 'SUBORDINATED UNITS' from the name description field throughout entire history. | | |
| 13076 | BLACKROCK UTILITY & INFRASTRUCTURE TR | Changed distribution code to 1222 from 1232 on ex-date 20140813. | 8/13/2014 | 8/13/2014 |
| 90954 | SAJAN INC | Added zero nameline for 20081023-20140903 to reflect off-exchange activities. | 10/23/2008 | 9/3/2014 |
| 31886 | FINANCIAL GENERAL BANKSHARES INC | Changed distribution code to 3853 from 3753 and removed acquiring PERMNO and permco from stock distribution on ex-date 19681029. | 10/29/1968 | 10/29/1968 |
| 89317 | TRANSCONTINENTAL REALTY INVS INC | Changed share code to 48 from 18 for 19890925-19900819 and changed exchange code to 31 from 1 for 19900820-19900909. | 9/25/1989 | 9/9/1990 |
| 62156 | BLACKSTONE MORTGAGE TRUST INC | Changed share code to 18 from 48 for 19990129-present and added Class A for 19970716-present. | 7/16/1997 | 8/29/2014 |
| 92948 | GOVERNMENT PROPERTIES INCOME TR | Changed share code to 48 from 18 throughout entire history. | | |

AUGUST 2014 DATA EDITS

GROUP EDITS

| BEGDT | ENDDT | DESCRIPTION |
|----------|----------|--|
| 20001201 | 20121231 | Reviewed potential missing distributions for ADR securities with ex-dates ranging from 2000 to 2012. Made 92 total distribution edits for 35 ADRs. |

INDIVIDUAL EDITS

| PERMNO | COMPANY NAME | DESCRIPTION | BEGDT | ENDDT |
|--------|----------------------------------|---|------------|-----------|
| 91801 | COREENERGY INFRASTRUCTURE TR INC | Changed share code to 18 from 11 for 20130102-present. | 1/2/2013 | 7/31/2014 |
| 86339 | CROWN CASTLE INTERNATIONAL CORP | Changed share code to 18 from 11 for 20140102-present. | 1/2/2014 | 7/31/2014 |
| 10201 | ATLANTIC POWER CORP | Changed share code to 12 from 11 throughout entire history. | | |
| 92423 | THOMPSON CREEK METALS CO INC | Changed share code to 12 from 11 throughout entire history. | | |
| 13185 | JUST ENERGY GROUP INC | Changed share code to 12 from 11 throughout entire history. | | |
| 13191 | PRETIUM RESOURCES INC | Changed share code to 12 from 11 throughout entire history. | | |
| 13438 | GOLD STANDARD VENTURES CORP | Changed share code to 12 from 11 throughout entire history. | | |
| 69446 | VISTA GOLD CORP | Changed share code to 12 from 11 for 20020619-present. | 6/19/2002 | 7/31/2014 |
| 80307 | VALEANT PHARMACEUTICALS INTL INC | Changed share code to 12 from 11 for 20100928-present. | 9/28/2010 | 7/31/2014 |
| 88240 | AETERNA ZENTARIS INC | Changed share code to 12 from 10 for 20000510-20040602 and to 12 from 11 for 20040603-present. | | |
| 91038 | ALMADEN MINERALS LTD | Changed share code to 12 from 11 throughout entire history. | | |
| 25022 | COMCAST CORP | Changed issue_id to 99995047 from 1230 throughout entire history. | | |
| 89525 | COMCAST CORP NEW | Changed issue_id to 1230 from 39176 throughout entire history. | | |
| 81190 | VOLT INFORMATION SCIENCES INC | Added zero nameline for 20110127-20140825 to reflect off-exchange activity. | 1/27/2011 | 8/25/2014 |
| 90752 | C I F C CORP | Changed distribution code to 1232 from 1222 on ex-date 20140521. | 5/21/2014 | 5/21/2014 |
| 80812 | ENERGY FOCUS INC | Added zero namelines to reflect off-exchange activities for 20111129-20140806. | 11/29/2011 | 8/6/2014 |
| 91078 | IMMUNE PHARMACEUTICALS INC | Added zero namelines to reflect off-exchange activities for 20110919-20140820. | 9/19/2011 | 8/20/2014 |
| 83734 | WILHELMINA INTERNATIONAL INC | Added zero namelines to reflect off-exchange activities for 20031010-20140804. | 10/10/2003 | 8/4/2014 |
| 75497 | EYE TECHNOLOGY INC | Removed all data for PERMNO 75497 and added it to PERMNO 87816. | | |
| 92556 | LIME ENERGY CO | Removed all data for PERMNO 92556 and added it to PERMNO 88850. | | |
| 87816 | ROCK CREEK PHARMACEUTICALS INC | Added all data from PERMNO 75497 to PERMNO 87816 for 19860325-20000320. | 3/25/1986 | 3/20/2000 |
| 88850 | LIME ENERGY CO | Added all data from PERMNO 92556 to PERMNO 88850 for 20060612-present. | 6/12/2006 | 8/29/2014 |
| 92582 | F A B UNIVERSAL CORP | Removed halt record from 20131122-20140731 and added delisting date of 20131121 with delist code 580, next date of 20140812 and next price of \$1.10. | 11/22/2013 | 7/31/2014 |

GROUP EDITS

| BEGDT | ENDDT | DESCRIPTION |
|-------|-------|---|
| 2013 | 2014 | Reviewed potential missing distributions for ADR securities with ex-dates in 2013 & 2014. Added missing distributions for 30 ADRs. Project is 10% complete. |

INDIVIDUAL EDITS

| PERMNO | COMNAM | DESCRIPTION | BEGDT | ENDDT |
|--------|-----------------------|---|------------|------------|
| 87029 | CONOCO INC | Changed shares outstanding to 624873 from 324873 for 20011008-20011030. | 10/8/2001 | 10/30/2001 |
| 88838 | GENZYME CORP | Changed company name to Genzyme Corp from Genzyme Biosurgery throughout entire history. | | |
| 27204 | ONE HORIZON GROUP INC | Added zero namelines for 19981015-20140708 to reflect off-exchange activities. | 10/15/1998 | 7/8/2014 |
| 92878 | OAK VALLEY BANCORP | Changed distribution code to 1242 from 1212 on ex-date 20140102. | 1/2/2014 | 1/2/2014 |

JUNE 2014 DATA EDITS

SHARES OUSTANDING CHANGES FROM MERGERS REVIEW:

Over the last year, we have been reviewing the shares outstanding values in our database when a merger with a distribution of the acquiring company’s stock was part of the merger terms. In many cases, the shares outstanding value did not include the newly issued shares. We have reviewed over 1600 cases from 2000-2014 and made corrections to over 600 PERMNOs to increase the precision of our shares outstanding values resulting in acquisitions. Project is 100% complete.

DECLARATION DATE CLEANUP

Incorrect Declaration Dates for periods prior to July 1962 have been removed from the CRSP Stock database. CRSP will soon begin an effort to review and repopulate the early declaration date history.

Declaration Dates, data item **dc1rdt**, are a part of the Distribution History.

GROUP EDITS

| BEGDT | ENDDT | DESCRIPTION |
|-------|-------|--|
| 2000 | 2002 | Reviewed shares outstanding for securities with acquisitions having stock distributions as part of their merger terms for 2000-2002. We used the merger terms to calculate how many additional shares are expected to be added due to the merger and made corrections to our shares outstanding values as needed on over 200 merger events. Some edits were made to shares outstanding values outside this immediate range corresponding to the stock event. |
| 1925 | 1962 | Removed all declare dates from distributions with ex-dates between 19251231 and 19620701. Over 100000 distribution records were changed. |

INDIVIDUAL EDITS

| PERMNO | COMPANY NAME | DESCRIPTION | BEGDT | ENDDT |
|--------|-----------------------|--|------------|-----------|
| 50972 | MEDIA GENERAL INC | Removed Class A designation for 20131112-present | 11/12/2013 | 5/30/2014 |
| 83916 | TELETECH HOLDINGS INC | Changed shares outstanding to 54947 from 41746 for 19960801-19960929. | | |
| 86097 | WASTE CONNECTIONS INC | Changed shares outstanding to 7933 from 2350 for 19980526-19980929. | | |
| 83622 | ARADIGM CORP | Added zero namelines to reflect off-exchange activities from 20061110 to 20140610. | 11/10/2006 | 6/10/2014 |

| PERMNO | COMPANY NAME | DESCRIPTION | BEGDT | ENDDT |
|--------|--------------------------------|---|------------|------------|
| 90556 | FUSION TELECOMMUNICATIONS INTL | Added zero namelines to reflect off-exchange activities from 20090618 to 20140608. | 6/18/2009 | 6/8/2014 |
| 93273 | CHINA GENGSHENG MINERALS INC | Removed halt record from 20140519-20140530 and added delisting date of 20140516 with delist code of 570, next date of 20140609 and next price of \$0.113. | 5/16/2014 | 5/30/2014 |
| 80210 | RAYONIER INC NEW | Changed company name to RAYONIER INC NEW from RAYONIER INC throughout entire history | | |
| 93044 | LIHUA INTERNATIONAL INC | Removed halt record from 20140501-20140530 and added delisting date of 20140430 with delist code of 585, next date of 20140626 and next price of \$0.29. | 4/30/2014 | 5/30/2014 |
| 51131 | SONY CORP | Added semi-annual dividend on 20140326 | 3/26/2014 | 3/26/2014 |
| 10209 | AMERICAN AGRIC CHEM CO | Changed shares outstanding to 333 from 33322 for 19251231-19260629, to 318 from 33322 for 19310108-19301230, to 318 from 33321 for 19301231-19310107, to 318 from 3332 for 19310108-19311230, and to 318 from 333 for 19311231-19351230 | 12/31/1925 | 12/30/1935 |
| 22082 | PANENERGY CORP | Changed shares outstanding to 810 from 1620 for 19450323-19450402 and to 1620 from 3240 for 19450403-19451230 | 3/23/1945 | 12/30/1945 |
| 13303 | N L INDUSTRIES INC | Changed shares outstanding to 207 from 310 for 19261231-19270526, to 311 from 465 for 19270527-19271230, to 310 from 353 for 19350116-19351230, to 3095 from 310 for 19361231-19411230, and to 3091 from 310 for 19411231-19471230 | 12/31/1926 | 12/30/1937 |

MAY 2014 DATA EDITS

GROUP EDITS

| BEGDT | ENDDT | DESCRIPTION |
|----------|----------|--|
| 19960522 | 20040412 | Declare dates for 13 securities have been added between 19960522-20040412. |

INDIVIDUAL EDITS

| PERMNO | COMPANY NAME | DESCRIPTION | BEGDT | ENDDT |
|--------|----------------------------------|--|------------|-----------|
| 93026 | NUVEEN ENHANCED MUNICIPAL VAL | Changed distribution code on 20140411 to 1223 from 1222. | 4/11/2014 | 4/11/2014 |
| 10302 | CYPRESS SEMICONDUCTOR CORP | Changed Acquiring PERMNO to 92791 from 90978 on exdate 20080930. | 9/30/2008 | 9/30/2008 |
| 90319 | GOOGLE INC | Changed factor to adjust price to .9969 from 0 on exdate 20140403. | 4/3/2014 | 4/3/2014 |
| 90227 | LIBERTY GLOBAL PLC | Changed factor to adjust price to .9656 from 0 on exdate 20140304. | 3/4/2014 | 3/4/2014 |
| 90228 | LIBERTY GLOBAL PLC | Changed factor to adjust price to .9603 from 0 on exdate 20140304. | 3/4/2014 | 3/4/2014 |
| 11674 | DETROIT EDISON CO | Changed shares outstanding to 1272 from 6361 for 19401231-19410406 | 12/31/1940 | 4/6/1941 |
| 12038 | AMBOW EDUCATION HOLDING LTD | Removed halt record from 20130325 - 20140430 and added delisting date of 20130322 with delist code of 580, next date of 20140519 and next price of \$0.25. | 3/22/2013 | 3/22/2013 |
| 68276 | PROVECTUS BIOPHARMACEUTICALS INC | Added zero nameline to reflect off exchange activity for 19821108-20140515. | 11/8/1982 | 5/15/2014 |
| 76950 | VAPOR CORP | Added zero namelines to reflect off-exchange activities from 19920406 - 20140529. | 4/6/1992 | 5/29/2014 |
| 91893 | FINJAN HOLDINGS INC | Added zero namelines to reflect off-exchange activities from 20110707 - 20140511. | 7/7/2011 | 5/11/2014 |
| 88471 | TRANSGENOMIC INC | Added zero namelines to reflect off-exchange activities from 20070222 - 20140508. | 2/22/2007 | 5/8/2014 |
| 76950 | VAPOR CORP | Changed the Cusip from 60052010 to 60052030 for 19910419 - 19920405. | 4/19/1991 | 4/5/1992 |

GROUP EDITS

| BEGDT | ENDDT | DESCRIPTION |
|-------|-------|--|
| 2003 | 2004 | Reviewed shares outstanding for securities with acquisitions having stock distributions as part of their merger terms for 2002-2004. We used the merger terms to calculate how many additional shares are expected to be added due to the merger and made corrections to our shares outstanding values as needed on over 120 merger events. Some edits were made to shares outstanding values outside this immediate range corresponding to the stock event. |

INDIVIDUAL EDITS

| PERMNO | COMPANY NAME | DESCRIPTION | BEGDT | ENDDT |
|--------|----------------------------------|--|------------|------------|
| 79824 | FIRST FINANCIAL BANKSHARES INC | Changed shares outstanding to 12360 from 15459 on 20030331-20030430 and to 12372 from 15465 for 20030501-20030602 | 3/31/2003 | 5/1/2003 |
| 86198 | PANACOS PHARMACEUTICALS INC | Changed shares outstanding to 54476 from 381950 on 20050314 and to 38195 from 40765 for 20050328-20050330 | 3/14/2005 | 3/30/2005 |
| 62287 | HUNT CORP | Changed ex-date of delisting distribution to 20021216 from 20021214 | 12/14/2002 | 12/16/2002 |
| 91575 | HERTZ GLOBAL HOLDINGS INC | Changed shares outstanding to 320619 from 88235 for 20061116-20061228 | 11/16/2006 | 12/28/2006 |
| 4880 | ITAU UNIBANCO HOLDING S A | Added distribution on ex-date 20140203 and changed distribution code to 1212 from 1222 on ex-date 20140219 | 2/3/2014 | 2/19/2014 |
| 93026 | NUVEEN ENHANCED MUNICIPAL VAL FD | Changed distribution codes to 1223 from 1222 for distributions on ex-dates 20140113, 20140212, and 20140312 | 1/13/2014 | 3/12/2014 |
| 88863 | EXACT SCIENCES CORP | Removed all price and volume data on 20140327 | 3/27/2014 | 3/27/2014 |
| 88285 | VIGGLE INC | Added zero name lines to reflect off-exchange activities for 19941117 - 20140424 | 11/17/1994 | 4/24/2014 |
| 93265 | L & L ENERGY INC | Removed halt record from 20131115 to 20140331 and added delisting date of 20131115 with delist code of 584, next date of 20140421 and next price of \$0.21 | 11/15/2013 | 3/31/2014 |
| 93046 | TRI TECH HOLDING INC | Removed halt record from 20131213 to 20140331 and added delisting date of 20131212 with delist code of 585, next date of 20140416 and next price of \$0.5 | 12/12/2013 | 3/31/2014 |
| 91612 | GLOBALSTAR INC | Added zero nameline to reflect off-exchange activity for 20121221-20140420 | 12/21/2012 | 4/20/2014 |
| 76908 | TRANSENERIX INC | Added zero namelines to reflect off-exchange activity for 20030512 - 20140414 | 5/12/2003 | 4/14/2014 |

MARCH 2014 DATA EDITS

IMPROVEMENT IN TOTAL VALUE (TOTVAL) CALCULATION

A change has been made to fix a bug with the TOTVAL calculation used in CRSP Historical Indexes. In previous iterations, incorrect shares values were used in the calculation of TOTVAL in 29 cases. USDVAL was calculated correctly in all cases so those values have not changed.

VOLUME PRECISION

Our price vendor has changed the way it delivers its volume data. Beginning with this shipment of the March 2014 data, volumes will represent total number of shares traded with no rounding to the nearest 100.

INDIVIDUAL EDITS

| PERMNO | COMPANY NAME | DESCRIPTION | BEGDT | ENDDT |
|--------|-----------------------|--|-----------|-----------|
| 15254 | ENSERVCORP | Added zero name lines to reflect off-exchange activities for 19920617-20140310. | 6/17/1992 | 3/10/2014 |
| 75754 | ISSUER DIRECT CORP | Added zero name lines to reflect off-exchange activities for 19990614-20140311. | 6/14/1999 | 3/11/2014 |
| 78062 | ZOLTEK COMPANIES INC | Removed all data from 20140228, added delist date of 20140227 with delist code of 233 and added delisting distribution on ex-date 20140228 | 2/27/2014 | 2/28/2014 |
| 76038 | BIOLIFE SOLUTIONS INC | Added zero namelines to reflect off-exchange activities for 19981203-20140325. | 12/3/1998 | 3/25/2014 |

| PERMNO | COMPANY NAME | DESCRIPTION | BEGDT | ENDDT |
|--------|--------------------------|---|-----------|-----------|
| 78179 | M R V COMMUNICATIONS INC | Added zero name lines to reflect off-exchange activities for 20090617-20140318. | 6/17/2009 | 3/18/2014 |
| 92126 | L D K SOLAR CO LTD | Removed halt record from 20140224-20140228 and added delisting date of 20140221 with delist code of 551, next date of 20140331 and next price of \$0.25 | 2/21/2014 | 2/28/2014 |
| 93111 | S T R HOLDINGS INC | Changed company name to S T R HOLDINGS INC from STREET HOLDINGS INC throughout entire history | 11/6/2009 | 2/28/2014 |

FEBRUARY 2014 DATA EDITS

SHARES OUTSTANDING DATA REFINEMENT

In an effort to improve the quality of our shares outstanding data, we have initiated a project to review the total shares outstanding after a company has just completed an acquisition of another company and a stock distribution is part of the merger terms. Most cases can be resolved by making small changes to when the shares jump is applied in our database. There are over 1600 cases to be reviewed. We have been working through the list since the summer of 2013 and have made improvements to around 250 securities covering 2005-2013 so far. We plan on getting through the year 2000 by June 2014.

GROUP EDIT

| BEGDT | ENDDT | DESCRIPTION |
|-------|-------|---|
| 2005 | 2007 | Reviewed shares outstanding for securities with acquisitions having stock distributions as part of their merger terms for 2005-2007. We used the merger terms to calculate how many additional shares are expected to be added due to the merger and made corrections to our shares outstanding values as needed on over 100 merger events. |

INDIVIDUAL EDITS

| PERMNO | COMPANY NAME | DESCRIPTION | BEGDT | ENDDT |
|--------|-------------------------------|---|-----------|-----------|
| 91494 | BREITBURN ENERGY PARTNERS L P | Changed distribution code to 1222 from 1232 for distribution with ex date of 20140109 | 1/9/2014 | 1/9/2014 |
| 91797 | PROSHARES TRUST | Updated shares outstanding number to 150 from 225 for time period 20140131-present | 1/31/2014 | 2/28/2014 |
| 43836 | RELIANCE GROUP INC | Changed distribution code to 5523 from 5533 on ex-date 19680528 | 5/28/1968 | 5/28/1968 |
| 26294 | LITTON INDUSTRIES INC | Added close of 55.00, high of 56.375, low of 53.625 and volume of 50200 on 19620816 | 8/16/1962 | 8/16/1962 |

JANUARY 2014 DATA EDITS

| PERMNO | COMPANY NAME | DESCRIPTION | BEGIN DATE | END DATE |
|--------|---------------------------------|---|------------|------------|
| 90792 | PIKE CORP | Named changed to PIKE CORP from PIKE ELECTRIC CORP for 20131106 to present. | 11/6/2013 | 12/31/2013 |
| 89603 | NUVEEN AMT FREE MUNI INC FUND | Changed share code to 44 from 14 for entire history. | 11/22/2002 | 12/31/2012 |
| 13344 | MARKET VECTORS E T F TRUST | Changed company name to MARKET VECTORS E T F TRUST from MARKET VECTORS ETF TRUST throughout entire history. | 4/25/2012 | 12/31/2013 |
| 13605 | E G A EMERGING GLOBAL SHARES TR | Changed company name to E G A EMERGING GLOBAL SHARES TR from E G A EMERGING GLOBAL SHARES throughout entire history. | 10/16/2012 | 12/31/2012 |
| 14604 | E G A EMERGING GLOBAL SHARES TR | Changed company name to E G A EMERGING GLOBAL SHARES TR from EGA EMERGING GLOBAL SHARES TR throughout entire history. | | |
| 13448 | STREAM EXCHANGE TRADED TRUST | Changed delist code to 450 from 470, and added final liquidation payment on ex-date 20130415. | 4/12/2013 | 4/15/2013 |
| 76184 | THAI CAPITAL FUND INC | Changed delist code to 450 from 470, and added final liquidation payment on ex-date 20130814. | 8/13/2013 | 8/14/2013 |

| PERMNO | COMPANY NAME | DESCRIPTION | BEGIN DATE | END DATE |
|--------|----------------------------------|--|------------|------------|
| 79241 | BLACKROCK INV QUAL MUNI TR | Changed delist code to 450 from 470, and added initial liquidation payment and final liquidation payment on ex-date 20120613. | 6/12/2012 | 6/13/2012 |
| 90615 | NUVEEN TAX ADVANTAGED FLTG RT F | Changed delist code from 470 to 450, and added final liquidation payment on ex-date 20120625. | 6/22/2012 | 6/25/2012 |
| 91295 | CURRENCYSHARES MEXICAN PESO TR | Changed delist code from 470 to 450, and added final liquidation payment on ex-date 20120326. | 3/23/2012 | 3/26/2012 |
| 92811 | CURRENCYSHARES RUSSIAN RUBLE TR | Changed delist code from 470 to 450, and added final liquidation payment on ex-date 20120326. | 3/23/2012 | 3/26/2012 |
| 11636 | HERON THERAPEUTICS INC | Added zero namelines to reflect off-exchange activity for 20110401-20140122. | 4/1/2011 | 1/22/2014 |
| 80640 | LA JOLLA PHARMACEUTICAL CO | Added zero namelines to reflect off-exchange activity for 20100304-20140128. | 3/4/2010 | 1/28/2014 |
| 80774 | GEO GROUP INC | Changed share code to 18 from 11 for 20130102-present. | 1/2/2013 | 1/31/2014 |
| 80307 | VALEANT PHARMACEUTICALS INTL INC | SIC code change from 8099 to 2834 for 20131212 - 20131231. | 12/12/2013 | 12/31/2013 |
| 64390 | PROGRESSIVE CORP OH | Changed distribution code to 1252 from 1262 for dividends with ex-dates on 20100125, 20110125, 20120124, and 20130123. Changed distribution code to 1272 from 1262 for dividends with ex-dates on 20101216 and 20121119. | 1/25/2010 | 1/23/2013 |
| 81774 | FREEMPORT MCMORAN COPPER & GOLD | Changed distribution code from 1232 to 1272 on ex-date 20101216, 20110511 and 20130612. | 12/16/2010 | 6/12/2013 |
| 11618 | FASTENAL COMPANY | Changed distribution codes to 1232 from 1242 on exdates 20110211 & 20110413. Changed distribution code to 1272 from 1242 on exdate 20121205. | 2/11/2011 | 12/5/2012 |

FILE VERSION SPECIFICS

This table contains version specific information for the CRSP Stock Files with data ending December 2014. It contains the number of securities and information about the maximums of the event arrays.

| FILE CODE | # OF SECURITIES | MAX NAMES | MAX DIST | MAX SHARES | MAX DELISTS | MAX GROUPS | MAX NASDIN | FIRST PERMNO | LAST PERMNO |
|-----------|-----------------|-----------|----------|------------|-------------|------------|------------|--------------|-------------|
| DAZ | 30658 | 39 | 1538 | 1901 | 1 | 4 | 2532 | 10000 | 93436 |
| MAZ | 30687 | 39 | 1538 | 1901 | 1 | 4 | 2532 | 10000 | 93436 |

| CALENDAR | DATE RANGE | DATE INDEX RANGE |
|------------------------------|-------------------|------------------|
| Daily trading calendar | 19251231-20141231 | 1-23535 |
| Month-end trading calendar | 19251231-20141231 | 1-1069 |
| Year-end trading calendar | 19251231-20151231 | 1-91 |
| Quarter-end trading calendar | 19251231-20151231 | 1-361 |
| Weekly trading calendar | 19260102-20141231 | 1-4644 |

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 | FIZyyyyymm | 3.9 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 | FAZyyyyymm | 3.5 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 | A6Zyyyyymm | 3.2 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 | AXZyyyyymm | 3.5 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 | IFZyyyyymm | 120 MB | | | IF - CRSP Supplemental US Indexes |
| CRSP/Compustat Merged Database | CMZyyyyymm | 8.86 GB | | | CM - Compustat Data formatted in CRSPAccess Database |
| Daily & Monthly Treasuries in CRSPSift | TRZyyyyymm | 263 MB | | | TR - Database format for use with CRSPSift |
| Daily & Monthly Treasuries Files | TFZyyyyymm | 1.35 GB | | | TF - Expanded daily and monthly files in EXCEL, SAS, and ASCII formats |
| Daily & Monthly Legacy Treasuries Files | TLZyyyyymm | 1.2 GB | | | TL - Legacy daily and monthly files in EXCEL, SAS, and ASCII formats - FINAL SHIPMENT |
| Mutual Fund Database | MFZyyyyymm | 10 GB | | | MF - Mutual Funds |
| CRSP/Ziman Daily & Monthly REIT | RAZyyyyymm | 234 MB | | | RD - Daily REITs RM - Monthly REITs |

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

The following tables include new and old naming conventions.

WINDOWS 7/XP PRODUCTS:

| PRODUCT LABEL | PRODUCT NAME | OLD NAME | NEW NAME |
|-----------------|------------------------------|----------------|---------------------|
| A6Z1_yyyymm_SLD | CRSP 1962 US Stock | setupwin32.exe | a6zyyyymm_cadb.zip |
| AXZ1_yyyymm_SLD | CRSP 1962 US Stock and Index | setupwin32.exe | axzyyyymm_cadb.zip |
| FAZ1_yyyymm_SLD | CRSP 1925 US Stock | setupwin32.exe | fazyyyymm_cadb.zip |
| FIZ1_yyyymm_SLD | CRSP 1925 US Stock and Index | setupwin32.exe | fizzyyyymm_cadb.zip |
| IFZ1_yyyymm_SGD | CRSP 1925 Indexes | setupwin32.exe | ifzyyyymm_cadb.zip |

RED HAT LINUX PRODUCTS:

| PRODUCT LABEL | PRODUCT NAME | OLD NAME | NEW NAME |
|-----------------|------------------------------|----------------|---------------------|
| A6Z1_yyyymm_SLD | CRSP 1962 US Stock | setuplinux.bin | a6zyyyymm_cadb.zip |
| AXZ1_yyyymm_SLD | CRSP 1962 US Stock and Index | setuplinux.bin | axzyyyymm_cadb.zip |
| FAZ1_yyyymm_SLD | CRSP 1925 US Stock | setuplinux.bin | fazyyyymm_cadb.zip |
| FIZ1_yyyymm_SLD | CRSP 1925 US Stock and Index | setuplinux.bin | fizzyyyymm_cadb.zip |
| IFZ1_yyyymm_SGD | CRSP 1925 Indexes | setuplinux.bin | ifzyyyymm_cadb.zip |

SOLARIS SPARC PRODUCTS:

| PRODUCT LABEL | PRODUCT NAME | OLD NAME | NEW NAME |
|-----------------|------------------------------|------------------|----------------------|
| A6Z1_yyyymm_SBD | CRSP 1962 US Stock | setupsolaris.bin | a6zyyyymm_sparc.zip |
| AXZ1_yyyymm_SBD | CRSP 1962 US Stock and Index | setupsolaris.bin | axzyyyymm_sparc.zip |
| FAZ1_yyyymm_SBD | CRSP 1925 US Stock | setupsolaris.bin | fazyyyymm_sparc.zip |
| FIZ1_yyyymm_SBD | CRSP 1925 US Stock and Index | setupsolaris.bin | fizzyyyymm_sparc.zip |
| IFZ1_yyyymm_SGD | CRSP 1925 Indexes | setupsolaris.bin | ifzyyyymm_sparc.zip |

STEPS TO INSTALL:

- From the directory containing your downloaded zip file, right click (in Windows) or run File Roller (in Red Hat and Solaris)
- 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 and Solaris)
- 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 AND SUN SOLARIS

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_MSTK=~ /crspdata/miz201308`)
 - ♦ `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 /acbin 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.

The screenshot shows the 'CRSP Client Environment: (CUPL_ver322 64-bit)' window. It contains several sections for setting directories, each with a text input field and a 'Browse' button:

- CRSP Root:** CRSP Root Directory. This folder/directory contains the CRSP root subfolders that will allow the CRSP utilities to function properly. Path: `C:\crsp\`
- CRSP Work:** CRSP Work Directory. This folder/directory is used for storage of temporary files, log files and contains subfolders that may hold user created files. Path: `C:\crsp\`
- CRSP Daily Stock:** CRSP Daily Stock Database Directory. Path: `C:\crspdata\diz201308`
- CRSP Monthly Stock:** CRSP Monthly Stock Database Directory. Path: `C:\crspdata\miz201308`
- CRSP Compustat CCM:** CRSP Compustat CCM Database Directory. Path: `C:\crspdata\CMZ201308\`

At the bottom, there is a red warning message: **Administrator privileges are required to set system level environment variables.** Below this message are three buttons: 'Do', 'Remove', and 'Exit'.

FILE FORMATS

A number of subscribers have requested flat-file versions of the CRSP databases that can be more easily consumed and built into automated processes. In response to these requests, CRSP is actively working on creating these flat-file versions, which once created, will also be available through the “MFT” delivery.