CRSP ZIMAN/REAL ESTATE DATA SERIES RELEASE NOTES

DECEMBER 2016 ANNUAL UPDATE

FILE VERSION SPECIFICS

- The CRSP/Ziman Real Estate Data Series contains data through December 2016, available in January 2017.
- The data series contains 629 securities of which 223 are currently trading. The date range is from 19800102-20161230.
- This release that may be installed on three platforms: Windows, Linux, and Sun. ASCII and SAS versions of the data series are available for all three platforms and in addition, a Microsoft Access database is available for Windows. The Zip files available for download include a version for each different set of files, found in the table in the zip file structure section below.

RESEARCH AND PROGRAMMING NOTES

Prices and indexes in this product begin in January of 1980. This is true even when the Ziman REIT Info table states that the REIT was in existence prior to 1980.

The base year for the CRSP/Ziman Indexes is 12/30/1994, at which point they are set to a value of 100. This differs from CRSP Market Indexes which are set to 100 on 12/29/1972.

Due to some inconsistent trading early in the time series, a few additional rules were implemented to improve the continuity of the portfolios used to calculate the indexes. Please refer to Chapter 2 of the CRSP/Ziman Real Estate Data Series Guide for an explanation of universe and price selection criteria.

201612 REIT SUMMARY

CRSP ADDS, DELISTS, AND CHANGES:

PERMNO	COMPANY NAME	TICKER	CUSIP	START DATE	END DATE		
ADDS	ADDS						
16515	INNOVATIVE INDUSTRIAL PPTYS INC	IIPR	45781V10	12/1/2016	12/30/2016		
DELISTS	DELISTS						
79449	POST PROPERTIES INC	PPS	73746410	7/16/1993	11/30/2016		
89548	NEWCASTLE INVESTMENT CORP	NCT	65105M60	10/10/2002	12/28/2016		
HISTORICAL CHANGES							
16346	QUALITY CARE PROPERTIES INC	QCP	74754510	11/1/2016	12/30/2016		

INDICES DIFFS:

(any change over 5% for 1000800 and 1000850, except new adds and drops, or any suspicious change in returns, usdval or usdcnt for any indno)

Daily:

- INDNOs 1000850 & 1000800 had an absolute value change ranging from -100% to 1000% addvals for the period 20161102-20161103 due to PERMNO 16346 which began trading as a REIT on 20161101.
- INDNOs 1000856 & 1000806 had an absolute value change ranging from 5.26% to 1000% usdcnts on 20161102 due to PERMNO 16346 which began trading as a REIT on 20161101.
- INDNOs 1000850 & 1000800 had an absolute value change ranging from -100% to 1000% addcnts for the period 20161102-20161103 due to PERMNO 16346 which began trading as a REIT on 20161101.

CRSP DATABASE CHANGES

PERMNO	COMPANY NAME	DESCRIPTION
28388	VORNADO REALTY TRUST	had a NDIV from 0.400 to 0.000 and FACPR from 1.000 to 1.012 on 19981019
50585	URSTADT BIDDLE PROPERTIES INC	had a NDIV from 9.438 to 0.000 and FACPR from 1.000 to 1.956 on 19980817
81175	PRICE LEGACY CORP	had a NDIV from 14.875 to 0.000 and FACPR from 1.000 to 4.400 on 19980818

201611 REIT SUMMARY

CRSP ADDS, DELISTS, AND CHANGES:

PERMNO	COMPANY NAME	TICKER	CUSIP	START DATE	END DATE
ADDS					
16346	QUALITY CARE PROPERTIES INC	QCP	74754510	11/1/2016	11/30/2016
HISTORICA	HISTORICAL CHANGES				
85234	CORECIVIC INC	CXW	21871N10	1/2/2013	11/30/2016

CRSP DATABASE CHANGES

PERMNO	COMPANY NAME	DESCRIPTION
85234	CORECIVIC INC	had a share code change to 18 from 11 for 20130102-20161130
13700	WHEELER REAL ESTATE INV TR INC	had a shares outstanding change to 67940 from 67889 from 20160930-20161031.
14252	GAMING & LEISURE PROPERTIES INC	had a shares outstanding change to 207115 from 205122 from 20160930-20161031.
14651	CARETRUST REIT INC	had a shares outstanding change to 57742 from 57896 from 20160930-20161031.
15279	COMMS SALES & LEASING INC	had a shares outstanding change to 155123 from 153911 from 20160930-20161031.
16266	REVEN HOUSING REIT INC	had a shares outstanding change to 10122 from 10119 from 20160930-20161031.
80014	C I M COMMERCIAL TRUST CORP	had a shares outstanding change to 84048 from 87676 from 20160930-20161031.
81087	CONDOR HOSPITALITY TRUST INC	had a shares outstanding change to 4957 from 4952 from 20160930-20161031.
81917	HOSPITALITY PROPERTIES TRUST	had a shares outstanding change to 164269 from 164160 from 20160930-20161031.
83879	LAMAR ADVERTISING CO NEW	had a shares outstanding change to 82712 from 82848 from 20160930-20161031.
87289	SENIOR HOUSING PROPERTIES TRUST	had a shares outstanding change to 237546 from 237484 from 20160930-20161031.
89617	EQUINIX INC	had a shares outstanding change to 71379 from 71075 from 20160930-20161031.
89823	GLADSTONE COMMERCIAL CORP	had a shares outstanding change to 23748 from 23601 from 20160930-20161031.
90092	SABRA HEALTHCARE REIT INC	had a shares outstanding change to 65260 from 65288 from 20160930-20161031.
92343	RETAIL OPPORTUNITY INVST CORP	had a shares outstanding change to 109298 from 109156 from 20160930-20161031.
92680	A G N C INVESTMENT CORP	had a shares outstanding change to 331000 from 331046 from 20160930-20161031.

CRSP ADDS, DELISTS, AND CHANGES:

PERMNO	COMPANY NAME	TICKER	CUSIP	START DATE	END DATE		
ADDS	ADDS						
16340	PARKWAY INC	PKY	70156Q10	10/7/2016	10/31/2016		
DELISTS	DELISTS						
12072	PARKWAY PROPERTIES INC	PKY	70159Q10	1/2/1997	10/5/2016		
HISTORICAL CHANGES							
14709	UNITED DEVELOPMENT FUNDING IV	UDF	91018710	6/4/2014	2/18/2016		

CRSP DATABASE CHANGES

PERMNO	COMPANY NAME	DESCRIPTION
13309	SELECT INCOME REIT	had a shares outstanding change to 89429 from 89387 from 20160831-20160930
13752	CYRUSONE INC	had a shares outstanding change to 83525 from 80097 from 20160831-20160930
89823	GLADSTONE COMMERCIAL CORP	had a shares outstanding change to 23601 from 22584 from 20160831-20160930
92343	RETAIL OPPORTUNITY INVST CORP	had a shares outstanding change to 109156 from 108869 from 20160831-20160930
92948	GOVERNMENT PROPERTIES INCOME TR	had a shares outstanding change to 71179 from 71139 from 20160831-20160930

201609 REIT SUMMARY

CRSP ADDS, DELISTS, AND CHANGES:

PERMNO	COMPANY NAME	TICKER	CUSIP	START DATE	END DATE
ADDS	ADDS				
16332	MEDEQUITIES REALTY TRUST INC	MRT	58409L30	9/29/2016	9/30/2016
DELISTS	DELISTS				
12893	APOLLO RESIDENTIAL MORTGAGE INC	AMTG	03763V10	7/22/2011	8/31/2016

CRSP DATABASE CHANGES

PERMNO	COMPANY NAME	DESCRIPTION
16266	REVEN HOUSING REIT INC	had a shares outstanding change to 10119 from 7039 from 20160729-20160831.
81917	HOSPITALITY PROPERTIES TRUST	had a shares outstanding change to 164160 from 162560 from 20160729-20160831.

CRSP ZIMAN/REIT INFO CHANGES

PERMNO	COMPANY NAME	DESCRIPTION
14709	UNITED DEVELOPMENT FUNDING IV	had an end date change from 2016729 to 20160930.

CRSP ADDS, DELISTS, AND CHANGES:

PERMNO	COMPANY NAME	TICKER	CUSIP	START DATE	END DATE	
ADDS						
16266	16266 REVEN HOUSING REIT INC		76137820	8/30/2016	8/31/2016	
DELISTS	DELISTS					
14709	UNITED DEVELOPMENT FUNDING IV	UDF	91018710	6/4/2014	7/29/2016	
50614	WINTHROP REALTY TRUST	FUR	97639130	5/21/1970	8/1/2016	

CRSP DATABASE CHANGES

PERMNO	COMPANY NAME	DESCRIPTION
12965	AMERICAN CAPITAL MTG INVT CORP	had a shares outstanding change to 45798 from 45759 from 20160630-20160729.
13700	WHEELER REAL ESTATE INV TR INC	had a shares outstanding change to 67860 from 66404 from 20160630-20160729.
13752	CYRUSONE INC	had a shares outstanding change to 80097 from 79607 from 20160630-20160729.
14252	GAMING & LEISURE PROPERTIES INC	had a shares outstanding change to 205122 from 201931 from 20160630-20160729.
14651	CARETRUST REIT INC	had a shares outstanding change to 57549 from 57914 from 20160630-20160729.
15279	COMMS SALES & LEASING INC	had a shares outstanding change to 153244 from 151623 from 20160630-20160729.
81087	CONDOR HOSPITALITY TRUST INC	had a shares outstanding change to 4952 from 4942 from 20160630-20160729.
83879	LAMAR ADVERTISING CO NEW	had a shares outstanding change to 82629 from 82434 from 20160630-20160729.
89617	EQUINIX INC	had a shares outstanding change to 71075 from 69429 from 20160630-20160729.
89823	GLADSTONE COMMERCIAL CORP	had a shares outstanding change to 22584 from 22984 from 20160630-20160729.
90092	SABRA HEALTHCARE REIT INC	had a shares outstanding change to 65288 from 65273 from 20160630-20160729.
90214	NEW YORK MORTGAGE TRUST INC	had a shares outstanding change to 109569 from 109409 from 20160630-20160729.
92680	AMERICAN CAPITAL AGENCY CORP	had a shares outstanding change to 331046 from 331000 from 20160630-20160729.

201607 REIT SUMMARY

CRSP ADDS, DELISTS, AND CHANGES:

PERMNO	COMPANY NAME	TICKER	CUSIP	START DATE	END DATE
DELISTS					
13134	ROUSE PROPERTIES INC	RSE	77928710	11/28/2011	7/5/2016
92620	HATTERAS FINANCIAL CORP	HTS	41902R10	4/25/2008	7/11/2016

CRSP DATABASE CHANGES

PERMNO	COMPANY NAME	DESCRIPTION
49744	POTLACH CORP NEW	had a shares outstanding change to 40688 from 40519 from 20160531-20160630
89823	GLADSTONE COMMERCIAL CORP	had a shares outstanding change to 22613 from 22984 from 20160531-20160630
92343	RETAIL OPPORTUNITY INVST CORP	had a shares outstanding change to 100111 from 101979 from 20160531-20160630

CRSP ADDS, DELISTS, AND CHANGES:

PERMNO	COMPANY NAME	TICKER	CUSIP	START DATE	END DATE
ADDS					
16136	GLOBAL MEDICAL REIT INC	GMRE	37954A20	6/29/2016	6/30/2016

CRSP DATABASE CHANGES

PERMNO	COMPANY NAME	DESCRIPTION
89617	EQUINIX INC	had a shares outstanding change to 69429 from 69428 from 20160429-20160531.

ZIMAN REIT INFO CHANGES

PERMI	IO COMPANY NAME	DESCRIPTION
14709	UNITED DEVELOPMENT FUNDING IV	had an end date change from 20160429 to 20160630.

201605 REIT SUMMARY

CRSP ADDS, DELISTS, AND CHANGES:

F	PERMNO	COMPANY NAME	TICKER	CUSIP	START DATE	END DATE
[DELISTS					
	14709	UNITED DEVELOPMENT FUNDING IV	UDF	91018710	6/4/2014	4/29/2016

CRSP DATABASE CHANGES

PERMNO	COMPANY NAME	DESCRIPTION
12965	AMERICAN CAPITAL MTG INVT CORP	had a shares outstanding change to 45759 from 47626 from 20160331-20160429
13700	WHEELER REAL ESTATE INV TR INC	had a shares outstanding change to 66404 from 66260 from 20160331-20160429
13752	CYRUSONE INC	had a shares outstanding change to 79607 from 79456 from 20160331-20160429
13756	GLADSTONE LAND CORP	had a shares outstanding change to 9993 from 10739 from 20160331-20160429
14252	GAMING 7 LEISURE PROPERTIES INC	had a shares outstanding change to 201931 from 145901 from 20160331-20160429
14709	UNITED DEVELOPMENT FUNDING IV	had a shares outstanding change to 30686 from 30680 from 20160331-20160429
15279	COMMS SALES 7 LEASING INC	had a shares outstanding change to 150034 from 150624 from 20160331-20160429
80014	C I M COMMERCIAL TRUST CORP	had a shares outstanding change to 97661 from 97666 from 20160331-20160429
83879	LAMAR ADVERTISING CO NEW	had a shares outstanding change to 82432 from 82216 from 20160331-20160429
89617	EQUINIX INC	had a shares outstanding change to 69428 from 69025 from 20160331-20160429
89823	GLADSTONE COMMERCIAL CORP	had a shares outstanding change to 22613 from 22550 from 20160331-20160429
90092	SABRA HEALTHCARE REIT INC	had a shares outstanding change to 65273 from 65189 from 20160331-20160429
92343	RETAIL OPPORTUNITY INVST CORP	had a shares outstanding change to 100111 from 99942 from 20160331-20160429
92680	AMERICAN CAPITAL AGENCY CORP	had a shares outstanding change to 331000 from 332453 from 20160331-20160429

CRSP ADDS, DELISTS, AND CHANGES:

Permno	Company Name	Ticker	Cusip	Start Date	End Date	
ADDS	ADDS					
16042	M G M Growth Properties LLC		55303A10	4/20/2016	4/29/2016	
DELISTS						
13614	Javelin Mortgage Investment Co	JMI	47200B10	10/3/2012	4/6/2016	

PERMNO	COMPANY NAME	DESCRIPTION
CHANGES		
13752	CYRUSONE INC	had a shares outstanding change to 79456 from 72823 from 20160229-20160331.
14252	GAMING & LEISURE PROPERTIES INC	had a shares outstanding change to 117028 from 116687 from 20160229-20160331
14651	CARETRUST REIT INC	had a shares outstanding change to 57922 from 48147 from 20160229-20160331
14709	UNITED DEVELOPMENT FUNDING IV	had a shares outstanding change to 30680 from 30673 from 20160229-20160331
15279	COMMS SALES & LEASING INC	had a shares outstanding change to 150624 from 150549 from 20160229-20160331
49744	POTLATCH CORP NEW	had a shares outstanding change to 40688 from 40681 from 20160229-20160331
90214	NEW YORK MORTGAGE TRUST INC	had a shares outstanding change to 109409 from 109360 from 20160229-20160331
90506	SOTHERLY HOTELS INC	had a shares outstanding change to 14950 from 14491 from 20160229-20160331
92343	RETAIL OPPORTUNITY INVST CORP	had a shares outstanding change to 99942 from 99590 from 20160229-20160331

201603 REIT SUMMARY

CRSP ADDS, DELISTS, AND CHANGES:

Permno	Company Name	Ticker	Cusip	Start Date	End Date
DELISTS					
12323	CAMPUS CREST COMMUNITIES INC	CCG	13466Y10	10/14/2010	3/2/2016
13886	AMERICAN RESIDENTIAL PPTYS INC	ARPI	02927E30	5/9/2013	2/29/2016
90208	INLAND REAL ESTATE CORP	IRC	45746120	6/9/2004	3/30/2016

PERMNO	COMPANY NAME	DESCRIPTION			
CHANGES	CHANGES				
13700	WHEELER REAL ESTATE INV TR INC	had a shares outstanding change to 66260 from 66161 from 20160129-20160229.			
13752	CYRUSONE INC	had a shares outstanding change to 72271 from 72593 from 20160129-20160229.			
80014	C I M COMMERCIAL TRUST CORP	had a shares outstanding change to 97482 from 97590 from 20160129-20160229.			
81087	CONDOR HOSPITALITY TRUST INC	had a shares outstanding change to 4942 from 4937 from 20160129-20160229.			
83879	LAMAR ADVERTISING CO NEW	had a shares outstanding change to 82086 from 82084 from 20160129-20160229.			
90214	NEW YORK MORTGAGE TRUST INC	had a shares outstanding change to 109360 from 109402 from 20160129-20160229.			
92343	RETAIL OPPORTUNITY INVST CORP	had a shares outstanding change to 99590 from 99531 from 20160129-20160229.			
92680	AMERICAN CAPITAL AGENCY CORP	had a shares outstanding change to 332453 from 337500 from 20160129-20160229.			

CRSP ADDS, DELISTS, AND CHANGES:

Permno	Company Name	Ticker	Cusip	Start Date	End Date
DELISTS					
75592	PLUM CREEK TIMBER CO INC	PCL	72925110	1/4/1999	2/19/2016

PERMNO	COMPANY NAME	DESCRIPTION
CHANGES		
12965	AMERICAN CAPITAL MTG INVT CORP	had a shares outstanding change to 47626 from 50010 from 20151231-20160129
13756	GLADSTONE LAND CORP	had a shares outstanding change to 9993 from 9062 from 20151231-20160129
14252	GAMING & LEISURE PROPERTIES INC	had a shares outstanding change to 115594 from 115182 from 20151231-20160129
14651	CARETRUST REIT INC	had a shares outstanding change to 47665 from 48148 from 20151231-20160129
49744	POTLATCH CORP NEW	had a shares outstanding change to 40681 from 40678 from 20151231-20160129
83879	LAMAR ADVERTISING CO NEW	had a shares outstanding change to 82084 from 81987 from 20151231-20160129
89617	EQUINIX INC	had a shares outstanding change to 69025 from 59890 from 20151231-20160129
89823	GLADSTONE COMMERCIAL CORP	had a shares outstanding change to 22486 from 22066 from 20151231-20160129
90092	SABRA HEALTHCARE REIT INC	had a shares outstanding change to 65182 from 65134 from 20151231-20160129
92343	RETAIL OPPORTUNITY INVST CORP	had a shares outstanding change to 99531 from 99485 from 20151231-20160129
92680	AMERICAN CAPITAL AGENCY CORP	had a shares outstanding change to 337500 from 346450 from 20151231-20160129

201601 REIT SUMMARY

CRSP ADDS, DELISTS, AND CHANGES:

Permno	Company Name	Ticker	Cusip	Start Date	End Date
ADDS					
31974	FOREST CITY REALTY TRUST INC	FCEA	34560510	1/4/2016	1/29/2016
65584	FOREST CITY REALTY TRUST INC	FCEB	34560520	1/4/2016	1/29/2016
15719	FOUR CORNERS PROPERTY TRUST INC	FCPT	35086T10	1/4/2016	1/29/2016
DELISTS					
90301	BIOMED REALTY TRUST INC	BMR	09063H10	8/6/2004	1/27/2016

PERMNO	COMPANY NAME	DESCRIPTION	
CHANGES			
13752	CYRUSONE INC	had a shares outstanding change to 72593 from 66241 from 20151130-20151231	

DELIVERY METHOD, INSTALLS, AND DATA FORMATS

DELIVERY

CRSP data delivery for all products is available through the "Cloud." By utilizing IPSwitch's MOVEit Cloud product (https://crsp.moveitcloud.com, you can download data products either on demand, or with scheduled processes.

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:

- All directories are extracted to lower case letters. For example: C:\crspdata\raz201308
- 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:

Three separate zip files need to be unzipped separately. Unzip the files into the root or home or your target directory. For example, c:\ in Windows; /home for Linux and Solaris. The unzip process will created the \crspdata subdirectory.

Note that the destination directories have also changed as part of this process:

Zip file on disk	Description	Install Path
razyyyymm_ascii	ASCII files	\crspdata\razyyyymm_ascii
razyyyymm_msaccess	MS Access tables	\crspdata\razyyyymm_msaccess
razyyyymm_sas	SAS files	\crspdata\razyyyymm_sas

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

SYSTEM REQUIREMENTS

- SAS version 8 or higher, Microsoft Access, or an analytical tool of your choice
- Sufficient disk space to load and manipulate the data series.*

Data Series Format	Monthly Data Series	Daily/Monthly Data Series
ASCII	11.9 MB	254 MB
Microsoft Access	11.6 MB	218 MB
SAS V 9.1	13.6 MB	270 MB

^{*}Additional disk space will be needed for data manipulation.

FILE NAME SPECIFICATIONS AND INSTALLATION

ASCII

All files contain variable-width records, ending with line-feeds, with pipe-delimited "I" fields. There are no header records. See Table Definitions in Chapter 3 of the guide for field order in each file.

File Name	Description
crsp_daily_data.txt*	daily REIT security data
crsp_header.txt	security REIT header data
crsp_monthly_data.txt	monthly REIT security data
crsp_names.txt	security name history of REITS
crsp_ziman_daily_index.txt*	daily index results
crsp_ziman_monthly_index.txt	monthly index results
index_type_map.txt	definitions of REIT indexes and characteristics
price_type.txt	definitions of available price types
Property_type.txt	definitions of available REIT property types
reit_type.txt	definitions of available REIT categories
sub_property_type.txt	definitions of available REIT property subtypes
ziman_reit_info.txt	REIT information

SAS

Column names and labels are embedded in the data sets. The full descriptions for fields can be found in the table definitions section of Chapter 3 of the guide.

File Name	Description	
crsp_daily_data.sas7bdat*	daily REIT security data and index	
crsp_daily_data.sas7bndx*	dally NETT Security data and index	
crsp_header.sas7bdat	security REIT header data and index	
crsp_header.sas7bndx	Security NETT fleader data and fildex	
crsp_monthly_data.sas7bdat	monthly REIT security data and index	
crsp_monthly_data.sas7bndx	monthly NETT Security data and midex	
crsp_names.sas7bdat	security name history of REITS and index	
crsp_names.sas7bndx	security fiame mistory of KETTS and midex	
crsp_ziman_daily_index.sas7bdat*	daily index results and index	
crsp_ziman_daily_index.sas7bndx*	ually filluex results and filluex	
crsp_ziman_monthly_index.sas7bdat	monthly index results and index	
crsp_ziman_monthly_index.sas7bndx	monthly maex results and maex	
index_type_map.sas7bdat	definitions of REIT indexes and characteristics	
price_type.sas7bdat	definitions of available price types	
Property_type.sas7bdat	definitions of available REIT property types	
reit_type.sas7bdat	definitions of available REIT categories	
sub_property_type.sas7bdat	definitions of available REIT property subtypes	
ziman_reit_info.sas7bdat	RFIT information and index	
ziman_reit_info.sas7bndx	INCIT IIIIOTIII ALIOIT AIIU IIIUEX	

MSACCESS

A Microsoft Access database is provided named reit_db.mdb containing all data tables. The database is in Access 2000 file format. The design view menu within Access can be used to view available fields, data types, and descriptions.