



Long Wide Converter

Event Study Metrics

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Long Wide Converter

The *Long Wide Converter* allows you to swiftly reshape your data from the **long format** to the **wide format**.

Conducting an event study with Event Study Metrics software requires the **wide data structure**. Many data providers allow you to store the data in the **wide format**. If you have your data in the **long format**, please follow the instructions in this manual.

Long and Wide Data Structures

In the **long format**, the data file contains multiple rows for each asset. Each row includes the value(s) for an asset at the specific date:

	A	B	C
1	PERMNO	date	PRC
2	10107	20070131	30.86
3	10107	20070228	28.17
4	10107	20070330	27.87
5	11081	20070131	24.22
6	11081	20070228	22.85
7	11081	20070330	23.21
8	11308	20070131	47.88
9	11308	20070228	46.68
10	11308	20070330	48

In the **wide format**, the data file contains single rows for each date and single columns for each asset. The values of a single variable at a specific date are matched to each corresponding asset:

	A	B	C	D	E
1	date	10107	11081	11308	83435
2	20070131	30.86	24.22	47.88	28.31
3	20070228	28.17	22.85	46.68	30.86
4	20070330	27.87	23.21	48	31.29

Long Data File (WRDS)

A **CRSP long data file** from **WRDS (Wharton Research Data Services)** is used in this manual as an example. In order to obtain your data from **WRDS** in the required format, please conduct the following steps:

1. Select the **time period** for your data:

Step 1: What date range do you want to use?

I would like data from to to

2. Select the **format of the company codes**. You are able to select any identifier. Enter the company codes and proceed to the next step:

Step 2: How would you like to search this dataset?

What format are your company codes?

- TICKER
- PERMNO
- PERMCO
- CUSIP
- NCUSIP
- HSICCD
- SICCD

Manually enter company codes

10107 11308 83435 110
[Code Lookup]

Please enter Company codes separated by a space.
 Example: IBM MSFT DELL

Save selected code list to myWRDS

Upload a file containing company codes

Search the entire database

Retrieve saved codes from MyWRDS

- WRDS allows you to add **market return** (e.g. CRSP value-weighted index) data to your data file. If you want to implement the market model, the market adjusted return, the CAPM, or a multifactor model in your event study, WRDS provides you with the corresponding **return data**:

Market Information (NYSE/AMEX/Nasdaq/Arca) (2 of 5 selected)

Select the items you would like to include in your search. Corresponding help links are available for more information on selected codes.

<div style="border: 1px solid #ccc; padding: 5px;"> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Value-Weighted Return (includes distributions) ? <input type="checkbox"/> Value-Weighted Return (excluding dividends) ? <input checked="" type="checkbox"/> Equal-Weighted Return (includes distributions) ? <input type="checkbox"/> Equal-Weighted Return (excluding dividends) ? <input type="checkbox"/> Return on S&P Composite Index ? </div> <p>Check All Uncheck All</p>	<p>Selected Items</p> <hr/> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Value-Weighted Return (includes distributions) <input checked="" type="checkbox"/> Equal-Weighted Return (includes distributions)
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- Select the **comma-delimited text (*.csv)** as the preferred output format. Retain the remaining options and click the **Submit query** button:

Step 4: How would you like the query output?

Select the desired **format** of the output file. For large data requests, select a compression type to expedite downloads. If you enter your email address, you will receive an email that contains a URL to the output file when the data request is finished processing.

<p>Output format</p> <ul style="list-style-type: none"> <input type="radio"/> fixed-width text (*.txt) <input checked="" type="radio"/> comma-delimited text (*.csv) <input type="radio"/> Excel Spreadsheet (*.xlsx) <input type="radio"/> tab-delimited text (*.txt) <input type="radio"/> HTML table (*.htm) <input type="radio"/> SAS Windows_32 dataset (*.sas7bdat) <input type="radio"/> SAS Solaris_64 dataset (*.sas7bdat) <input type="radio"/> dBase file (*.dbf) <input type="radio"/> STATA file (*.dta) <input type="radio"/> SPSS file (*.sav) 	<p>Compression Type</p> <ul style="list-style-type: none"> <input checked="" type="radio"/> None <input type="radio"/> zip (*.zip) <input type="radio"/> gzip (*.gz) <p>Date Format</p> <ul style="list-style-type: none"> <input checked="" type="radio"/> YYMMDDn8. (e.g. 19840725) <input type="radio"/> DATE9. (e.g. 25JUL1984) <input type="radio"/> DDMMYY6. (e.g. 250784) <input type="radio"/> MMDDYY10. (e.g. 07/25/1984) <input type="radio"/> DDMMYY10. (e.g. 25/07/1984) <input type="radio"/> YYMMDDs10. (e.g. 1984/07/25)
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

E-Mail Address (Optional)

Custom Field (Optional)

Save this query to myWRDS

Query Name

5. Finally, the data is saved in the **long format** as a **comma-delimited text file (*.csv)**:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	PERMNO	date	NCUSIP	TICKER	COMNAM	CUSIP	DISTCD	FACPR	FACSHR	PRC	VOL	RET	vwretd	ewretd
2	10107	20070131	59491810	MSFT	MICROSOFT	59491810				30.86	13390496	0.03349	0.019428	-0.022283
3	10107	20070228	59491810	MSFT	MICROSOFT	59491810	1232	0	0	28.17	13007733	-0.083927	-0.013957	0.00211
4	10107	20070330	59491810	MSFT	MICROSOFT	59491810				27.87	12832900	-0.01065	0.012949	0.006545
5	10107	20070430	59491810	MSFT	MICROSOFT	59491810				29.94	9676052	0.074273	0.039821	0.027044
6	10107	20070531	59491810	MSFT	MICROSOFT	59491810	1232	0	0	30.6901	13176580	0.028393	0.038932	0.023123
7	10107	20070629	59491810	MSFT	MICROSOFT	59491810				29.47	11884314	-0.039756	-0.014756	-0.007906
8	10107	20070731	59491810	MSFT	MICROSOFT	59491810				28.99	13008446	-0.016288	-0.031756	-0.043537
9	10107	20070831	59491810	MSFT	MICROSOFT	59491810	1232	0	0	28.73	12397224	-0.005519	0.011166	-0.011737
10	10107	20070928	59491810	MSFT	MICROSOFT	59491810				29.46	11168623	0.025409	0.04086	0.025363
11	10107	20071031	59491810	MSFT	MICROSOFT	59491810				36.81	17744802	0.249491	0.025835	0.017406
12	10107	20071130	59491810	MSFT	MICROSOFT	59491810	1232	0	0	33.6	18330717	-0.084216	-0.049222	-0.076608
13	10107	20071231	59491810	MSFT	MICROSOFT	59491810				35.6	10700171	0.059524	-0.004419	-0.010989
14	10107	20080131	59491810	MSFT	MICROSOFT	59491810				32.6	19530535	-0.08427	-0.062151	-0.045082
15	10107	20080229	59491810	MSFT	MICROSOFT	59491810	1232	0	0	27.1999	23258303	-0.162273	-0.021653	-0.021401
16	10107	20080331	59491810	MSFT	MICROSOFT	59491810				28.38	14572915	0.043386	-0.01042	-0.02531
17	10107	20080430	59491810	MSFT	MICROSOFT	59491810				28.52	14480582	0.004933	0.051106	0.031907
18	10107	20080530	59491810	MSFT	MICROSOFT	59491810	1232	0	0	28.32	14084270	-0.003156	0.023842	0.031775
19	10107	20080630	59491810	MSFT	MICROSOFT	59491810				27.51	15648014	-0.028602	-0.078434	-0.086626
20	10107	20080731	59491810	MSFT	MICROSOFT	59491810				25.72	16420967	-0.065067	-0.01333	-0.001296
21	10107	20080829	59491810	MSFT	MICROSOFT	59491810	1232	0	0	27.29	12083088	0.065319	0.010564	0.013023
22	10107	20080930	59491810	MSFT	MICROSOFT	59491810				26.69	19299651	-0.021986	-0.098005	-0.120105
23	10107	20081031	59491810	MSFT	MICROSOFT	59491810				22.33	30441987	-0.163357	-0.184603	-0.205222
24	10107	20081128	59491810	MSFT	MICROSOFT	59491810	1232	0	0	20.22	17985595	-0.08867	-0.084615	-0.13032
25	10107	20081231	59491810	MSFT	MICROSOFT	59491810				19.44	15442392	-0.038576	0.022149	0.042157
26	10107	20090130	59491810	MSFT	MICROSOFT	59491810				17.1	15618965	-0.12037	-0.07733	-0.024042
27	10107	20090227	59491810	MSFT	MICROSOFT	59491810	1232	0	0	16.15	14630937	-0.047953	-0.100214	-0.107667
28	10107	20090331	59491810	MSFT	MICROSOFT	59491810				18.37	16364071	0.137461	0.086692	0.107441
29	10107	20090430	59491810	MSFT	MICROSOFT	59491810				20.26	15703150	0.102885	0.109359	0.192761
30	10107	20090529	59491810	MSFT	MICROSOFT	59491810		0	0	20.89	11077166	0.037512	0.067789	0.10233
31	10107	20090630	59491810	MSFT	MICROSOFT	59491810				23.77	14184830	0.137865	-0.003098	0.023917
32	10107	20090731	59491810	MSFT	MICROSOFT	59491810				23.52	15253854	-0.010517	0.081719	0.085217
33	10107	20090831	59491810	MSFT	MICROSOFT	59491810	1232	0	0	24.65	10093985	0.053571	0.031459	0.056864
34	10107	20090930	59491810	MSFT	MICROSOFT	59491810				25.72	10433262	0.043408	0.045222	0.071237
35	10107	20091030	59491810	MSFT	MICROSOFT	59491810				27.73	15277741	0.078149	-0.027993	-0.050612
36	10107	20091130	59491810	MSFT	MICROSOFT	59491810	1232	0	0	29.41	10236442	0.065272	0.057098	0.028444
37	10107	20091231	59491810	MSFT	MICROSOFT	59491810				30.48	9238424	0.036382	0.028419	0.054578
38	10107	20100129	59491810	MSFT	MICROSOFT	59491810				28.18	13640561	-0.075459	-0.037096	-0.011388

PERMNO, NCUSIP, TICKER, COMNAM, CUSIP: the unique asset identifiers.

PRC: the asset prices.

VOL: the trading volumes.

RET: the total returns.

vwretd: the returns on a value-weighted index.

ewretd: the returns on an equally-weighted index.

DISTCD: the distribution codes.

FACPR: the factors to adjust prices.

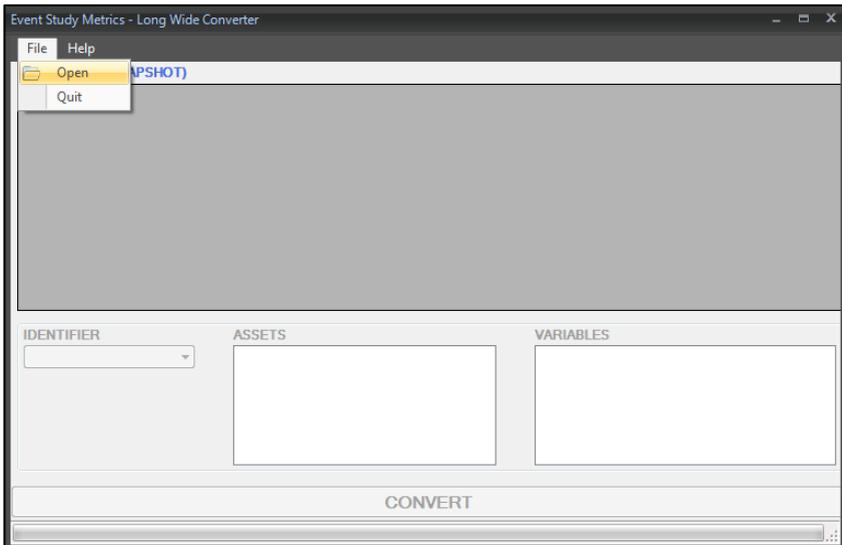
FACSHR: the factors to adjust shares outstanding.

Reshaping Long to Wide Format (Converter)

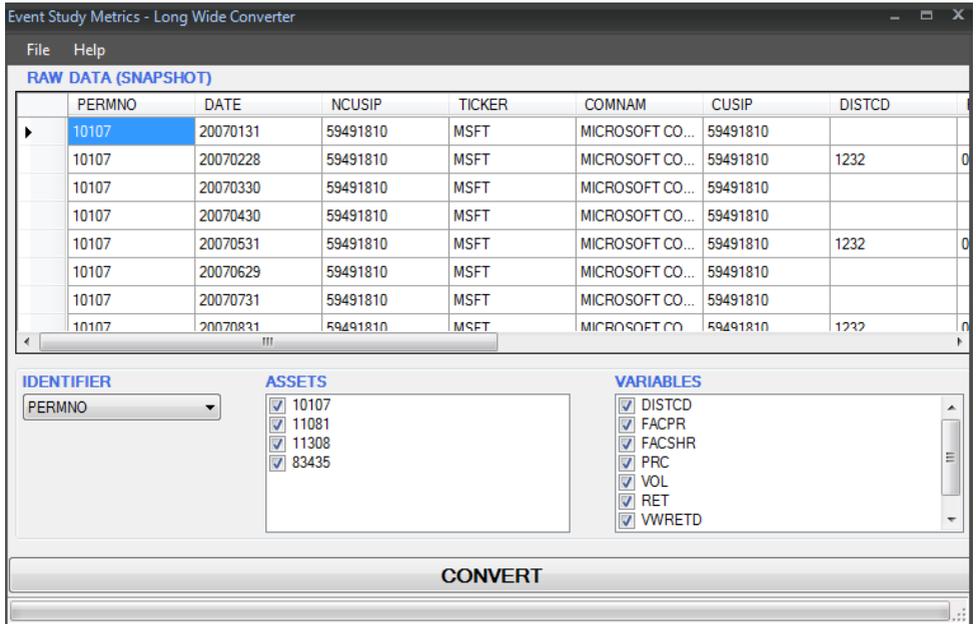
1. After installing the *Long Wide Converter*, double click the *Long Wide Converter* icon on your desktop:



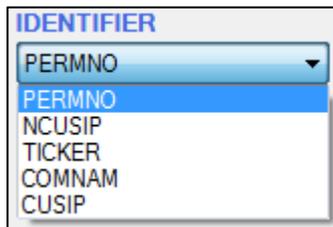
2. Click the **File** button and select the **Open** tab in the menu bar:



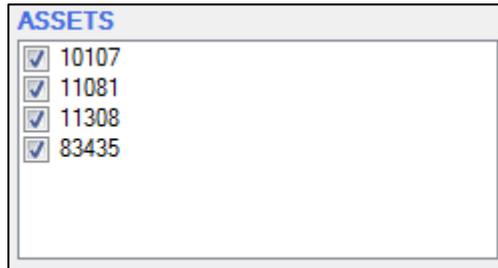
3. Select and open your **long data** from a **comma-delimited text file (*.csv)**:



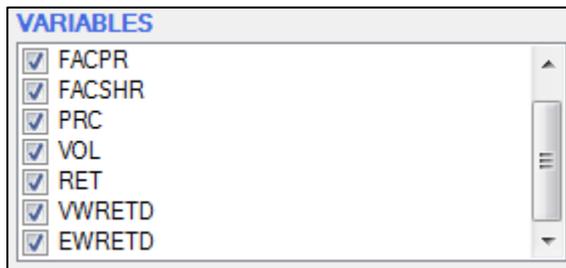
4. Select the preferred **identifier** for the **assets**:



5. Select the **assets** for your **data file(s)**:



6. Select the **variables** (prices, returns etc.) for your **Dataset** and/or **Return Model**:



Note: The converter allows you to create a separate **comma-delimited text file (*.csv)** for each variable.

Example: If you select **price (PRC)** and **value-weighted index return (VWRETD)** as your variables, you will obtain **two files**. The **price file** may be your **Dataset** and the **value-weighted return file** may be your **Return Model**:

VARIABLES	
<input type="checkbox"/>	FACPR
<input type="checkbox"/>	FACSHR
<input checked="" type="checkbox"/>	PRC
<input type="checkbox"/>	VOL
<input type="checkbox"/>	RET
<input checked="" type="checkbox"/>	VWRETD
<input type="checkbox"/>	EWRETD

- Please click the **CONVERT** button.
- Finally, the new data file(s) satisfy the **wide data structure**:

Dataset:

	A	B	C	D	E
1	date	10107	11081	11308	83435
2	1/31/2007	30.86	24.22	47.88	28.31
3	2/28/2007	28.17	22.85	46.68	30.86
4	3/30/2007	27.87	23.21	48	31.29
5	4/30/2007	29.94	25.21	52.19	28.04
6	5/31/2007	30.69	26.911	52.99	28.7
7	6/29/2007	29.47	28.55	52.31	27.13
8	7/31/2007	28.99	27.97	52.11	23.25
9	8/31/2007	28.73	28.25	53.78	22.73
10	9/28/2007	29.46	27.6	57.47	26.84
11	10/31/2007	36.81	30.6	61.76	31.1
12	11/30/2007	33.6	24.54	62.1	26.81
13	12/31/2007	35.6	24.51	61.37	23.26
14	1/31/2008	32.6	20.04	59	19.18
15	2/29/2008	27.19	19.9	58.46	27.78

Return Model:

	A	B
1	date	Index
2	1/31/2007	0.019428
3	2/28/2007	-0.013957
4	3/30/2007	0.012949
5	4/30/2007	0.039821
6	5/31/2007	0.038932
7	6/29/2007	-0.014756
8	7/31/2007	-0.031756
9	8/31/2007	0.01166
10	9/28/2007	0.04086
11	10/31/2007	0.025835
12	11/30/2007	-0.049222
13	12/31/2007	-0.004419
14	1/31/2008	-0.062151
15	2/29/2008	-0.021653

9. Open the **Event Study Metrics software** and import the newly generated **comma-delimited text file(s) (*.csv)**:

