

Futures Industry Institute

Daily Data:

US and Canadian, and Non-North American full data sets

(September 1999)

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About these datasets

The Department of Finance acquired the Futures Daily Data from the Futures Industry Institute (<http://www.fiafii.org>) during December 1999.

The accompanying documentation from the Futures Industry Institute is poor and incomplete at best. The documents that follow were generated by Kellogg Research Computing, while working on SAS programs to read the data files. It has been created on the basis of information provided by FII, and of information available on the web sites of the relevant exchanges. Nevertheless, the documentation is still incomplete, especially concerning the description of the contracts, and mistakes might remain. **Users should verify this information and notify us about any mistakes or additional pieces of information encountered.**

All the data files have been decompressed and uploaded to Kellogg's UNIX server, skew3. The original CD-ROM can be borrowed from Research Computing, if needed.

Contents of the /kellogg/data/futures in skew3:

The files have been spread into the following subdirectories:

- docs: Contains a couple of text files, which are a subset of this documentation, for user convenience.
- 11 through 19: Data files, classified according to their layout (see section on file layouts).
- pgm: SAS programs to read the data. Within this directory, a subdirectory called "tidbits" contains the lists of files for each layout, including the path. To run these programs, users should copy them to their respective accounts.

Notes about specific contracts and units:

FII documentation lacks unit references, especially regarding the currencies in which prices are quoted. Users should be especially wary of currency unit changes in European markets. The following two references to changes in the contract specification were found among the data files:

- Please note that the price quotation for Tokyo Grain Exchange (TGE) Soybean Futures (USS) changed in June 1994. Prior to that month, the price was "yen per 60 kilograms". Since June 1994, the price quotation is based on "yen per 1,000 kilograms".
- Live Hog (LH in CME) Futures contract ended and Lean Hog Futures contract began in November 1995.

Available contracts

| Code | Contract | Exchange | File layout | Set | Type | Original ZIP file 1/ |
|------|--|----------|-------------|-------|----------------------|-------------------------|
| BO | Soybean oil | CBT | 12 | usset | Grains and oilseeds | |
| CN | Corn | CBT | 12 | usset | Grains and oilseeds | |
| NR | Rice - rough | CBT | 11 | usset | Grains and oilseeds | |
| OA | Oats | CBT | 12 | usset | Grains and oilseeds | |
| SM | Soybean meal | CBT | 12 | usset | Grains and oilseeds | |
| SY | Soybeans | CBT | 12 | usset | Grains and oilseeds | |
| WC | Wheat | CBT | 12 | usset | Grains and oilseeds | |
| FV | T-note (5-year) | CBT | 11 | usset | Interest rate | |
| MB | Municipal bonds | CBT | 12 | usset | Interest rate | |
| TY | T-note (10-year) | CBT | 11 | usset | Interest rate | |
| US | T-bond | CBT | 11 | usset | Interest rate | |
| AG | Silver 1000 oz | CBT | 12 | usset | Metals and petroleum | |
| KI | Gold - kilo | CBT | 12 | usset | Metals and petroleum | |
| SV | Silver 5000 oz | CBT | 12 | usset | Metals and petroleum | |
| FF | 30-day Interest Rate? | CBT? | 12 | usset | Interest rate | |
| AD | Australian dollar | CME | 11 | usset | Currency | |
| AD2 | Australian dollar, including cash prices | CME | 19 | usset | Currency | |
| BP | British pound | CME | 12 | usset | Currency | |
| CD | Canadian dollar | CME | 12 | usset | Currency | |
| DM | Deutsche Mark | CME | 12 | usset | Currency | |
| ED | Eurodollar | CME | 12 | usset | Currency | |
| ED2 | Eurodollar, day session | CME | 19 | usset | Currency | |
| JY | Japanese Yen | CME | 12 | usset | Currency | |
| JY2 | Japanese Yen, day session | CME | 19 | usset | Currency | |
| MP | Mexican Peso | CME | 12 | usset | Currency | |
| SF | Swiss Franc | CME | 12 | usset | Currency | |
| BC | Major market index - old put | CME | 11 | usset | Index | |
| SP | S&P 500 index | CME | 12 | usset | Index | |
| TB | T-bill | CME | 11 | usset | Interest rate | |
| FC | Cattle - feeder | CME | 12 | usset | Livestock and meat | |
| LC | Cattle - live | CME | 12 | usset | Livestock and meat | |
| LH | Hogs - live | CME | 12 | usset | Livestock and meat | |
| PB | Pork bellies | CME | 12 | usset | Livestock and meat | |
| LB | Lumber | CME | 11 | usset | Other | |
| CC | Cocoa | CSCE | 11 | usset | Food and fiber | |
| KC | Coffee | CSCE | 12 | usset | Food and fiber | |
| SB | Sugar # 11 | CSCE | 12 | usset | Food and fiber | |
| CI | Consumer price index | CSCE | 11 | usset | Other | |
| KW | Wheat, hard red winter | KCBT | 12 | usset | Grains and oilseeds | |
| KV | Value line index | KCBT | 12 | usset | Index | |
| MV | Mini value line average | KCBT | 11 | usset | Index | |
| XB | T-bond, 30 year | MACE | 11 | usset | Interest rate | |
| MW | Wheat - white | MGE | 12 | usset | Grains and oilseeds | |
| EU | European currency unit | NYCE | 11 | usset | Currency | |
| CT | Cotton no. 2 | NYCE | 12 | usset | Food and fiber | |
| JO | Orange juice | NYCE | 11 | usset | Food and fiber | |
| DX | US dollar index | NYCE | 11 | usset | Index | |
| FY | T-note (5-year) | NYCE | 11 | usset | Interest rate | |
| RT | Russell 2000 | NYFE | 11 | usset | Index | |
| YX | NYSE composite index | NYFE | 12 | usset | Index | |
| CR | Bridge/CRB (Commodity Research Bureau) index | NYFE | 12 | usset | Other | |
| MI | Moody corporate bond | NYMEX | 11 | usset | Interest rate | |
| AL | Aluminum | NYMEX | 11 | usset | Metals and petroleum | |
| CL | Crude oil - light | NYMEX | 12 | usset | Metals and petroleum | |
| CP | Copper | NYMEX | 12 | usset | Metals and petroleum | |

| Code | Contract | Exchange | File layout | Set | Type | Original ZIP file 1/ |
|------|---------------------------|----------|-------------|----------|----------------------|----------------------|
| GC | Gold | NYMEX | 12 | usset | Metals and petroleum | |
| HG | Copper - high grade | NYMEX | 12 | usset | Metals and petroleum | |
| HO | Heating oil - ny harbor | NYMEX | 12 | usset | Metals and petroleum | |
| HU | Gasoline, unleaded | NYMEX | 12 | usset | Metals and petroleum | |
| NG | Natural Gas | NYMEX | 11 | usset | Metals and petroleum | |
| PA | Palladium | NYMEX | 12 | usset | Metals and petroleum | |
| PL | Platinum | NYMEX | 12 | usset | Metals and petroleum | ADCASH |
| PN | Liquid propane | NYMEX | 12 | usset | Metals and petroleum | |
| SI | Silver | NYMEX | 12 | usset | Metals and petroleum | |
| WB | Barley | WINN | 11 | usset | Grains and oilseeds | |
| WF | Flax seed | WINN | 11 | usset | Grains and oilseeds | |
| WO | Oats | WINN | 11 | usset | Grains and oilseeds | EDD |
| WP | Rapeseed (canola) | WINN | 11 | usset | Grains and oilseeds | |
| WR | Rye | WINN | 11 | usset | Grains and oilseeds | JYD |
| WW | Wheat | WINN | 11 | usset | Grains and oilseeds | |
| COM | US Dollar Commercial | BOLSA | 13 | nonusset | Currency | |
| FLO | US Dollar Floating | BOLSA | 13 | nonusset | Currency | |
| ARA | Coffee, Arabica | BOLSA | 13 | nonusset | Food and fiber | |
| ROB | Coffee, Robusta | BOLSA | 13 | nonusset | Food and fiber | |
| STO | Bovespa stock index | BOLSA | 18 | nonusset | Index | |
| INT | Interbank deposit (1-day) | BOLSA | 14 | nonusset | Interest rate | |
| CAT | Cattle - live | BOLSA | 14 | nonusset | Livestock and meat | |
| BCR | Brent crude oil | IPE | 11 | nonusset | Metals and petroleum | |
| GO | Gas oil | IPE | 11 | nonusset | Metals and petroleum | |
| UG | Unleaded gasoline | IPE | 11 | nonusset | Metals and petroleum | |
| LCC | Cocoa futures no. 7 | LCE | 11 | nonusset | Food and fiber | |
| LKC | Robusta coffee futures | LCE | 11 | nonusset | Food and fiber | |
| LSG | White sugar no. 5 futures | LCE | 11 | nonusset | Food and fiber | |
| 3MO | Sterling (3-month) | LIFFE | 11 | nonusset | Currency | |
| ECU | ECU (3-month) | LIFFE | 11 | nonusset | Currency | |
| EUR | Eurodollar (3-month) | LIFFE | 11 | nonusset | Currency | |
| GIL | UK Gilt (20-year) | LIFFE | 11 | nonusset | Currency | |
| MRK | Euro D-mark (3-month) | LIFFE | 11 | nonusset | Currency | |
| SWS | Euroswiss (3-month) | LIFFE | 11 | nonusset | Currency | |
| FTS | FT-SE 100 index | LIFFE | 11 | nonusset | Index | |
| BOB | Mid-term Notional Bond | LIFFE | 11 | nonusset | Interest rate | |
| BTB | U.S. T- Bond? | LIFFE | 11 | nonusset | Interest rate | |
| BTP | Italian Government Bond? | LIFFE | 11 | nonusset | Interest rate | |
| BUN | German bund | LIFFE | 11 | nonusset | Interest rate | |
| CAC | CAC 40 | MATIF | 11 | nonusset | Index | |
| FLT | French Treasury bond | MATIF | 11 | nonusset | Interest rate | |
| MEC | ECU bond? | MATIF | 11 | nonusset | Interest rate | |
| NNN | Notional bond | MATIF | 11 | nonusset | Interest rate | |
| PIB | PIBOR (3-month) | MATIF | 11 | nonusset | Interest rate | |
| NIK | Nikkei 225 index | OSAKA | 15 | nonusset | Index | |
| SEY | Euroyen | SIMEX | 11 | nonusset | Currency | |
| SNI | Nikkei index | SIMEX | 11 | nonusset | Index | |
| SFO | Fuel oil | SIMEX | 11 | nonusset | Metals and petroleum | |
| SMI | Swiss market index | SOFFEX | 16 | nonusset | Index | |
| SGB | Swiss government bond | SOFFEX | 16 | nonusset | Interest rate | |
| AAO | All ordinaries share pr | SYDNEY | 11 | nonusset | Index | |
| A3Y | Australian T-bond (3-yr) | SYDNEY | 11 | nonusset | Interest rate | |
| ABA | Bank acctpd bl (90-day) | SYDNEY | 11 | nonusset | Interest rate | |
| ATB | Australian T-bond (10-yr) | SYDNEY | 11 | nonusset | Interest rate | |
| RDB | Red Beans (Azuki) | TGE | 17 | nonusset | Food and fiber | |
| RFS | Refined Sugar | TGE | 17 | nonusset | Food and fiber | |
| RSG | Raw Sugar | TGE | 17 | nonusset | Food and fiber | |

| Code | Contract | Exchange | File layout | Set | Type | Original ZIP file 1/ |
|-------------|-----------------------|-----------------|--------------------|------------|---------------------|---------------------------------|
| USC | US Corn | TGE | 17 | nonusset | Grains and oilseeds | |
| USS | US Soybean | TGE | 17 | nonusset | Grains and oilseeds | |
| TEY | 1-year Euroyen future | TIFFE | 11 | nonusset | Currency | |

1/ If different from assigned commodity code.

File layouts

All files are blank-delimited with no missing values. Some files (for the Non-North American exchanges) have headers that take seven to eight.

Layout 1 (I1):

Files with nine columns, with no header rows.

| Item | Variable name |
|---------------------------|---------------|
| Date | date |
| Contract name | cname |
| Expiration month and year | exp |
| Open price | po |
| High price | ph |
| Low price | pl |
| Settlement price | ps |
| Volume | vol |
| Open interest | opint |

Contracts with this layout:

| Exchange | Contract code |
|----------|---|
| CBT | FV, NR, TY, US |
| CME | AD ¹ , BC, LB, TB |
| CSCE | CC, CI |
| IPE | BCR, GO, UG |
| KCBT | MV |
| LCE | LCC, LKC, LSG |
| LIFFE | 3MO, BOB, BTB, BTP, BUN, ECU, EUR, FTS, GIL, MRK, SWS |
| MACE | XB |
| MATIF | CAC, FLT, MEC, NNN, PIB |
| NYCE | DX, EU, FY, JO, RT |
| NYMEX | AL, MI, NG |
| SIMEX | SEY, SFO, SNI |
| SYDNEY | A3Y, AAO, ABA, ATB |
| TIFFE | TEY |
| WINN | WB, WF, WO, WP, WR, WW |

¹ See also layout 9.

Layout 2 (I2)

Files with 10 columns, with no header rows.

| Item | Variable name |
|---------------------------|----------------------|
| Date | date |
| Contract name | cname |
| Expiration month and year | exp |
| Open price | po |
| High price | ph |
| Low price | pl |
| Settlement price | ps |
| Cash price | pc |
| Volume | vol |
| Open interest | opint |

Contracts with this layout:

| Item | Contract codes |
|-------------|--|
| CBT | AG, BO, CN, KI, MB, OA, SM, SV, SY, WC, FF |
| CME | BP, CD, DM, ED ¹ , FC, JY ¹ , LC, LH, MP, PB, SF, SP |
| CSCE | KC, SB |
| KCBT | KV, KW |
| MGE | MW |
| NYCE | CT, |
| NYFE | CR, YX |
| NYMEX | CL, CP, GC, HG, HO, HU, PA, PL, PN, SI |

Layout 3 (13)

Files with nine columns; the first eight rows are headers.

| Item | Variable name |
|------------------|----------------------|
| Date | date |
| Open price | po |
| High price | ph |
| Low price | pl |
| Close price | cp |
| Settlement price | ps |
| Volume | vol |
| Open interest | opint |
| Number of trades | ntr |

Contracts with this layout:

| Exchange | Contract codes |
|-----------------|-----------------------|
| Bolsa | ARA, COM, FLO, ROB |

Layout 4 (14):

Files with 10 columns and seven header rows (the data starts at row eight).

| Item | Variable name |
|---------------------------|----------------------|
| Date | date |
| Open price | po |
| High price | ph |
| Low price | pl |
| Close price | cp |
| Settlement price | ps |
| Adjusted settlement price | aps |
| Volume | vol |
| Open interest | opint |
| Number of trades | ntr |

Contracts with this layout:

| Exchange | Contract code |
|-----------------|----------------------|
| Bolsa | CAT, INT |

Layout 5 (I5):

Files with seven columns and seven rows of headers (the data starts at row eight).

| Item | Variable name |
|---------------|---------------|
| Date | date |
| Open price | po |
| High price | ph |
| Low price | pl |
| Close price | cp |
| Volume | vol |
| Open interest | opint |

Contracts with this layout:

| Exchange | Contract code |
|----------|---------------|
| Osaka | NIK |

Layout 6 (I6):

Files with 15 columns and eight header rows (the data starts at row nine).

| Item | Variable name |
|-------------------|---------------|
| Date | date |
| Open price | po |
| High price | ph |
| Low price | pl |
| Last price | lp |
| Settle price | ps |
| Volume | vol |
| Open interest | opint |
| Number of trades | ntr |
| Best bid price | bbp |
| Best bid quantity | bbq |
| Best ask price | bap |
| Best ask quantity | baq |
| End bid | eb |
| End ask | ea |

Contracts with this layout:

| Exchange | Contract codes |
|----------|----------------|
| SOFFEX | SGB, SMI |

Layout 7 (I7):

Files with 10 columns and eight header rows (the data starts at row nine)

| Item | Variable name |
|--------------------------|----------------------|
| Date | date |
| First morning session | am1 |
| Second morning session | am2 |
| Third morning session | am3 |
| First afternoon session | pm1 |
| Second afternoon session | pm2 |
| Third afternoon session | pm3 |
| Settle | ps |
| Volume | vol |
| Open interest | opint |

Contracts with this layout:

| Exchange | Contract codes |
|-----------------|-------------------------|
| TGE | RDB, RFS, RSG, USC, USS |

Layout 8 (I8):

Files with ten columns and seven headings (the data starts at row eight).

| Item | Variable name |
|------------------|----------------------|
| Date | date |
| Open price | po |
| High price | ph |
| Low price | pl |
| Close price | cp |
| Settlement price | ps |
| Spot price | spot |
| Volume | vol |
| Open interest | opint |
| Number of trades | ntr |

Contracts with this layout:

| Exchange | Contract codes |
|-----------------|-----------------------|
| Bolsa | STO |

Layout 9 (I9): “Special” contracts – same as layout 2 (I2)

This is not really a separate layout, but a collection of three “special” contracts of the Chicago Mercantile Exchange (CME):

- Australian Dollar (AD), series including cash price prices.
- Eurodollar (ED), day session series
- Japanese Yen (JY), day session series.

To distinguish them from the regular contracts with the same code, a “2” was appended to the contract name in these files (AD2, ED2 and JY2). The file layout and contents is otherwise the same as **layout 2**.

Sample portions of each file layout

The following samples show the first rows of each layout, including the first five lines of data.

Layout 1

| | | | | | | | |
|----------|----------|---------|---------|---------|---------|---|---|
| 06/10/88 | "FV H89" | 96.3125 | 96.3125 | 96.2031 | 96.2813 | 5 | 5 |
| 06/13/88 | "FV H89" | 96.3906 | 96.3906 | 96.3906 | 96.3906 | 0 | 5 |
| 06/14/88 | "FV H89" | 97.2500 | 97.2500 | 97.2500 | 97.2500 | 0 | 5 |
| 06/15/88 | "FV H89" | 97.0625 | 97.0781 | 97.0313 | 97.0469 | 2 | 5 |
| 06/16/88 | "FV H89" | 96.5313 | 96.5313 | 96.4219 | 96.4219 | 2 | 5 |

Layout 2

| | | | | | | | | |
|----------|----------|-------|-------|-------|-------|-------|----|----|
| 12/29/94 | "AG F95" | 475.0 | 482.0 | 475.0 | 481.5 | 489.0 | 24 | 14 |
| 12/30/94 | "AG F95" | 475.0 | 480.5 | 475.0 | 480.5 | 487.0 | 8 | 6 |
| 01/03/95 | "AG F95" | 471.0 | 471.0 | 466.0 | 466.0 | 474.5 | 2 | 3 |
| 01/04/95 | "AG F95" | 460.0 | 460.0 | 455.0 | 455.0 | 469.0 | 6 | 4 |
| 01/05/95 | "AG F95" | 460.0 | 464.0 | 460.0 | 462.0 | 463.0 | 2 | 0 |

Layout 3

BOLSA ARABICA COFFEE MARCH 1992 FUTURES
U.S. DOLLAR PER BAG (1-BAG = 60KG.)

| DATE | OPEN | HIGH | LOW | CLOSE | SETTLEMENT | VOLUME | OPEN INTEREST | NO. OF TRADES |
|----------|------|-------|-------|-------|------------|--------|---------------|---------------|
| 08/15/91 | 0 | 0.00 | 0.00 | 0.00 | 76.20 | 0 | 7 | 0 |
| 08/16/91 | 0 | 0.00 | 0.00 | 0.00 | 77.20 | 0 | 7 | 0 |
| 08/19/91 | 0 | 78.50 | 78.00 | 78.50 | 78.50 | 5 | 12 | 4 |
| 08/20/91 | 0 | 78.40 | 78.00 | 78.40 | 78.60 | 5 | 17 | 5 |
| 08/21/91 | 0 | 80.00 | 79.50 | 80.00 | 80.00 | 7 | 22 | 6 |

Layout 4

BOLSA LIVE CATTLE FEBRUARY 1992 FUTURES
U.S. DOLLAR PER ARROBA (1 ARROBA = 15KG.)

| DATE | OPEN | HIGH | LOW | CLOSE | SETTLEMENT | ADJUSTED SETTLEMENT | VOLUME | OPEN INTEREST | NO. OF TRADES |
|----------|------|------|------|-------|------------|------------------------|--------|------------------|------------------|
| 11/25/91 | 0.00 | 0.00 | 0.00 | 0.00 | 19.04 | 0.00 | 0 | 0 | 0 |
| 11/26/91 | 0.00 | 0.00 | 0.00 | 0.00 | 19.04 | 0.00 | 0 | 0 | 0 |
| 11/27/91 | 0.00 | 0.00 | 0.00 | 0.00 | 19.04 | 0.00 | 0 | 0 | 0 |
| 11/28/91 | 0.00 | 0.00 | 0.00 | 0.00 | 19.04 | 0.00 | 0 | 0 | 0 |
| 11/29/91 | 0.00 | 0.00 | 0.00 | 0.00 | 19.04 | 0.00 | 0 | 0 | 0 |

Layout 5

OSAKA NIKKEI 225 INDEX MARCH 1989 FUTURES
1988

| DATE | OPEN | HIGH | LOW | CLOSE | VOLUME | OPEN INTEREST |
|----------|-------|-------|-------|-------|--------|------------------|
| 09/03/88 | 28080 | 28080 | 28000 | 28080 | 19 | 18 |
| 09/05/88 | 28080 | 28080 | 28080 | 28080 | 1 | 17 |
| 09/06/88 | 0 | 0 | 0 | 0 | 0 | 17 |
| 09/07/88 | 28010 | 28010 | 28010 | 28010 | 1 | 17 |
| 09/08/88 | 28040 | 28040 | 28040 | 28040 | 2 | 17 |

Layout 6

DAILY PRICE DATA
FOR SWISS GOVERNMENT BOND FUTURES SEPTEMBER 92 CONTRACT

| DATE | OPEN PRICE | DAY HIGH | DAY LOW | LAST PRICE | SETTLE PRICE | VOLUME | OPEN INTEREST | NO. OF TRADES | BEST BID PRC | BEST BID QTY | BEST ASK PRC | BEST ASK QTY | END BID | END ASK |
|----------|------------|----------|---------|------------|--------------|--------|---------------|---------------|--------------|--------------|--------------|--------------|---------|---------|
| 05/26/92 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 |
| 05/27/92 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0.00 |
| 05/29/92 | 94.60 | 94.60 | 93.36 | 93.47 | 93.47 | 1318 | 381 | 74 | 93.44 | 50 | 93.47 | 49 | 93.44 | 93.44 |
| 06/01/92 | 93.48 | 93.83 | 93.48 | 93.64 | 93.62 | 2508 | 792 | 107 | 93.61 | 25 | 93.63 | 20 | 93.61 | 93.61 |
| 06/02/92 | 93.60 | 93.73 | 93.52 | 93.53 | 93.53 | 1967 | 919 | 93 | 93.53 | 2 | 93.63 | 15 | 93.53 | 93.53 |

Layout 7

DAILY PRICE DATA
FOR TOKYO GRAIN EXCHANGE AZUKI (RED BEANS) FUTURES JANUARY 1990
(Yen per 30 kilograms)

| DATE | MORNING SESSIONS | | | AFTERNOON SESSIONS | | | SETTLE | VOLUME | OPEN INTEREST |
|----------|------------------|--------|-------|--------------------|--------|-------|--------|--------|---------------|
| | First | Second | Third | First | Second | Third | | | |
| 08/01/89 | 13670 | 13650 | 13700 | 13650 | 13680 | 13680 | 13680 | 1447 | 2907 |
| 08/02/89 | 13560 | 13480 | 13380 | 13420 | 13400 | 13440 | 13440 | 1985 | 3913 |
| 08/03/89 | 13300 | 13340 | 13240 | 13200 | 13200 | 13170 | 13170 | 2062 | 4638 |
| 08/04/89 | 13130 | 13170 | 13210 | 13260 | 13250 | 13250 | 13250 | 2107 | 5628 |
| 08/07/89 | 13190 | 13050 | 13050 | 13090 | 13010 | 13010 | 13010 | 2014 | 5961 |

Layout 8

BOLSA BOVESPA STOCK INDEX FEBRUARY 1991 FUTURES
INDEX POINTS

| DATE | OPEN | HIGH | LOW | CLOSE | SETTLEMENT | SPOT | VOLUME | OPEN INTEREST | NO. OF TRADES |
|----------|---------|---------|---------|---------|------------|---------|--------|---------------|---------------|
| 12/04/90 | 0.00000 | 5.00000 | 5.00000 | 5.00000 | 5.00000 | 2.64010 | 200 | 200 | 1 |
| 12/05/90 | 0.00000 | 4.80000 | 4.80000 | 4.80000 | 4.80000 | 2.59940 | 200 | 200 | 1 |
| 12/06/90 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 4.80000 | 2.58240 | 0 | 200 | 0 |
| 12/07/90 | 0.00000 | 4.17000 | 4.17000 | 4.17000 | 4.17000 | 2.49780 | 200 | 200 | 1 |
| 12/10/90 | 0.00000 | 3.95000 | 3.60000 | 3.85000 | 3.84920 | 2.51930 | 820 | 50 | 26 |

Available variables per contract

| Code | File layout | date | cname | exp | po | ph | pl | ps | vol | opint | pc | cp | ntr | spot | aps | lp | bbp | bbq | bap | baq | eb | ea | am1 | am2 | am3 | pm1 | pm2 | pm3 |
|------|-------------|------|-------|-----|----|----|----|----|-----|-------|----|----|-----|------|-----|----|-----|-----|-----|-----|----|----|-----|-----|-----|-----|-----|-----|
| 3MO | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| A3Y | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| AAO | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| ABA | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| AD | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| AD2 | 19 | x | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AG | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| AL | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| ARA | 13 | x | | | x | x | x | x | x | x | | x | x | | | | | | | | | | | | | | | |
| ATB | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| BC | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| BCR | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| BO | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| BOB | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| BP | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| BTB | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| BTP | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| BUN | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| CAC | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| CAT | 14 | x | | | x | x | x | x | x | x | | x | x | | x | | | | | | | | | | | | | |
| CC | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| CD | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| CI | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| CL | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| CN | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| COM | 13 | x | | | x | x | x | x | x | x | | x | x | | | | | | | | | | | | | | | |
| CP | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| CR | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| CT | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| DM | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| DX | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| ECU | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| ED | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| ED2 | 19 | x | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EU | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| EUR | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| FC | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| FF | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| FLO | 13 | x | | | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| FLT | 11 | x | x | x | x | x | x | x | x | x | | | x | x | | | | | | | | | | | | | | |
| FTS | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| FV | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |

| Code | File layout | date | ename | exp | po | ph | pl | ps | vol | optint | pc | cp | ntr | spot | aps | lp | bbp | bbq | bap | baq | eb | ea | am1 | am2 | am3 | pm1 | pm2 | pm3 |
|------|-------------|------|-------|-----|----|----|----|----|-----|--------|----|----|-----|------|-----|----|-----|-----|-----|-----|----|----|-----|-----|-----|-----|-----|-----|
| FY | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| GC | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| GIL | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| GO | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| HG | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| HO | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| HU | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| INT | 14 | x | | | x | x | x | x | x | x | | x | x | | x | | | | | | | | | | | | | |
| JO | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| JY | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| JY2 | 19 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| KC | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| KI | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| KV | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| KW | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| LB | 11 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| LC | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| LCC | 11 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| LH | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| LKC | 11 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| LSG | 11 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| MB | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| MEC | 11 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| MI | 11 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| MP | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| MRK | 11 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| MV | 11 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| MW | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| NG | 11 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| NIK | 15 | x | | | x | x | x | | x | x | | x | | | | | | | | | | | | | | | | |
| NNN | 11 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| NR | 11 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| OA | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| PA | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| PB | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| PIB | 11 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| PL | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| PN | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| RDB | 17 | x | | | | | | x | x | x | | | | | | | | | | | | x | x | x | x | x | x | x |
| RFS | 17 | x | | | | | | x | x | x | | | | | | | | | | | | x | x | x | x | x | x | x |
| ROB | 13 | x | | | x | x | x | x | x | x | | x | x | | | | | | | | | | | | | | | |
| RSG | 17 | x | | | | | | x | x | x | | | | | | | | | | | | x | x | x | x | x | x | x |
| RT | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |

| Code | File layout | date | ename | exp | po | ph | pl | ps | vol | opint | pc | cp | ntr | spot | aps | lp | bbp | bbq | bap | baq | eb | ea | am1 | am2 | am3 | pm1 | pm2 | pm3 |
|------|-------------|------|-------|-----|----|----|----|----|-----|-------|----|----|-----|------|-----|----|-----|-----|-----|-----|----|----|-----|-----|-----|-----|-----|-----|
| SB | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| SEY | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| SF | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| SFO | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| SGB | 16 | x | | | x | x | x | x | x | x | | | x | | | x | x | x | x | x | x | | | | | | | |
| SI | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| SM | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| SMI | 16 | x | | | x | x | x | x | x | x | | | x | | | x | x | x | x | x | x | | | | | | | |
| SNI | 11 | x | x | x | x | x | x | x | x | x | | | | | | x | x | x | x | x | x | | | | | | | |
| SP | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| STO | 18 | x | | | x | x | x | x | x | x | | x | x | x | | | | | | | | | | | | | | |
| SV | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| SWS | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| SY | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| TB | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| TEY | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| TY | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| UG | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| US | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| USC | 17 | x | | | | | | x | x | x | | | | | | | | | | | | x | x | x | x | x | x | x |
| USS | 17 | x | | | | | | x | x | x | | | | | | | | | | | | x | x | x | x | x | x | x |
| WB | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| WC | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| WF | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| WO | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| WP | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| WR | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| WW | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| XB | 11 | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| YX | 12 | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |

Futures Industry Institute exchange abbreviations

| <i>Abbreviation</i> | <i>Exchange name</i> | <i>City and country</i> | <i>Data set</i> |
|---------------------|---|-------------------------|--------------------|
| Bolsa | Bolsa de Mercadorias & Futuros (BM&F) | São Paulo, Brazil | Non North American |
| CBT | Chicago Board of Trade | Chicago, USA | US and Canadian |
| CME | Chicago Mercantile Exchange | Chicago, USA | US and Canadian |
| CSCE | Coffee, Sugar & Cocoa Exchange (subsidiary of the New York Board of Trade) | New York, USA | US and Canadian |
| IPE | International Petroleum Exchange of London | London, England | Non North American |
| KCBT | Kansas City Board of Trade | Kansas City, USA | US and Canadian |
| LCE | London Commodity Exchange (part of LIFFE) 1/ | London, England | Non North American |
| LIFFE | London International Financial Futures & Options Exchange | London, United Kingdom | Non North American |
| MACE | MidAmerica Commodity Exchange | Chicago, USA | US and Canadian |
| MATIF | Marché A Terme d'Instruments Financiers | Paris, France | Non North American |
| MGE | Minneapolis Grain Exchange | Minneapolis, USA | US and Canadian |
| NYCE | New York Cotton Exchange (subsidiary of the New York Board of Trade) | New York, USA | US and Canadian |
| NYFE | New York Futures Exchange (subsidiary of the New York Board of Trade) | New York, USA | US and Canadian |
| NYMEX | New York Mercantile Exchange | New York, USA | US and Canadian |
| OSAKA | Osaka Mercantile Exchange | Osaka, Japan | Non North American |
| SIMEX | Singapore International Monetary Exchange (subsidiary of the Singapore Exchange, SGX) | Singapore, Singapore | Non North American |
| SOFFEX | Swiss Options and Financial Futures Exchange (Subsidiary of the Swiss Exchange, SWX) 2/ | Zürich, Switzerland | Non North American |
| SYDNEY | Sydney Futures Exchange | Sydney, Australia | Non North American |
| TGE | Tokyo Grain Exchange | Tokyo, Japan | Non North American |
| TIFFE | Tokyo International Financial Futures Exchange | Tokyo, Japan | Non North American |
| WINN | Winnipeg Commodities Exchange | Winnipeg, Canada | US and Canadian |

1/ Merged with LIFFE on 9/16/96.

2/ On 7/20/98, merged with Deutsche Terminbörse (DTB) under Eurex

Notes about the programs

Provided SAS programs

For user convenience, two sets of SAS programs were written. To run these programs, please copy them to your account and modify them as necessary.

The first set reads all the data in each file layout. These files are named after the layout, 11 through 19. All these files use the variable names assigned in the “File Layouts” section; these programs are called within the second set of programs.

The second set of SAS programs consists of two programs:

- **sasdata.sas** is a very simple program which outputs the data to a SAS data file. This data file can then be used either in SAS or translated using DBMS Copy for use in a different software package. The user must specify the file layout (11 through 19). In addition, the user may specify one or more specific contracts within the file layout, and one or more variables to keep or drop. If these items are not provided, **sasdata.sas** simply will output all the data for one file layout into a SAS data file. The layout of this data file is the same as in the corresponding ASCII file for layouts 1, 2 and 9, except all data is included in one file. For layouts 3 through 8, the following variables are added: expiration date and contract name.
- **csvdata.sas** outputs part of the data to a comma-separated values (CSV) file. This is a comma-delimited file with a header row, which is easily read into a spreadsheet. The program is a series of macros that require the following information from the user: one contract code, its corresponding file layout, and one variable (e.g., “ps” for settlement price). The program reads and subsets the data, then matches each expiration date by date signed. In the resulting CSV file, the rows are dates and each column corresponds to an expiration date and contains the values for the selected variable.

Additional files

The file lists with the corresponding path have been preserved in the “tidbits” subdirectory. Users who wish to write their own code from scratch may use these files. Additional file lists may be generated sending the output of a UNIX ls command to file.

Sample file to read ASCII data

```
/* *****  
/* Filename:                               */  
/* Futures data from the Futures Industry Institute */  
/* This file reads all the data files for one layout. The filenames */  
/* are fed to the program as data themselves. The file lists are */  
/* created by sending the result of a UNIX ls command to file and */  
/* adding the data path in MS Word. The modified file list is then */
```

```

/* inserted in the corresponding file. */
/* It also creates two recoded versions of the expiration date, */
/* when available: one allows proper chronological sorting (newseq), */
/* the other provides column headings for the comma delimited files */
/* that are easier to read (fecha). */
/* */
/* Program written by Patricia Ledesma, October 2000 */
/* Last modified: October 30, 2000 by Ledesma */
/*****
options ls=76 nodate nocenter nonumber;
filename raw 'path/filename';
data readraw;
input file1: $45.;
infile raw filevar=file1 end=done;
do while (done ne 1);
    input
        date mmdyy8. tcname $ texp $ po ph pl ps vol opint;
    ;
    output;
end;
cards;
[path/filenames inserted here]
;
data tmp; set readraw;
cname=compress(tcname, '');
exp=compress(texp, '');
length mo $ 3;
if substr(exp,1,1)='F' then expmo='01';
if substr(exp,1,1)='G' then expmo='02';
if substr(exp,1,1)='H' then expmo='03';
if substr(exp,1,1)='J' then expmo='04';
if substr(exp,1,1)='K' then expmo='05';
if substr(exp,1,1)='M' then expmo='06';
if substr(exp,1,1)='N' then expmo='07';
if substr(exp,1,1)='Q' then expmo='08';
if substr(exp,1,1)='U' then expmo='09';
if substr(exp,1,1)='V' then expmo='10';
if substr(exp,1,1)='X' then expmo='11';
if substr(exp,1,1)='Z' then expmo='12';
if substr(exp,1,1)='F' then mo='Jan';
if substr(exp,1,1)='G' then mo='Feb';
if substr(exp,1,1)='H' then mo='Mar';
if substr(exp,1,1)='J' then mo='Apr';
if substr(exp,1,1)='K' then mo='May';
if substr(exp,1,1)='M' then mo='Jun';
if substr(exp,1,1)='N' then mo='Jul';
if substr(exp,1,1)='Q' then mo='Aug';
if substr(exp,1,1)='U' then mo='Sep';
if substr(exp,1,1)='V' then mo='Oct';
if substr(exp,1,1)='X' then mo='Nov';
if substr(exp,1,1)='Z' then mo='Dec';
if substr(exp,2,2)='75' then expyr='1975';
if substr(exp,2,2)='76' then expyr='1976';
if substr(exp,2,2)='77' then expyr='1977';
if substr(exp,2,2)='78' then expyr='1978';
if substr(exp,2,2)='79' then expyr='1979';
if substr(exp,2,2)='80' then expyr='1980';

```

```

if substr(exp,2,2)='80' then expyr='1981';
if substr(exp,2,2)='82' then expyr='1982';
if substr(exp,2,2)='83' then expyr='1983';
if substr(exp,2,2)='84' then expyr='1984';
if substr(exp,2,2)='85' then expyr='1985';
if substr(exp,2,2)='86' then expyr='1986';
if substr(exp,2,2)='87' then expyr='1987';
if substr(exp,2,2)='88' then expyr='1988';
if substr(exp,2,2)='89' then expyr='1989';
if substr(exp,2,2)='90' then expyr='1990';
if substr(exp,2,2)='91' then expyr='1991';
if substr(exp,2,2)='92' then expyr='1992';
if substr(exp,2,2)='93' then expyr='1993';
if substr(exp,2,2)='94' then expyr='1994';
if substr(exp,2,2)='95' then expyr='1995';
if substr(exp,2,2)='96' then expyr='1996';
if substr(exp,2,2)='97' then expyr='1997';
if substr(exp,2,2)='98' then expyr='1998';
if substr(exp,2,2)='99' then expyr='1999';
if substr(exp,2,2)='00' then expyr='2000';
if substr(exp,2,2)='01' then expyr='2001';
if substr(exp,2,2)='02' then expyr='2002';
if substr(exp,2,2)='03' then expyr='2003';
if substr(exp,2,2)='04' then expyr='2004';
if substr(exp,2,2)='05' then expyr='2005';
newseq=expyr || '-' || expmo;
fecha=mo || expyr;
drop tcname texp;
run;
/* END */

```

sasdata.sas

```

/*****/
/* Filename: sasdata.sas */
/* This program writes futures data from the Futures Industry */
/* Institute into a SAS data file. You can either write all the */
/* data for one file layout or select one or more contracts, */
/* and select on or more variables. */
/* */
/* Before you begin, you need to know: */
/* - the corresponding file layout (l1 through l9) */
/* If you intend to subset, the you need to know */
/* - the contract codes */
/* - the name of the variables you need */
/* Please check the documentation available under the "docs" */
/* sub-directory or the Research Computing web site. */
/* */
/* Written by Patricia Ledesma, October 2000 */
/* Last modified: 10/31/00 by P. Ledesma */
/*****/

options ls=76 nodate nocenter nonumber;

/* Step 1: Specify file layout to read the ASCII data. */
/* In the following statement (after "%include"), please replace */
/* the appropriate file layout, l1 through l9. This statement */

```

```

/* reads all the files for the layout specified by running the */
/* corresponding SAS program, l1.sas through l9.sas. It writes */
/* the results to a temporary SAS dataset called "tmp", which is */
/* used by this program. */

%include testl1;

/* Step 2: Modify the output directory for the resulting data */
/* file. By default, it will be written to the current directory*/

libname out '.';

/* Step 3: Modify the data set name. By default, its name will */
/* be "futures.sas7bdat". You may also specify a list of */
/* contracts or variables to be selected, using the keep and if */
/* statements. */

data out.futures;
  set tmp;
  * keep cname date exp newseq &var;
  * if cname in ('NG','3MO');
run;

/* END */

```

csvdata.sas

```

/*****
/* Filename: csvdata.sas */
/* This program contains macros to convert futures data from the */
/* Futures Industry Institute into comma delimited files. */
/* */
/* Before you begin, you need to know: */
/* - the contract code */
/* - the name of the variable you need */
/* - the corresponding file layout (l1 through l7) */
/* Please check the documentation available under the "docs" */
/* sub-directory or the Research Computing web site. */
/* */
/* Note: This program must be run in an Xterm session due to a */
/* bug with SAS' proc export. */
/* */
/* Written by Patricia Ledesma, October 2000 */
/* Last modified: 10/30/00 by P. Ledesma */
*****/
options ls=76 nodate nocenter nonumber;
/* Step 1: Specify file layout to read the ASCII data. */
/* In the following statement (after "%include"), please replace */
/* the appropriate file layout, l1 thorough l7. This statement */
/* reads all the files for the layout specified by running the */
/* corresponding SAS program, l1.sas through l7.sas. It writes */
/* the results to a temporary SAS dataset called "tmp", which is */
/* used by this program. */
%include l9;
/* Step 2: Select contract name and variable needed */
/* In the next two lines, provide the commodity code */
/* (cn) and the variable needed (var). */

```

```

%let cn=ad2;
%let var=pc;
/* Step 3: Subset all the observations for the selected code, */
/* Keeping only the relevant variables. */
data &cn;
  set tmp;
  keep cname date exp newseq fecha &var;
  if cname=upcase("&cn");
  data tmp1 (keep= exp newseq fecha);
  set &cn;
/* Step 4: Generate required macro variables. The "newseq" */
/* variable is a recode of the contract's expiration date that */
/* allows proper chronological sorting. The following lines */
/* create macro variables for each of the expiration dates. */
/* SYMPUT creates one macro variable for each value of the */
/* specified variable. Example: macro variable "dt1" is assigned */
/* the first value available for variable "exp" */
/* The maximum number of expiration dates is recorded in macro */
/* variable "maxi" for use in a loop */

proc sort data=tmp1 noduplicates out=macvar;
by newseq;
data _null_;
  set macvar end=last;
call symput('dd' || left(_n_), exp);
call symput('dt' || left(_n_), fecha);
if last then call symput('maxi', left(_n_));
run;
/* Step 5: Create a subset of the data for each contract date */
/* and sort them by date to prepare for a merge. */
/* The double ampersands are used to postpone resolution of */
/* the macro variable until the value of "i" has been resolved. */
%macro subset;
%do i=1 %to &maxi;
  data &&dd&i;
  set &cn;
  if exp=left("&&dd&i");
  rename &var=&&dt&i;
  drop newseq fecha cname exp;
  run;
  proc sort data=&&dd&i;
  by date;
%end;
%mend subset;
%subset;
/* Step 6: Merge all the subsets by date. The following macro */
/* just creates the list of datasets to be called in the */
/* merge statement. */
%macro all;
  %do i=1 %to &maxi;
  &&dd&i
  %if &i=&maxi %then %goto out;
  %end;
%out: %mend all;
data fin&cn;
merge %all;
by date;

```



```
format date mmddyy8.;
/* Step 7: Export the resulting data to a CSV file          */
proc export data=fin&cn                                     */
  outfile="~/&cn&var..csv"
  dbms=csv
  replace;
/* END */
```

Part I

**Instructions for Identifying
and Decompressing Daily Data Files
for 3 1/2 disks**

The data are contained in compressed "zip" files with one file per commodity. For most exchanges, the file name is comprised of the commodity symbol (two or three-letter code) with a "zip" extension. Consult the "Daily Data Commodity Listing", which is included with your order when necessary.

To prepare for use, copy "pkunzip.exe" from diskette number 1 to a sub-directory on your hard disk drive.

Copy all data files to be decompressed to the same sub-directory and enter the following command from within the sub-directory:

```
"pkunzip filename"
```

Where "filename" is the name of the file to be decompressed.

The file requested will be decompressed in the sub-directory on your hard disk drive.

The resulting decompressed data files will be in ASCII, blank-delimited format with a "txt" extension. The file names will be in the form "CCMY.YY.TXT" where "CC" is a two or three-letter commodity symbol, "M" is the letter representing the expiration month (the standard F,G,H,J,K,M,N,Q,U,V,X,Z symbols) where "F" = January and "Z" = December, and "YY" is the expiration year of the contract.

The daily data file format for most of the exchanges, from left to right, is as follows:

```
date, contract name, expiration month and year, open,  
high, low, settlement price, cash price (if applicable),  
volume and open interest.
```

All exchanges for which the above file format does not apply will contain imbedded header records identifying the file format.

Part II

**Instructions for Identifying Daily Data Files
for CD-ROMs**

The data are contained in ASCII files with one file per commodity. For most exchanges, the file name is comprised of the commodity symbol (two or three-letter code). Consult the "Daily Data Commodity Listing", which is included with your order when necessary.

The data files are in ASCII, blank-delimited format with a "txt" extension. The file names will be in the form "CCMY.YY.TXT" where "CC" is a two or three-letter commodity symbol, "M" is the letter representing the expiration month (the standard F,G,H,J,K,M,N,Q,U,V,X,Z symbols) where "F" = January and "Z" = December, and "YY" is the expiration year of the contract.

The daily data file format for most of the exchanges, from left to right, is as follows:

date, contract name, expiration month and year, open, high, low, settlement price, cash price (if applicable), volume and open interest.

All exchanges for which the above file format does not apply will contain imbedded header records identifying the file format.

DAILY DATA COMMODITY LIST

| Exchange | Commodity | Type | Commodity Code | Format | Units |
|----------|------------------------------|------|----------------|--------|---------------------------|
| BOLSA | Arabica Coffee | FUT | ARA | F6 | pts/bag |
| BOLSA | Bovesta Stock Index | FUT | STO | F6 | pts of index times R\$3.0 |
| BOLSA | Cattle - Live | FUT | CAT | F6 | pts/net arroba |
| BOLSA | interbank Dep (1-Day) | FUT | INT | F6 | pts/face value |
| BOLSA | Robusta Coffee | FUT | ROB | F6 | pts/bag |
| BOLSA | US Dollar Commercial | FUT | COM | F6 | reals/US \$ |
| BOLSA | US Dollar floating | FUT | FLO | F6 | reals/US \$1000 |
| CBT | Corn | FUT | CN | F4 | Cents/bu |
| CBT | Gold - Kilo | FUT | KI | F4 | \$ and cents/troy ounce |
| CBT | Major Market index - Old put | FUT | BC | F4 | |
| CBT | Municipal Bonds | FUT | MB | F4 | \$1000times bond buyer ME |
| CBT | Oats | FUT | OA | F4 | cents/bu |
| CBT | Rice - Rough | FUT | NR | F4 | \$/cwt |
| CBT | Silver 1000 oz | FUT | AG | F4 | \$s and cents/troy ounce |
| CBT | Silver 5000 oz | FUT | SV | F4 | same as above |
| CBT | Soybean Meal | FUT | SM | F4 | \$/ton |
| CBT | Soybean Oil | FUT | BO | F4 | cents/lb |
| CBT | Soybeans | FUT | SY | F4 | cents/bu |
| CBT | T-Bond | FUT | US | F4 | pts 64th of 100% |
| CBT | T-Note (10-Year) | FUT | TY | F4 | pts 64th of 100% |
| CBT | T-Note (5-year) | FUT | FV | F4 | pts 64th of 100% |
| CBT | Wheat | FUT | WC | F4 | cents/bu |
| CME | Australian Dollar | FUT | AD | F4 | \$ per/\$ |
| CME | British Pound | FUT | BP | F4 | cents/lb |
| CME | Canadian Dollar | FUT | CD | F4 | cents/canadian \$ |
| CME | Cattle - Feeder | FUT | PC | F4 | cents/lb |
| CME | Cattle - Live | FUT | LC | F4 | cents/lb |
| CME | Deutsche Mark | FUT | DM | F4 | cents/mark |
| CME | Eurodollar | FUT | ED | F4 | pts of 100% |
| CME | Hogs - Live | FUT | LH | F4 | cents/lb |
| CME | Japanese Yen | FUT | JY | F4 | cents/100 yen |
| CME | Lumber | FUT | LB | F4 | \$/1000 bd. Ft |
| CME | Major Market index - Old put | FUT | BC | F4 | |
| CME | Nasdaq 100 | FUT | ND | F4 | \$100 times index |
| CME | Nikkei 225 Stock Average | FUT | NK | F4 | \$5 times index |
| CME | Pork - Bellies | FUT | PB | F4 | cents/lb |
| CME | S&P Mid Cap 400 | FUT | MD | F4 | \$500 times index |
| CME | S&P 500 Index | FUT | SP | F4 | \$250 times index |
| CME | Swiss Franc | FUT | SF | F4 | cents/franc |
| CME | T-Bill | FUT | TB | F4 | pts of 100% |
| CSCE | Cocoa | FUT | CC | F4 | \$/ton |
| CSCE | Coffee | FUT | KC | F4 | cents/lb |

| Exchange | Commodity | Type | Commodity Code | Format | Units |
|----------|--------------------------|------|----------------|--------|------------------------------|
| CSCE | Consumer Price Index | FUT | CI | F4 | |
| CSCE | Sugar #11 | FUT | SB | F4 | cents/lb |
| DTB | German Stock Index (DAX) | FUT | FDAX | F7 | |
| DTB | Med-Term Notional Bonds | FUT | B013L | F7 | |
| DTB | Notional, German Gov Bnd | FUT | BUND | F7 | |
| DTB | Notional german Gov Lt | FUT | BUXL | F7 | |
| DTB | Three Month Fibor Put | FUT | FIBO | F7 | |
| DTB | Equity Options | OPT | OSTK | F7 | |
| DTB | Opt on Dax Futures | OPT | OBND | F7 | |
| DTB | Opt on Med-Term Ntnl Bnd | OPT | OBOB | F7 | |
| DTB | Opt on Notnal Gov Bonds | OPT | OBND | F7 | |
| DTB | Opt on the Dax Index | OPT | ODAX | F7 | |
| IPE | Brent Crude Oil | FUT | BCR | F4 | \$ per bbl |
| IPE | Gas Oil | FUT | GO | F4 | \$/ton |
| KCBT | Mini Value Line Average | FUT | MV | F4 | \$100 times futures price |
| KCBT | Value-Line Index | FUT | KV | F4 | index pts |
| KCBT | Wheat | FUT | KW | F4 | \$, cents and 1/4 cents/bush |
| LCE | No. 5 White Sugar Futur | FUT | LSG | F4 | |
| LCE | No. 7 Cocoa Futures | FUT | LCC | F4 | |
| LCE | Robusta Coffee Futures | FUT | LKC | F4 | |
| LIFFE | Ecu (3-Month) | FUT | ECU | F4 | pts of 100% |
| LIFFE | Euro D-Mark (3-Month) | FUT | MRK | F4 | pts of 100% |
| LIFFE | Eurodollar (3-Month) | FUT | EUR | F4 | 100-rate of interest |
| LIFFE | Euroaira (3-month) | FUT | LIR | | |
| LIFFE | Euroswiss (3-month) | FUT | SWS | F4 | pts of 100% |
| LIFFE | FT-SE 100 Index | FUT | FTS | F4 | BP 10 per index point |
| LIFFE | Ft-Se Eurotrack | FUT | TRK | | |
| LIFFE | German Bond | FUT | BUN | F4 | /euro 100 nominal value |
| LIFFE | Japanese Gov Bond | FUT | JPN | F4 | /yen 100 face value |
| LIFFE | Sterling (3-Month) | FUT | 3MO | F4 | pts of 100% |
| LIFFE | UK Guilt (20-year) | FUT | GIL | F4 | /100 lb sterling nominal |
| LIFFE | US T-Bond | FUT | USB | | |
| LIFFE | Euro D-Mark (3-Month) | OPT | MR | F4 | multiple of .01% |
| LIFFE | Eurodollar (3-Month) | OPT | EU | | |
| LIFFE | German Bond | OPT | BU | | |
| LIFFE | Sterling (3-Month) | OPT | 3M | | pts of 100% |
| LIFFE | US T-Bond | OPT | US | | |
| MACE | T-Bond | FUT | XB | F4 | |
| MATIF | CAC 40 | FUT | CAC | F3 | 10.0Xindex |
| MATIF | ECU Bond | FUT | ECU | F3 | |
| MATIF | French Treasury Bond | FUT | FLT | F3 | |
| MATIF | Medium-Term French Trea | FUT | FMT | F3 | |
| MATIF | Notional Bond | FUT | NNN | F3 | Euros 100,000 |
| MATIF | Pibor (3 Month) | FUT | PIB | F3 | Euros 100,000 |
| MATIF | Ecu Bond | OPT | OX | F3 | |

| Exchange | Commodity | Type | Commodity Code | Format | Units |
|----------|---------------------------|------|----------------|--------|-------------------------|
| MATIF | Notional Bond | OPT | ON | F3 | |
| MATIF | Pibor (3-Month) | OPT | OP | F3 | |
| MGE | Wheat - White | FUT | MW | F4 | |
| NYCE | Cotton No. 2 | FUT | CT | F4 | cents/lb |
| NYCE | European Currency Unit | FUT | EU | | |
| NYCE | Orange Juice, Frozen | FUT | JO | F4 | cents/lb |
| NYCE | T-Note (5 Yr) | FUT | FY | F4 | |
| NYCE | US Dollar index | FUT | DX | F4 | |
| NYFE | CRB Index | FUT | CR | F4 | index pts |
| NYFE | NYSE Composite Index | FUT | YX | F4 | in 100th of an index pt |
| NYFE | Russell 2000 | FUT | RT | F4 | |
| NYMEX | Aluminum | FUT | AL | F4 | |
| NYMEX | Copper | FUT | CP | F4 | cents/lb |
| NYMEX | Copper - High Grade | FUT | HG | F4 | cents/lb |
| NYMEX | Crude Oil - Light | FUT | CL | | \$/bbl |
| NYMEX | Gold | FUT | GC | F4 | \$/troy ounce |
| NYMEX | Heating Oil - NY Harbor | FUT | HO | F4 | \$/gal |
| NYMEX | Liquit Propane | FUT | PN | F4 | cents/gal |
| NYMEX | Moody Corporate Bond | FUT | MI | F4 | |
| NYMEX | Palladium | FUT | PA | F4 | \$/troy ounce |
| NYMEX | Platinum | FUT | PL | F4 | \$/troy ounce |
| NYMEX | Silver | FUT | SI | F4 | cents/tray oz |
| NYMEX | Unleaded Gasoline-NYH | FUT | HU | F4 | \$/gallon |
| OSAKA | Nikkei 225 Index | FUT | MIX | F5 | yen |
| OSAKA | Nikkei 225 Index | FUT | NI | F5 | |
| SIMEX | Euroyen | FUT | SEY | F4 | index pts |
| SOFFEX | Nikkei Index | FUT | SNI | F4 | index pts |
| SOFFEX | Swiss Franc (5-Year) | FUT | 5MI | F1 | |
| SOFFEX | Swiss Government Bond | FUT | SGB | F1 | in % of par value |
| SOFFEX | Swiss Market Index | FUT | SMI | F1 | in pts |
| SOFFEX | Opt on Swiss Gov Bonds | FUT | GB | F1 | in pts |
| SOFFEX | Opt on Swiss Markt NDX | FUT | SM | F1 | in pts |
| SOFFEX | Opt on Sws Gov Bond Fut | FUT | SG | F1 | in pts |
| SOFFEX | All Ordinaries Share Pr | FUT | AAO | F4 | \$/25 times index |
| SOFFEX | Aus T-Bond (10-Yr) | FUT | ATB | F4 | Annual%-100 |
| SOFFEX | Aus T-Bond (3-Yr) | FUT | A3Y | F4 | Annual%-100 |
| SOFFEX | Bank Accepted BL (90-Day) | FUT | ABA | F4 | |
| TCE | Cotton Yarn | FUT | COT | | yen/0.45359 kg |
| TCE | Gold | FUT | GOL | | yen/gm |
| TCE | Platinum | FUT | PLA | | yen/gm |
| TCE | Rubber | FUT | RUB | | yen/kg |
| TCE | Silver | FUT | SIL | | yen/gm |
| TCE | Wool Yarn | FUT | WOO | | yen/kg |
| TGE | Sugar - Raw | FUT | RSG | F2 | yen/100kg |
| TIFFE | One-Year Euroyen Future | FUT | TEY | F4 | US \$/yen |

| Exchange | Commodity | Type | Commodity Code | Format | Units |
|-----------------|------------------|-------------|-----------------------|---------------|-----------------------|
| WINN | Barley | FUT | WB | F4 | canadian\$/metric ton |
| WINN | Flax Seed | FUT | WF | F4 | canadian\$/metric ton |
| WINN | Oats | FUT | WOO | F4 | US\$/metric ton |
| WINN | Rapeseed | FUT | WP | F4 | |
| WINN | Rye | FUT | WR | F4 | |
| WINN | Wheat | FUT | WW | F4 | canadian\$/metric ton |

FORMAT(F1)

Date, Open Price, Day High, Day Low, Last Price, Settlement Price,
Volume, Open Interest Best Bid, Price, Best Bid Qty, Best Ask Price,
Best Ask Qty, End Bid, End Ask

FORMAT(F2)

Morning Session

Date, First, Second, Third
Volume, Open Interest

Afternoon Session

First, Second, Third, Settlement

FORMAT(F3)

Date, Open High, Low, Last, Settlement, Volume, Open Interest, No
of Trades, Globex Open, Globex High, Globex, Globex Last, Globex
Volume, Globex Number of Trades

FORMAT(F4)

Date, Ticker Symbol, Open, High, Low, Close, Volume, Open Interest

FORMAT(F5)

Date, Open, High, Low, Close, Volume, Open Interest

FORMAT(F6)

Date, Open, High, Low, Close, Settlement, Volume, Open Int, No. Of Trades