International Journal of Transport Economics
Volume 29, 2002, Pages 201-213

Cross Border Cargo Vehicle Flows
JEL Category F17: International Trade Modeling

Thomas M. Fullerton, Jr. & Roberto Tinajero
Department of Economics & Finance
University of Texas at El Paso
El Paso, TX 79968-0543
Telephone 915-747-7747
Facsimile 915-747-6282
Email tomf@utep.edu

Acknowledgments

Financial support for this research was provided by the NAFTA Intermodal Institute at the Public Policy Research Center at the University of Texas at El Paso El Paso. Additional funding was provided by El Paso Electric Company, the Fulbright Council for International Exchange of Scholars, and the Center for InterAmerican & Border Studies at the University of Texas at El Paso. Helpful comments were provided by Jesús Cañas and seminar participants at UTEP, Universidad Autónoma de Ciudad Juárez, and New Mexico State University. Econometric research assistance was provided by David Torres and Roberto Coronado.

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Abstract

Increases in international merchandise trade plus growth in the northern Mexico maquiladora sector have caused the volume of cargo vehicle flows through border metropolitan areas to expand in recent decades. In order to examine whether the trends associated with these developments can be successfully modeled, short-term time series characteristics of cross-border cargo vehicle traffic through El Paso, Texas are analyzed. Econometric methodologies employed include both univariate and transfer function ARIMA analysis. Data are drawn for the January 1980 - December 1999 sample period. Empirical results indicate that Ciudad Juárez maquiladora employment, El Paso nonagricultural employment, inflation adjusted exchange rate, Mexican industrial activity, and U.S. industrial performance play important roles in determining month-to-month fluctuations in border region cargo vehicle traffic flows.

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Introduction

Geography, economic growth, and trade liberalization have all contributed to increased volumes of merchandise trade between the United States and Mexico. This trend has intensified during the period associated with the North American Free Trade Agreement (Weissman and Harrison, 1998; Sullivan, Soden, and Conary, 2000). Surface transportation via cargo trucks has played an important, if sometimes controversial, role in facilitating the intensification of commercial and industrial linkages across the international boundary. These developments have raised questions with respect to physical infrastructure and business opportunities. Accordingly, academic research efforts have begun to examine different aspects of trade flows to and from Mexico.

Material in this paper provides an analysis of empirical regularities associated with monthly cargo vehicle flows from Ciudad Juárez, Chihuahua to El Paso, Texas. Together, these two cities form the largest international borderplex in the world. In 1998, they also provided the second largest conduit for merchandise imports from Mexico, trailing only Laredo, Texas and Nuevo Laredo, Tamaulipas to the east (Sullivan, Soden, and Conary, 2000). While there have been a number of studies conducted with respect to various aspects of the economic ties between El Paso and Ciudad Juárez, the time series behavior of international trucking through this point-of-entry has been largely overlooked.

To partially address this gap in the literature, time series econometric methodologies are employed as a means for potentially quantifying cross-border cargo vehicle flows through El Paso. To accomplish that goal, monthly data from the January 1980 - December 1999 sample period are utilized. Subsequent sections of the study are as follows. A short review of relevant literature is provided in the second section. A brief discussion of the general methodologies is next. Empirical analysis is summarized in the third section. Conclusions and suggestions for future research comprise the final segment of the paper.

Related Studies

Modern times series analysis for univariate and small modeling systems dates from 1969 (Pankratz, 1983). The various classes of autoregressive-moving average (ARIMA) models have long proven useful in short-term dynamic forecasting applications. They are also helpful in examining the quantitative impacts associated with new policy initiatives and other changes to the economic environment such as business cycle downturns and currency devaluations. In Mexico, for instance, large scale devaluations of the peso have occurred on six separate occasions since 1949. Similarly, the United States observed nine macroeconomic recessions over the same post-war historical period.

Overall flexibility in handling such events, as well as different data generating processes, has allowed ARIMA time series models to be applied to a wide range of international and regional economic issues (Trívez and Mur, 1999). Fullerton (1998) utilizes transfer function analysis to examine the impacts of cross-border business cycle fluctuations on commercial electricity sales. Similarly, Fullerton (2000a) employs the same basic methodology to model international commuter reactions to exchange rate movements. The latter study is particularly relevant to the exercise at hand since it offers at least partial evidence that cross border traffic flow data respond fairly quickly to currency market variations.

Because all cargo vehicle traffic between El Paso and Ciudad Juárez is functionally dependent on international commerce, lagged responses to changes in the peso/dollar can also be expected to influence final model specifications selected below. Lagged impacts of this nature have surfaced in many analyses of international merchandise flows in the J-curve branch of the economics literature (Tegene, 1989). Additional economic variables such as labor market conditions and industrial activity have also been found to affect annual frequency commuter traffic between border metropolitan areas (Cobb, Molina, and Sokulsky, 1989; Fullerton, 2000b). Given the results obtained in previous efforts, it seems reasonable to investigate whether similar modeling of border region cargo vehicle data is also feasible.

Data and Methodology

Northbound bridge crossing statistics are reported at a monthly frequency by the Customs Service of the United States. Categories include pedestrian, personal vehicles, and cargo vehicles by point-of-entry. Cargo vehicles utilize two of the three bridges connecting El Paso and Ciudad Juárez. The latter are the Bridge of the Americas near the central highway interchanges in El Paso and the Ysleta-Zaragosa Bridge near the eastern industrial zones of both cities. Data on cargo vehicle traffic from Ciudad Juárez date from January 1979.

Several independent variables are used as exogenous regressors for the transfer functions estimated. These variables are selected as indicators of the forces influencing the demand for cargo vehicle transportation services as industrial and commercial production inputs. Much of the trucking services utilized relate to in-bond assembly plant activities. Monthly maquiladora employment estimates for Ciudad Juárez are employed as a proxy for this source of demand. The latter are available from January 1980, determining the sample range for the empirical analysis conducted below. A portion of the cross-border cargo vehicle traffic across the two bridges is a function of commercial activities in the borderplex. To account for local business conditions, monthly total nonagricultural employment for El Paso is selected.

International cargo traffic also results from non-border merchandise flows that may or may not be related maquiladora activities (Vargas, 1999). To capture the effect of these forces on cargo bridge activity in El Paso, two macroeconomic variables are

incorporated into the analysis. The first is the monthly industrial production index of the United States. The second is the monthly industrial production index of Mexico. Beyond their availability at a monthly frequency, these variables have additional advantages associated with them. Principal among them is that they reflect general business cycle conditions in both countries. Also important is that they reflect changes in industrial demand for the intermediate inputs that represent an increasingly large percentage of traded goods among NAFTA countries.

A final macroeconomic variable is utilized to reflect national and regional economic trends. Overall purchasing power variations are accounted for by the monthly real exchange rate, calculated by multiplying the nominal exchange rate by the U.S. consumer price index and dividing it by the corresponding measure for Mexico. The aforementioned series are all collected by the International Monetary Fund. Real currency devaluations such as those observed in 1986 and December 1994 increase the demand for labor by international factories in Mexico while simultaneously limiting the ability of Mexican companies and consumers to purchase imported goods. Trade flows in Mexico have been shown to respond differently to currency valuation changes than they do to shifts in other variables such as relative prices (Fullerton, Sawyer, and Sprinkle, 1999).

As mentioned above, transfer function analysis offers one means for examining whether systematic linkages exist between cross border cargo vehicle traffic and the economic variables described above. This statistical methodology is a mathematically advanced modeling procedure that is closely related to the univariate time series techniques that have been employed in numerous forecasting and policy analytic exercises. In fact, univariate autoregressive-moving average (ARIMA) analysis is one of the key steps in transfer ARIMA modeling (Box and Jenkins, 1976; Tiao and Tsay, 1983).

Univariate ARIMA analysis utilizes the statistical information contained within a single variable to model it. The basic steps involved in developing a univariate equation are identification, estimation, and diagnostic checking of a model built to explain variation in the stationary component of a given data series (the mean and variance of a stationary series are both constant). Univariate ARIMA equation residuals, or unexplained movements in the dependent variable, are used to suggest input variable lag structures in multi-input transfer models. Subsequent steps for the transfer equations also involve estimation and diagnostic checking.

The first stage in transfer ARIMA modeling involves estimating univariate ARIMA equations for an output or dependent variable, as well as for each of the input or independent regressors. Cross correlation functions (CCFs) are then calculated between the output variable residuals and the independent variable residuals (Box and Jenkins, 1976). The latter results may also be augmented by CCFs estimated for the stationary components of each of the data series themselves. The transfer equation to be estimated will then involve a combination of the autoregressive and moving average parameters

from the dependent output variable univariate model plus lags of the regressor input variables. Standard diagnostic checking may result in several rounds of re-estimation before a final model specification is selected. These results will indicate whether a systematic relationship exists between the input variables and cargo vehicle traffic across the two international bridges.

The general format for the cargo vehicle time series model can be summarized as follows:

$$1. \quad CV_t = f(AR_{t-i}, MA_{t-j}, \underset{(+)}{\text{US Industrial Prdn.}_{t-k}}, \underset{(+)}{\text{MX Ind. Prdn.}_{t-l}},$$

$$\underset{(+)}{\text{CJ Maquiladora Emp}_{t-m}}, \underset{(+)}{\text{ELP Emp}_{t-n}}, \underset{(?)}{\text{Real Peso}_{t-o}}) ,$$

where the algebraic signs under each of the independent variables indicates the nature of the hypothesized relationship between said regressor and cross border cargo vehicle flows. Because there are no set temporal patterns associated with merchandise trade flows, time lags are allowed to vary for each of the explanatory variables as well as for the autoregressive and moving average parameters resulting from the univariate stage of the time series analysis.

Readers will note that the arithmetic sign associated with the inflation adjusted value of the peso is ambiguous. If the currency in Mexico becomes overvalued, its arithmetic value declines subsequent to adjusting for inflationary trends in both countries. When this occurs, it becomes increasingly less expensive for pesos to be exchanged for dollars, thus making inventory purchased on the north side of the border more affordable to Mexican firms and consumers. Conversely, undervaluation of the peso causes its arithmetic value to increase in real terms. In such instances, dollar denominated prices for labor services and merchandise supplied by Mexico become less expensive. It is not clear how these offsetting forces will ultimately affect the magnitudes and signs associated with the lagged real exchange rate coefficients.

Empirical Results

The first stage of any transfer function modeling effort is to develop univariate ARIMA equations for all of the series to be included in the system. Stationary series, whose means (first moments) and variances (second moments) do not change over time, may have to be filtered from the raw series. For the data utilized herein, it was necessary to difference all of the series to obtain stationary working series. Table 1 summarizes the model specifications selected as part of the univariate time series modeling procedure. Regressor lag lengths for each parameter class appear in parentheses. The sample period for which all series are available is January 1980 - December 1999.

A total of seven univariate ARIMA models are listed in Table 1, one each for the two bridges that carry international trucks into El Paso, and one each for the five input regressor variables. Five of the equations contain moving average terms at lag one, not surprising given the fact that all of the data were differenced prior to estimation. Four models contain statistically significant constant terms. Given the utilization of regular differenced data of order one, this result implies that all of the employment and industrial production index series include virtually deterministic upward trend components. The latter is both economically and statistically plausible given the consistently strong growth patterns observed throughout large portions of the NAFTA region in recent years.

That three equations do not include intercept terms that are statistically distinguishable from zero is also plausible. The three models in questions are those for cargo vehicle traffic across the Americas and Ysleta-Zaragoza bridges, respectively, and for the inflation adjusted peso/dollar exchange rate. Given that all three series have been differenced prior to modeling, the statistical insignificance of their individual intercepts reflects a failure to exhibit systematic upward trends over long periods of time. For the two truck series, this is not surprising, since border bridge congestion has been a problem for several decades and has been statistically corroborated for earlier time periods in El Paso and elsewhere (Phillips and Campbell, 1998; Fullerton, 2000a). Potentially reflective of general upward movements in international merchandise movements, both constant terms are greater than zero.

For the real value of the peso, it reflects the substantially more stable currency environment observed in Mexico from 1988 forward. If currency markets are allowed to equalize international prices for goods and services, there is no reason to expect an inflation adjusted exchange rate to move on a sustained basis in favor of one currency or the other. This result differs from that reported for the January 1979 - December 1988 sample period in which the peso is found to systematically lose ground against the dollar (Fullerton, 2000a). Periodic nominal devaluations of the peso have been observed in recent years allowing the intercept term for this equation to be positive, though insignificant.

Residuals from the univariate models estimated for the two truck volume time series are cross correlated against lags of the other univariate equation residuals. The CCF output suggested the initial lag structures to be built into the two transfer ARIMA models. General transfer output specifications are reported in Table 2. Regressor lag lengths appear in parentheses. As mentioned above, all of the cargo vehicle univariate parameters are also included in the transfer model specifications. Statistical results for the multiple-input equations are detailed in Tables 3 and 4.

All of the regressor series are found to impact cross border cargo vehicle flows within a fairly short time frame. The latter observation is reflected by the fact that none of the input variables have lag lengths of more than twelve months associated with them. Although all of the independent regressors have coefficients with the expected algebraic signs associated with them, many of the coefficient estimates are not significant at the 5-

percent level. Table 3 summarizes the statistical output for truck flows across the Bridge of the Americas.

Empirical characteristics of the Bridge of the Americas model are generally favorable. The R-squared coefficient of determination for the differenced data is approximately 33 percent and translates to a 98 percent level of explanatory power for the dependent variable following transformation to the original nonstationary units of measure. A troubling aspect of the results is that a number of the computed t-statistics do not satisfy the 5-percent significance criterion. Because the F-statistic for the output is significant at the 1-percent level, the former probably reflects the multicollinearity problem that has surfaced in other cross-border modeling efforts that rely upon transfer function techniques (Fullerton, 1998, 2000a).

Results in Table 3 indicate that increases in Ciudad Juárez maquiladora payrolls lead to greater cargo shipments within an eight-to-twelve month time horizon. The latter is presumably due to finished product shipments from the twin plants as new orders are processed. Growth in nonagricultural employment in El Paso is also associated with a short lead-time, eleven months, with respect to increased truck traffic across this artery connecting the two nations. Expansion of overall Mexican industrial activity precedes increased cargo vehicle flows across the Bridge of the Americas by a five-to-nine month lead-time. With respect to United States industrial activity, one coefficient is estimated at lag ten. The latter carries the hypothesized positive sign expected for this input series, but is not statistically significant.

Real depreciation of the peso vis-a-vis the dollar causes a loss in south-of-the-border customer purchasing power for imported items from the United States. It also causes the dollar denominated wage bills for labor services in Mexico to decline, as well as reducing overseas prices for Mexican exports. A decline in the international currency value of the peso precedes an initial reduction in truck flows across the Americas structure by a mere four months. That decline is subsequently offset by an increase in cargo vehicle flows four months later. The latter seems to correspond to a fairly rapid, but not immediate, response to improved profitability associated with greater manufacturing output from factories located in Mexico. The overall ebb and flow cargo traffic pattern is similar to that generated for total person commuter flows subsequent to currency valuation changes during the January 1979 - December 1988 sample period (Fullerton, 2000a).

Table 4 summarizes the estimation output for cargo vehicle flows across the smaller and more easterly Ysleta-Zaragoza Bridge. As in the case of the Bridge of the Americas, overall goodness-of-fit measures for the equation are fairly strong. In particular, the Pseudo R-Squared indicates that the equation accounts for just under 98 percent of the variation in the dependent variable prior to differencing. Similarly, the F-statistic is significant at the 1-percent level. Those results notwithstanding, caution must be used in interpreting the results appearing in Table 4. While the F-statistic is

significant, most of the independent variable computed t-statistics also fail to satisfy the standard 5-percent criterion.

The lag structure exhibited in Table 4 for the Ysleta-Zaragoza point-of-entry into the United States indicates that international truck traffic across this artery responds rapidly to economic stimuli. Increases in maquiladora activity generate positive responses in the usage of cargo vehicle services within a one-to-seven-month period. Greater economic activity on the north side of the Rio Grande borderplex, proxied by nonagricultural employment in El Paso, leads to increased cargo vehicle flows within a two-to-six-month time lapse.

Truck flow reaction times to changes in national economic conditions in Mexico and the United States also occur relatively quickly at the Ysleta-Zaragoza artery. Three- and nine-month lags are included for the industrial production index for Mexico. Lags of one- and twelve-months are included in the stationary component of its northern counterpart. Both of the latter carry the hypothesized algebraic signs, but are not significant at the 5-percent level. As also reported in Table 3, cargo vehicle traffic across the Ysleta-Zaragoza Bridge responds rapidly to changes in the real value of the peso by initially declining and later recovering. In Table 4, however, the positive coefficient associated with lag 10 is smaller in absolute value than that estimated at lag 4.

Results obtained herein indicate that it is possible to model international cargo vehicle flow fluctuations via an econometric time series framework that utilizes a transfer ARIMA modeling strategy. Although many of the individual t-statistics for the explanatory variables are not significant at the 5-percent level, F-statistics for both bridges are significant at the 1-percent level, implying that while multicollinearity may be a problem, overall model fits are robust. The latter contention is further underscored by pseudo coefficient of determination estimates that exceed 97-percent for the level versions of both dependent variables.

It is possible, of course, that inclusion of the real exchange rate index, El Paso nonagricultural employment, Ciudad Juárez maquiladora employment, and the national industrial activity series does not help explain movements in cross-border cargo vehicle volumes. If this is true, then exclusion of these variables from the bridge equations estimated will not cause the computed Q-statistics associated with each rate class equation to increase. Similar to Fullerton (1998), however, both of the white noise chi-squared measures are lower for the transfer functions than they are for their respective univariate equation counterparts. The latter underscores the usefulness of incorporating the borderplex and international economic times series via the multivariate ARIMA framework in the analysis of cross-border trucking patterns between Mexico and the United States.

Conclusion

Merchandise trade between the United States and Mexico has increased in recent years as a function of economic growth and trade liberalization. A large percentage of the products sold between the two countries are transported via cargo trucks that clear customs at the El Paso, Texas - Ciudad Juárez, Chihuahua borderplex. Because of numerous factors associated with increased truck flows through these cities, a fair amount of research has started to examine different issues surrounding this category of international surface transport.

Material in this paper provides an empirical analysis of monthly cargo vehicle volumes across two bridges linking El Paso and Ciudad Juárez. Time series econometric techniques are employed as a means for quantifying the empirical characteristics associated with a January 1980 - December 1999 data sample. Results indicate that international truck traffic through the borderplex responds fairly quickly to stimuli such as changes in local economic activity, variations in national industrial conditions in Mexico and the United States, and movements in the inflation adjusted value of the peso.

Future research should take into account that these initial results encountered several econometric obstacles. Potential problems that may resurface include multicollinearity and statistical insignificance associated with individual regression coefficients. Experimentation with both longer and shorter sample periods may help uncover potential parameter heterogeneity due to structural breakpoints in response to policy innovations such as NAFTA. Replication of these efforts for other border entry points such as Laredo and San Diego would also help uncover additional information regarding cargo vehicle traffic between the United States and Mexico. Given the intensification of cross-border business and economic linkages between these trading partners, plus potential deregulation of surface transport associated with them, additional efforts such as those described herein would be welcome.

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Table 1
Univariate ARIMA Model Specifications

Variable	Description		Equation Specification	
BAT	Americas Bridge Truck Traffic		AR(1, 4, 12)	MA(2, 4, 12)
BYT	Ysleta Bridge Truck Traffic		AR(1, 12)	MA(1, 2, 12)
CJMQ	Juárez Maquiladora Employment	*	AR(12)	MA(1, 12)
ELEM	El Paso Nonagricultural Employment	*		MA(6, 12)
MXIP	Mexico Industrial Production Index	*	AR(4, 12)	MA(1, 2, 12)
REX	Real Peso per Dollar Exchange Rate		AR(6)	MA(1)
USIP	United States Industrial Production Index	*	AR(1)	MA(1, 8)

* - estimated equation contains statistically significant constant term at 5-percent level.

Table 2
Transfer ARIMA Model Specifications

Variable		Model Specification		
BAT	Americas Bridge Truck Traffic	AR(1, 3, 12) ELEM(11) USIP(10)	MA(2, 4, 12) MXIP(5, 9)	CJMQ(8, 12) REX(4, 8)
BYT	Ysleta Bridge Truck Traffic	AR(1, 12) ELEM(2, 6) USIP(1, 12)	MA(1, 2, 12) MXIP(3, 9)	CJMQ(1,7) REX(4, 10)

Table 3
Bridge of the Americas Cargo Vehicle Transfer ARIMA Empirical Output

Variable	Coefficient	Std. Error	t-Statistic	Probability
C	-0.330488	0.176704	-1.870293	0.0628
CJMQ (8)	0.074171	0.084307	0.879766	0.3800
CJMQ (12)	0.204909	0.083962	2.440502	0.0155
ELEM (11)	0.210279	0.067598	3.110714	0.0021
MXIP (5)	0.117158	0.054387	2.142585	0.0333
MXIP (9)	0.174892	0.054387	3.215677	0.0015
REX (4)	-0.039448	0.021720	-1.816218	0.0707
REX (8)	0.032426	0.021327	1.520381	0.1299
USIP (10)	0.161322	0.349821	0.461157	0.6452
AR (1)	-0.269670	0.055866	-4.827055	0.0000
AR (3)	-0.229734	0.084122	-2.730959	0.0068
AR (12)	0.494721	0.078206	6.325853	0.0000
MA (2)	-0.143648	0.063514	-2.261670	0.0247
MA (4)	0.178460	0.098929	1.803915	0.0727
MA (12)	-0.439535	0.099076	-4.436326	0.0000

R-squared	0.329111	**Mean dependent var**	0.050207
Pseudo R-squared	0.980601	**S.D. dependent var**	3.836622
S.E. of regression	3.244598	**Akaike criterion**	5.255655
Sum squared resid	2231.812	**Schwarz criterion**	5.481973
Log likelihood	-581.5168	**F-statistic**	7.428457
Durbin-Watson	2.047969	**F-statistic probability**	0.000000
Iterations	11	**Q(24) white noise**	16.58500
Observations	227	**Q-statistic probability**	0.736000

Sample period: January 1980 - December 1999.

Table 4
Ysleta-Zaragoza Bridge Cargo Vehicle Transfer ARIMA Empirical Output

Variable	Coefficient	Std. Error	t-Statistic	Probability
C	0.016861	0.091229	0.184823	0.8535
CJMQ (1)	0.023377	0.040525	0.576848	0.5647
CJMQ (7)	0.027188	0.042783	0.635486	0.5258
ELEM (2)	0.030198	0.036792	0.820794	0.4127
ELEM (6)	0.024136	0.039603	0.609446	0.5249
MXIP (3)	0.072859	0.025422	2.865976	0.0046
MXIP (9)	0.030758	0.025348	1.213413	0.2263
REX (4)	-0.015165	0.009644	-1.572422	0.1174
REX (10)	0.005618	0.008949	0.627801	0.5308
USIP (1)	0.026830	0.169875	0.157942	0.8747
USIP (12)	0.115250	0.166051	0.694065	0.4884
AR (1)	-0.525593	0.098679	-5.326262	0.0000
AR (12)	0.328949	0.078465	4.192313	0.0000
MA (1)	0.218974	0.106338	2.059232	0.0407
MA (2)	-0.321629	0.070045	-4.591776	0.0000
MA (12)	-0.399073	0.070490	-5.661416	0.0000

R-squared	0.232073	**Mean dependent var**	0.090793
Pseudo R-squared	0.978329	**S.D. dependent var**	1.911115
S.E. of regression	1.733244	**Akaike criterion**	4.005744
Sum squared resid	633.8725	**Schwarz criterion**	4.247150
Log likelihood	-438.6519	**F-statistic**	4.251057
Durbin-Watson	1.993347	**F-statistic probability**	0.000001
Iterations	18	**Q(24) white noise**	19.76000
Observations	227	**Q-statistic probability**	0.536000

Sample period: January 1980 - December 1999.

Data Appendix

Mnemonic	Time Series
BAT	Bridge of the Americas Truck Traffic, Thousands
BYT	Ysleta-Zaragoza Bridge Truck Traffic, Thousands
CJMQ	Ciudad Juárez Maquiladora Employment, Thousands
ELEM	El Paso Nonagricultural Employment, Thousands
MXIP	Mexico Industrial Production Index, 1995 = 100
REX	Real Peso per Dollar Exchange Rate, 1990 = 100
USIP	United States Industrial Production Index, 1992 = 100

BAT	BYT	CJMQ	MXIP
1980:01 6.919000	1980:01 1.541000	1980:01 36.94300	1980:01 76.80000
1980:02 7.649000	1980:02 1.476000	1980:02 37.85900	1980:02 77.10000
1980:03 6.897000	1980:03 1.502000	1980:03 38.76400	1980:03 80.10000
1980:04 6.471000	1980:04 1.623000	1980:04 39.38200	1980:04 77.80000
1980:05 6.087000	1980:05 1.671000	1980:05 38.74800	1980:05 81.70000
1980:06 6.750000	1980:06 2.055000	1980:06 38.85400	1980:06 81.50000
1980:07 6.177000	1980:07 2.032000	1980:07 39.15300	1980:07 81.20000
1980:08 6.089000	1980:08 2.242000	1980:08 38.80800	1980:08 82.30000
1980:09 9.226000	1980:09 2.713000	1980:09 39.59700	1980:09 79.90000
1980:10 10.61700	1980:10 2.506000	1980:10 40.47400	1980:10 85.80000
1980:11 16.19000	1980:11 4.771000	1980:11 41.83500	1980:11 82.70000
1980:12 13.49400	1980:12 4.889000	1980:12 42.41200	1980:12 84.60000
1981:01 13.87300	1981:01 5.249000	1981:01 42.89200	1981:01 82.40000
1981:02 7.035000	1981:02 5.214000	1981:02 42.87200	1981:02 82.20000
1981:03 11.95400	1981:03 5.469000	1981:03 43.49800	1981:03 88.90000
1981:04 13.52900	1981:04 4.838000	1981:04 44.07000	1981:04 85.80000
1981:05 15.29700	1981:05 5.231000	1981:05 44.67100	1981:05 89.50000
1981:06 14.34200	1981:06 5.378000	1981:06 44.82500	1981:06 90.10000
1981:07 16.71300	1981:07 5.560000	1981:07 44.54800	1981:07 92.10000
1981:08 18.63800	1981:08 5.793000	1981:08 44.97400	1981:08 89.70000
1981:09 18.19200	1981:09 5.673000	1981:09 44.48300	1981:09 89.00000
1981:10 12.04900	1981:10 0.451000	1981:10 44.52800	1981:10 91.70000
1981:11 8.217000	1981:11 0.333000	1981:11 43.98300	1981:11 88.10000
1981:12 8.291000	1981:12 0.308000	1981:12 42.58900	1981:12 87.60000
1982:01 6.829000	1982:01 0.316000	1982:01 42.15300	1982:01 86.20000
1982:02 7.357000	1982:02 0.271000	1982:02 42.28300	1982:02 86.80000
1982:03 9.968000	1982:03 0.434000	1982:03 42.23400	1982:03 94.50000
1982:04 10.10600	1982:04 0.505000	1982:04 42.61800	1982:04 88.20000
1982:05 9.641000	1982:05 0.447000	1982:05 43.15900	1982:05 91.20000
1982:06 8.906000	1982:06 0.503000	1982:06 43.36300	1982:06 90.10000
1982:07 7.345000	1982:07 0.479000	1982:07 43.86200	1982:07 88.30000
1982:08 9.133000	1982:08 0.515000	1982:08 43.39400	1982:08 87.70000
1982:09 7.852000	1982:09 0.477000	1982:09 42.79800	1982:09 79.90000
1982:10 8.715000	1982:10 0.451000	1982:10 42.61000	1982:10 83.10000
1982:11 8.641000	1982:11 0.379000	1982:11 42.10900	1982:11 81.60000
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1983:01 6.883000	1983:01 0.405000	1983:01 43.31700	1983:01 79.20000
1983:02 7.698000	1983:02 0.885000	1983:02 44.28300	1983:02 78.50000
1983:03 9.121000	1983:03 1.320000	1983:03 46.41600	1983:03 82.20000
1983:04 8.895000	1983:04 0.723000	1983:04 48.03900	1983:04 81.10000
1983:05 10.91800	1983:05 1.118000	1983:05 50.82900	1983:05 81.60000
1983:06 11.25200	1983:06 1.054000	1983:06 53.95200	1983:06 79.80000
1983:07 9.819000	1983:07 0.749000	1983:07 56.02100	1983:07 79.30000
1983:08 11.77400	1983:08 0.697000	1983:08 58.12400	1983:08 79.30000
1983:09 10.77500	1983:09 0.576000	1983:09 58.65200	1983:09 76.80000
1983:10 10.54300	1983:10 0.694000	1983:10 62.04200	1983:10 78.50000
1983:11 10.10500	1983:11 0.837000	1983:11 63.42100	1983:11 77.60000
1983:12 9.690000	1983:12 0.477000	1983:12 63.77800	1983:12 77.30000
1984:01 9.124000	1984:01 0.390000	1984:01 65.95000	1984:01 78.00000
1984:02 10.09700	1984:02 0.488000	1984:02 67.92500	1984:02 78.90000
1984:03 10.31500	1984:03 0.711000	1984:03 70.42700	1984:03 83.60000

1984:04 10.47100	1984:04 0.749000	1984:04 71.05100	1984:04 78.00000
1984:05 12.00000	1984:05 0.696000	1984:05 70.74000	1984:05 83.70000
1984:06 11.47400	1984:06 0.685000	1984:06 72.71400	1984:06 83.40000
1984:07 11.21000	1984:07 0.610000	1984:07 75.33400	1984:07 84.00000
1984:08 11.88100	1984:08 0.477000	1984:08 75.19700	1984:08 83.80000
1984:09 10.32600	1984:09 0.432000	1984:09 75.12700	1984:09 80.50000
1984:10 12.15800	1984:10 0.429000	1984:10 74.96100	1984:10 84.90000
1984:11 10.78500	1984:11 0.498000	1984:11 75.96100	1984:11 85.00000
1984:12 9.098000	1984:12 0.277000	1984:12 74.54700	1984:12 83.00000
1985:01 10.04900	1985:01 0.317000	1985:01 74.49600	1985:01 84.00000
1985:02 9.993000	1985:02 0.366000	1985:02 75.63800	1985:02 84.90000
1985:03 11.55400	1985:03 0.438000	1985:03 76.28400	1985:03 88.50000
1985:04 12.21300	1985:04 0.630000	1985:04 77.17800	1985:04 85.10000
1985:05 12.85500	1985:05 0.594000	1985:05 77.33300	1985:05 89.00000
1985:06 11.72700	1985:06 0.489000	1985:06 77.18100	1985:06 86.80000
1985:07 12.41300	1985:07 0.624000	1985:07 78.00600	1985:07 89.60000
1985:08 13.21400	1985:08 0.598000	1985:08 77.19900	1985:08 87.90000
1985:09 11.82800	1985:09 0.417000	1985:09 77.59300	1985:09 84.50000
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1985:11 12.42300	1985:11 0.464000	1985:11 80.99600	1985:11 86.50000
1985:12 11.52700	1985:12 0.414000	1985:12 79.04300	1985:12 83.70000
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1986:04 14.33700	1986:04 1.113000	1986:04 84.53500	1986:04 88.00000
1986:05 14.11900	1986:05 1.277000	1986:05 85.37600	1986:05 86.30000
1986:06 13.21200	1986:06 1.314000	1986:06 85.74500	1986:06 80.90000
1986:07 12.59400	1986:07 0.816000	1986:07 88.33400	1986:07 80.40000
1986:08 11.74100	1986:08 0.887000	1986:08 87.32400	1986:08 79.00000
1986:09 12.96200	1986:09 0.679000	1986:09 89.43500	1986:09 75.90000
1986:10 18.14200	1986:10 0.792000	1986:10 90.31100	1986:10 80.10000
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1986:12 12.12500	1986:12 0.497000	1986:12 91.62200	1986:12 79.80000
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1987:02 13.08300	1987:02 0.659000	1987:02 105.6120	1987:02 79.40000
1987:03 14.66800	1987:03 0.740000	1987:03 95.00100	1987:03 86.50000
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1987:06 14.15300	1987:06 0.632000	1987:06 95.27800	1987:06 84.90000
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1987:10 15.16700	1987:10 0.597000	1987:10 100.9500	1987:10 88.20000
1987:11 12.35100	1987:11 0.532000	1987:11 102.4230	1987:11 89.00000
1987:12 11.57200	1987:12 0.282000	1987:12 100.4460	1987:12 89.80000
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1989:04 15.76900	1989:04 0.604000	1989:04 121.6090	1989:04 93.80000
1989:05 16.86800	1989:05 0.679000	1989:05 131.1980	1989:05 93.30000
1989:06 16.58900	1989:06 0.596000	1989:06 123.0550	1989:06 92.50000
1989:07 10.94100	1989:07 0.615000	1989:07 128.2260	1989:07 89.70000
1989:08 18.31900	1989:08 0.646000	1989:08 127.7210	1989:08 93.40000
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1989:11 35.79000	1989:11 0.780000	1989:11 127.6090	1989:11 96.40000
1989:12 28.75600	1989:12 0.558000	1989:12 122.4520	1989:12 91.70000
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1990:04 38.26600	1990:04 1.849000	1990:04 121.1430	1990:04 92.90000
1990:05 43.33700	1990:05 1.658000	1990:05 121.3290	1990:05 97.90000
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1990:08 45.57600	1990:08 1.431000	1990:08 124.2270	1990:08 98.60000
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1990:10 37.58200	1990:10 0.620000	1990:10 124.6390	1990:10 100.9000
1990:11 37.80300	1990:11 1.830000	1990:11 123.2580	1990:11 102.0000
1990:12 31.77500	1990:12 3.007000	1990:12 120.8540	1990:12 98.50000
1991:01 36.97100	1991:01 3.562000	1991:01 116.9890	1991:01 100.3000
1991:02 38.37800	1991:02 3.246000	1991:02 122.8750	1991:02 95.80000
1991:03 37.88300	1991:03 1.977000	1991:03 121.1740	1991:03 97.30000
1991:04 34.95200	1991:04 5.488000	1991:04 122.3990	1991:04 103.2000
1991:05 35.73600	1991:05 6.131000	1991:05 123.5450	1991:05 101.8000
1991:06 30.12500	1991:06 10.91600	1991:06 123.0320	1991:06 100.1000
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1991:09 35.23000	1991:09 8.849000	1991:09 127.9630	1991:09 98.10000
1991:10 45.69900	1991:10 9.212000	1991:10 129.4740	1991:10 104.8000
1991:11 38.40700	1991:11 9.060000	1991:11 127.8090	1991:11 106.0000
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1992:03 36.68800	1992:03 9.209000	1992:03 125.5120	1992:03 106.5000
1992:04 31.92900	1992:04 11.39000	1992:04 127.0940	1992:04 101.0000
1992:05 32.95000	1992:05 11.46700	1992:05 128.6000	1992:05 104.4000
1992:06 34.12000	1992:06 10.69100	1992:06 130.5890	1992:06 104.4000
1992:07 31.94200	1992:07 10.45100	1992:07 130.8400	1992:07 103.8000
1992:08 32.35500	1992:08 14.35800	1992:08 131.1960	1992:08 102.3000
1992:09 29.92600	1992:09 12.47500	1992:09 132.2880	1992:09 103.6000
1992:10 33.94200	1992:10 14.77600	1992:10 132.7950	1992:10 105.6000
1992:11 30.11700	1992:11 13.65300	1992:11 132.4270	1992:11 105.8000
1992:12 26.32000	1992:12 14.33800	1992:12 129.3640	1992:12 107.0000
1993:01 25.84900	1993:01 15.29000	1993:01 131.7680	1993:01 98.80000
1993:02 27.39800	1993:02 16.77400	1993:02 134.9810	1993:02 98.90000
1993:03 31.91200	1993:03 16.09000	1993:03 136.8820	1993:03 110.4000

1993:04 30.17300	1993:04 14.69800	1993:04 136.0600	1993:04 101.4000
1993:05 45.59600	1993:05 15.67100	1993:05 136.3920	1993:05 104.4000
1993:06 34.98100	1993:06 15.63500	1993:06 128.0740	1993:06 104.1000
1993:07 33.55300	1993:07 14.88800	1993:07 130.8220	1993:07 102.2000
1993:08 29.56700	1993:08 16.10000	1993:08 130.5720	1993:08 102.3000
1993:09 29.47200	1993:09 16.62000	1993:09 131.6720	1993:09 102.9000
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1993:11 29.32700	1993:11 16.69000	1993:11 130.0600	1993:11 104.9000
1993:12 26.13300	1993:12 16.99000	1993:12 128.6390	1993:12 105.0000
1994:01 27.18900	1994:01 15.25000	1994:01 129.9910	1994:01 102.1000
1994:02 28.77400	1994:02 15.34000	1994:02 135.2340	1994:02 99.90000
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1994:04 26.60200	1994:04 14.88300	1994:04 138.8620	1994:04 109.4000
1994:05 26.35900	1994:05 16.35600	1994:05 137.4260	1994:05 109.0000
1994:06 29.26100	1994:06 19.64400	1994:06 137.8420	1994:06 112.5000
1994:07 26.99900	1994:07 16.36600	1994:07 139.7350	1994:07 107.3000
1994:08 29.39000	1994:08 17.64000	1994:08 141.3430	1994:08 111.6000
1994:09 29.85600	1994:09 16.15000	1994:09 145.6170	1994:09 108.2000
1994:10 29.99200	1994:10 18.54300	1994:10 147.3220	1994:10 112.3000
1994:11 23.60700	1994:11 21.70700	1994:11 148.0700	1994:11 111.5000
1994:12 22.26400	1994:12 23.97200	1994:12 146.9900	1994:12 106.9000
1995:01 25.32400	1995:01 24.34700	1995:01 148.4750	1995:01 104.7000
1995:02 23.41600	1995:02 24.13000	1995:02 150.3550	1995:02 97.90000
1995:03 31.42900	1995:03 26.06700	1995:03 152.1290	1995:03 105.1000
1995:04 20.03200	1995:04 22.60300	1995:04 152.9370	1995:04 94.50000
1995:05 26.73100	1995:05 19.58300	1995:05 155.1350	1995:05 99.40000
1995:06 26.12100	1995:06 22.32200	1995:06 154.4220	1995:06 98.40000
1995:07 21.43500	1995:07 18.84700	1995:07 152.8420	1995:07 94.80000
1995:08 36.43900	1995:08 24.88300	1995:08 153.9710	1995:08 100.1000
1995:09 23.97700	1995:09 23.41800	1995:09 151.2600	1995:09 97.20000
1995:10 20.82000	1995:10 27.56100	1995:10 153.4860	1995:10 102.1000
1995:11 22.15500	1995:11 25.42500	1995:11 154.1530	1995:11 103.1000
1995:12 17.65500	1995:12 22.18700	1995:12 160.7020	1995:12 102.7000
1996:01 20.51500	1996:01 26.33200	1996:01 161.1700	1996:01 105.7000
1996:02 19.49800	1996:02 26.64200	1996:02 161.4720	1996:02 103.6000
1996:03 19.43500	1996:03 25.94200	1996:03 161.4150	1996:03 108.9000
1996:04 20.03200	1996:04 22.60300	1996:04 161.1270	1996:04 104.2000
1996:05 22.49500	1996:05 27.14500	1996:05 164.2870	1996:05 110.8000
1996:06 17.03400	1996:06 30.62200	1996:06 165.7450	1996:06 109.9000
1996:07 19.54700	1996:07 30.00400	1996:07 167.2460	1996:07 110.7000
1996:08 26.38000	1996:08 31.15300	1996:08 171.1100	1996:08 113.2000
1996:09 17.90600	1996:09 28.90700	1996:09 177.3280	1996:09 109.9000
1996:10 20.99300	1996:10 34.10500	1996:10 180.4210	1996:10 118.7000
1996:11 20.36000	1996:11 31.20900	1996:11 180.2900	1996:11 115.9000
1996:12 20.56800	1996:12 25.37600	1996:12 177.9810	1996:12 114.2000
1997:01 22.50000	1997:01 28.94500	1997:01 183.9830	1997:01 113.3000
1997:02 29.19500	1997:02 27.88300	1997:02 183.5270	1997:02 111.4000
1997:03 22.35800	1997:03 17.27800	1997:03 185.2070	1997:03 113.6000
1997:04 23.55200	1997:04 27.85400	1997:04 187.7470	1997:04 120.0000
1997:05 24.58500	1997:05 26.31900	1997:05 189.6990	1997:05 120.5000
1997:06 24.74800	1997:06 25.29300	1997:06 188.0700	1997:06 120.9000
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1997:09 28.15000	1997:09 23.94600	1997:09 195.1220	1997:09 118.3000

1997:10 28.95500	1997:10 23.96300	1997:10 197.1870	1997:10 125.2000
1997:11 24.25000	1997:11 19.89900	1997:11 198.6000	1997:11 119.5000
1997:12 23.07400	1997:12 18.31500	1997:12 196.0950	1997:12 123.2000
1998:01 24.03100	1998:01 20.03400	1998:01 198.4720	1998:01 122.7000
1998:02 25.80800	1998:02 22.38800	1998:02 201.9260	1998:02 120.0000
1998:03 28.19900	1998:03 24.30400	1998:03 205.0290	1998:03 132.4000
1998:04 26.92500	1998:04 25.37400	1998:04 203.6570	1998:04 124.3000
1998:05 24.71400	1998:05 24.23200	1998:05 201.8640	1998:05 127.9000
1998:06 27.28000	1998:06 23.38300	1998:06 203.7130	1998:06 130.5000
1998:07 26.01700	1998:07 23.38300	1998:07 206.3400	1998:07 129.5000
1998:08 27.23300	1998:08 24.10300	1998:08 208.4310	1998:08 130.6000
1998:09 26.57800	1998:09 28.89700	1998:09 210.6500	1998:09 130.0000
1998:10 28.74600	1998:10 27.86700	1998:10 213.2080	1998:10 134.2000
1998:11 24.11600	1998:11 25.88900	1998:11 214.5010	1998:11 128.1000
1998:12 22.66800	1998:12 23.89200	1998:12 211.6860	1998:12 128.1000
1999:01 23.34200	1999:01 23.14400	1999:01 216.4350	1999:01 124.4000
1999:02 26.56900	1999:02 25.15400	1999:02 218.6300	1999:02 123.0000
1999:03 30.15100	1999:03 29.70800	1999:03 216.9450	1999:03 134.7000
1999:04 27.74900	1999:04 27.61000	1999:04 216.8190	1999:04 129.8000
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1999:07 28.92300	1999:07 26.87800	1999:07 215.1310	1999:07 135.7000
1999:08 31.27000	1999:08 28.40000	1999:08 218.0630	1999:08 136.7000
1999:09 31.57000	1999:09 27.33300	1999:09 220.8530	1999:09 134.7836
1999:10 29.48300	1999:10 27.84300	1999:10 221.6660	1999:10 137.3736
1999:11 29.30000	1999:11 30.76200	1999:11 227.0590	1999:11 135.9232
1999:12 25.27000	1999:12 25.85900	1999:12 222.8660	1999:12 134.5764

ELEM	MXREX	USIP
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1980:02 167.0400	1980:02 79.43100	1980:02 81.93300
1980:03 166.7000	1980:03 79.01600	1980:03 81.90800
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1980:06 167.8800	1980:06 77.66200	1980:06 77.32900
1980:07 169.9700	1980:07 75.86000	1980:07 76.83300
1980:08 171.1500	1980:08 74.61400	1980:08 77.73400
1980:09 173.9200	1980:09 74.71000	1980:09 78.88500
1980:10 174.1700	1980:10 74.48500	1980:10 79.45300
1980:11 172.1200	1980:11 74.12900	1980:11 80.73500
1980:12 173.0800	1980:12 73.01400	1980:12 81.13500
1981:01 171.9500	1981:01 71.76200	1981:01 80.43600
1981:02 173.5100	1981:02 71.28500	1981:02 80.82100
1981:03 174.1800	1981:03 70.85000	1981:03 81.18700
1981:04 176.0800	1981:04 70.49200	1981:04 80.64400
1981:05 176.5700	1981:05 70.49500	1981:05 81.32000
1981:06 176.2600	1981:06 70.87400	1981:06 81.83000
1981:07 176.8600	1981:07 71.02500	1981:07 82.55400
1981:08 175.4500	1981:08 77.66500	1981:08 82.18400
1981:09 178.3500	1981:09 71.17800	1981:09 81.51900
1981:10 180.0500	1981:10 70.54400	1981:10 80.89700
1981:11 179.4900	1981:11 70.40000	1981:11 79.76500
1981:12 179.3200	1981:12 69.73800	1981:12 78.87000
1982:01 176.4900	1982:01 67.70200	1982:01 77.60100
1982:02 176.4800	1982:02 109.5480	1982:02 79.27400
1982:03 178.0300	1982:03 107.5750	1982:03 78.72000
1982:04 176.0100	1982:04 104.2940	1982:04 77.97700
1982:05 175.1600	1982:05 101.4820	1982:05 77.38000
1982:06 176.7900	1982:06 100.0000	1982:06 77.12100
1982:07 176.9600	1982:07 97.28500	1982:07 76.48800
1982:08 177.9500	1982:08 186.3520	1982:08 76.08400
1982:09 174.0300	1982:09 119.2500	1982:09 75.52600
1982:10 175.2200	1982:10 113.6630	1982:10 74.90000
1982:11 176.6300	1982:11 108.0600	1982:11 74.70100
1982:12 178.3300	1982:12 134.0230	1982:12 74.08600
1983:01 178.3700	1983:01 126.2640	1983:01 75.66600
1983:02 177.4700	1983:02 124.1760	1983:02 75.49000
1983:03 176.7700	1983:03 123.0320	1983:03 76.24200
1983:04 178.1200	1983:04 120.6290	1983:04 77.19700
1983:05 177.8100	1983:05 120.5930	1983:05 78.12800
1983:06 181.4400	1983:06 120.5400	1983:06 78.56800
1983:07 181.6900	1983:07 119.3070	1983:07 79.96100
1983:08 182.9200	1983:08 118.7660	1983:08 81.03500
1983:09 182.9500	1983:09 119.3290	1983:09 82.41800
1983:10 184.9900	1983:10 119.3390	1983:10 83.06800
1983:11 184.2100	1983:11 116.0990	1983:11 82.98600
1983:12 185.6300	1983:12 114.5990	1983:12 83.41000
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1984:02 184.6400	1984:02 109.1070	1984:02 85.01000
1984:03 187.2700	1984:03 107.5900	1984:03 85.94800

1984:04 186.3300	1984:04 106.3400	1984:04 86.40500
1984:05 189.9400	1984:05 105.7960	1984:05 86.90200
1984:06 193.0100	1984:06 104.8590	1984:06 87.29400
1984:07 191.8700	1984:07 104.3040	1984:07 87.47000
1984:08 191.1300	1984:08 104.3300	1984:08 87.45800
1984:09 192.9700	1984:09 103.9240	1984:09 87.33700
1984:10 193.4800	1984:10 103.1510	1984:10 86.92800
1984:11 190.4300	1984:11 101.7780	1984:11 86.99900
1984:12 191.4700	1984:12 101.8340	1984:12 86.61000
1985:01 186.0400	1985:01 96.13300	1985:01 86.91400
1985:02 186.5100	1985:02 94.88300	1985:02 87.66200
1985:03 192.1800	1985:03 94.64800	1985:03 87.88300
1985:04 191.6900	1985:04 94.94000	1985:04 88.02600
1985:05 190.2000	1985:05 95.89200	1985:05 88.22700
1985:06 191.2900	1985:06 96.55600	1985:06 88.01000
1985:07 193.9800	1985:07 115.1000	1985:07 87.62700
1985:08 195.0300	1985:08 114.7210	1985:08 88.15100
1985:09 195.6700	1985:09 115.7390	1985:09 88.68200
1985:10 196.2100	1985:10 117.9210	1985:10 87.91600
1985:11 198.4000	1985:11 120.0590	1985:11 88.41900
1985:12 198.0100	1985:12 122.7500	1985:12 89.03400
1986:01 194.0600	1986:01 123.2290	1986:01 89.61200
1986:02 190.9400	1986:02 127.7330	1986:02 88.97200
1986:03 192.1400	1986:03 130.8370	1986:03 88.07600
1986:04 194.3300	1986:04 132.0130	1986:04 88.74900
1986:05 194.3200	1986:05 133.9070	1986:05 88.55100
1986:06 194.5500	1986:06 135.2980	1986:06 88.24700
1986:07 200.1100	1986:07 141.7460	1986:07 88.53400
1986:08 198.6900	1986:08 144.7520	1986:08 88.78300
1986:09 201.4100	1986:09 148.2110	1986:09 88.70000
1986:10 204.4000	1986:10 150.3780	1986:10 89.49900
1986:11 203.0700	1986:11 150.9030	1986:11 89.94200
1986:12 203.7500	1986:12 149.8190	1986:12 90.77200
1987:01 200.8900	1987:01 151.2400	1987:01 90.19600
1987:02 201.6400	1987:02 151.6780	1987:02 91.24000
1987:03 200.3500	1987:03 152.2370	1987:03 91.58300
1987:04 202.0900	1987:04 149.8200	1987:04 91.95800
1987:05 208.0500	1987:05 149.0180	1987:05 92.36100
1987:06 206.9700	1987:06 148.0330	1987:06 93.15900
1987:07 216.7000	1987:07 143.5260	1987:07 93.72100
1987:08 218.1500	1987:08 140.9970	1987:08 93.82800
1987:09 214.2400	1987:09 139.4540	1987:09 93.74300
1987:10 213.1400	1987:10 135.8530	1987:10 95.01400
1987:11 215.5400	1987:11 134.4020	1987:11 95.29000
1987:12 214.1200	1987:12 146.5940	1987:12 95.85500
1988:01 209.1500	1988:01 128.0970	1988:01 95.92600
1988:02 209.4700	1988:02 121.8480	1988:02 96.24300
1988:03 209.7800	1988:03 116.3060	1988:03 96.25900
1988:04 212.6700	1988:04 113.3710	1988:04 96.81600
1988:05 213.9700	1988:05 111.6630	1988:05 96.89100
1988:06 219.6500	1988:06 109.8090	1988:06 96.96000
1988:07 223.3200	1988:07 108.5090	1988:07 97.59300
1988:08 224.4500	1988:08 108.0330	1988:08 98.11700
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1988:11 223.1200	1988:11 106.2710	1988:11 98.77100
1988:12 221.6000	1988:12 104.3120	1988:12 99.27500
1989:01 217.0800	1989:01 103.6130	1989:01 99.82700
1989:02 217.1600	1989:02 103.9100	1989:02 99.03800
1989:03 218.9400	1989:03 104.7300	1989:03 99.96800
1989:04 221.7300	1989:04 105.1140	1989:04 100.2130
1989:05 224.1000	1989:05 105.7190	1989:05 99.58300
1989:06 225.0400	1989:06 106.0210	1989:06 99.40700
1989:07 228.6500	1989:07 106.4970	1989:07 98.42400
1989:08 229.8900	1989:08 106.9700	1989:08 98.82400
1989:09 229.4200	1989:09 107.6000	1989:09 98.62300
1989:10 230.1400	1989:10 107.8040	1989:10 98.17100
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1990:02 226.2400	1990:02 102.3160	1990:02 99.08100
1990:03 226.9900	1990:03 102.2060	1990:03 99.55900
1990:04 227.4900	1990:04 102.0520	1990:04 98.95900
1990:05 228.7300	1990:05 101.5770	1990:05 99.35000
1990:06 230.9000	1990:06 100.7540	1990:06 99.33000
1990:07 233.2800	1990:07 100.2560	1990:07 99.28400
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1990:11 230.2000	1990:11 98.80100	1990:11 97.74800
1990:12 228.8300	1990:12 96.16000	1990:12 97.17100
1991:01 226.2700	1991:01 94.71100	1991:01 96.69300
1991:02 224.8300	1991:02 93.70000	1991:02 95.92900
1991:03 226.2600	1991:03 92.77800	1991:03 95.04600
1991:04 227.5400	1991:04 92.44400	1991:04 95.37900
1991:05 228.9400	1991:05 92.16900	1991:05 96.12000
1991:06 231.8100	1991:06 91.79000	1991:06 97.24400
1991:07 235.7300	1991:07 91.45500	1991:07 97.32100
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1991:09 234.3700	1991:09 91.41300	1991:09 98.37500
1991:10 236.1900	1991:10 90.86800	1991:10 98.28000
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1992:01 233.1900	1992:01 85.42700	1992:01 97.68000
1992:02 234.0200	1992:02 84.60300	1992:02 98.23700
1992:03 236.4200	1992:03 84.76400	1992:03 98.93200
1992:04 238.0300	1992:04 84.06800	1992:04 99.64700
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1992:08 244.2100	1992:08 82.71300	1992:08 100.1570
1992:09 242.4100	1992:09 83.19600	1992:09 100.5970
1992:10 246.4200	1992:10 83.34900	1992:10 101.1840
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1993:01 242.2000	1993:01 79.92500	1993:01 102.2500
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1993:03 242.6000	1993:03 79.49800	1993:03 102.8960

1993:04 244.6000	1993:04 79.36500	1993:04 103.2640
1993:05 245.4300	1993:05 79.56700	1993:05 102.7430
1993:06 247.8400	1993:06 79.19100	1993:06 102.9780
1993:07 253.6700	1993:07 78.72600	1993:07 103.1770
1993:08 252.7900	1993:08 78.42600	1993:08 102.8090
1993:09 252.3800	1993:09 78.12400	1993:09 103.8880
1993:10 253.3600	1993:10 78.10300	1993:10 104.2850
1993:11 252.3700	1993:11 77.70200	1993:11 104.7870
1993:12 252.6700	1993:12 76.95700	1993:12 105.6670
1994:01 247.9800	1994:01 76.55400	1994:01 105.8880
1994:02 247.3700	1994:02 78.94000	1994:02 106.3800
1994:03 249.8800	1994:03 82.57600	1994:03 107.1650
1994:04 251.4100	1994:04 79.98200	1994:04 107.6250
1994:05 250.6700	1994:05 80.81500	1994:05 108.4080
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1994:09 257.9000	1994:09 82.23100	1994:09 110.0220
1994:10 260.7000	1994:10 82.49100	1994:10 110.7540
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1994:12 260.7200	1994:12 126.5710	1994:12 112.8520
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1995:12 258.6100	1995:12 122.9450	1995:12 115.8010
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1996:11 259.0300	1996:11 105.6150	1996:11 121.9070
1996:12 260.0100	1996:12 102.0880	1996:12 122.3200
1997:01 252.6300	1997:01 107.7400	1997:01 122.9860
1997:02 252.0800	1997:02 99.83200	1997:02 123.8950
1997:03 253.8200	1997:03 98.29700	1997:03 124.3560
1997:04 255.4000	1997:04 98.25900	1997:04 125.1130
1997:05 256.3200	1997:05 97.56700	1997:05 125.4600
1997:06 258.5800	1997:06 100.0700	1997:06 126.1190
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1997:08 260.5700	1997:08 98.13500	1997:08 127.8190
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1998:02 255.2200	1998:02 99.83800	1998:02 130.1500
1998:03 258.3100	1998:03 100.1670	1998:03 130.6840
1998:04 258.8500	1998:04 98.24500	1998:04 131.3310
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1999:04 261.7000	1999:04 96.14300	1999:04 134.2200
1999:05 263.5600	1999:05 95.77300	1999:05 134.4900
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