

DATE: 6/06/90

TABLE 0

CORRECTED DPR DATA INCLUDING CONRAIL

RRID	YEAR	CLWRCKS	TRK	TMI
5	1979	38.5409	287.6000	492.2020
5	1980	14.4098	283.9000	429.0760
5	1981	11.3283	277.5300	391.0370
5	1982	8.8607	260.8900	337.4230
5	1983	7.6134	248.6400	335.0240
5	1984	7.5957	238.7300	350.4460
5	1985	7.7668	218.4500	329.8450
5	1986	8.8459	213.8800	328.6090
5	1987	9.7500	203.0700	349.3170
8	1979	1.2795	19.4800	40.2248
8	1980	0.8578	19.3700	33.1691
8	1981	0.5766	20.6200	35.5661
8	1982	0.4978	19.7200	31.0798
8	1983	0.4047	19.3100	28.9058
8	1984	0.4872	17.7400	32.6510
8	1985	1.3093	17.5800	34.5323
8	1986	1.0688	17.5500	31.2496
8	1987	0.9550	13.5000	29.6346
10	1979	12.3118	205.0600	485.3030
10	1980	7.9570	204.7400	464.3230
10	1981	6.1908	207.0800	426.8880
10	1982	4.7685	209.3200	347.7510
10	1983	2.5596	209.5600	303.8820
10	1984	2.6431	207.2300	332.0190
10	1985	3.2294	220.5700	341.8610
10	1986	2.8958	219.2800	336.0200
10	1987	2.6160	215.3900	343.8090
18	1979	7.8205	107.7700	156.5340
18	1980	4.6889	104.1200	151.8330
18	1981	3.6085	99.7100	142.8200
18	1982	2.5579	94.9800	115.6800
18	1983	1.7405	90.3100	109.1760
18	1984	2.0381	85.9200	116.2090
18	1985	1.9323	64.3900	102.8910
18	1986	1.7776	52.9100	75.9706
18	1987	0.4430	45.0500	62.2035
20	1979	31.8447	334.4800	604.0170
20	1980	28.2477	337.6500	600.2720
20	1981	17.4771	336.2300	579.6410
20	1982	18.0799	332.7500	501.7830
20	1983	9.4527	315.2900	504.9750
20	1984	11.7553	304.7300	540.4340
20	1985	10.5663	300.5700	526.2490
20	1986	9.2948	288.6300	531.3300
20	1987	6.4950	274.3200	524.8030
21	1979	5.9793	157.9100	434.0820
21	1980	6.4364	157.5500	448.7970
21	1981	4.7127	160.1500	447.0130
21	1982	2.9087	159.6600	370.6290
21	1983	3.4335	157.2000	374.3950

21	1984	2.5481	155.5200	386.4720
21	1985	1.9248	154.7200	347.5230
21	1986	3.2062	152.4400	328.5140
21	1987	1.3220	153.1300	367.5880
22	1979	16.8700	343.4900	616.7450
22	1980	13.1954	343.6900	659.2210
22	1981	9.2688	344.5600	629.3330
22	1982	7.2775	341.8000	537.6940
22	1983	7.5583	332.2100	561.0730
22	1984	6.6266	326.0300	632.2080
22	1985	6.0689	317.0100	610.3440
22	1986	5.0250	303.1600	637.0920
22	1987	4.9360	280.2100	691.7200
23	1979	7.1710	106.1800	122.5700
23	1980	5.3426	94.0300	138.2680
23	1981	5.1394	98.8300	133.9740
23	1982	4.1960	95.5900	106.4830
23	1983	3.8993	95.1500	107.9990
23	1984	4.2571	90.5400	110.8650
23	1985	3.4987	89.1300	103.3270
23	1986	3.8828	78.5900	104.0030
23	1987	3.0130	77.5200	96.1378
27	1979	0.4381	23.1700	54.2444
27	1980	0.5014	23.1800	50.6270
27	1981	0.3727	22.7200	52.9381
27	1982	0.3420	22.7200	45.4655
27	1983	0.3942	28.9200	56.0216
27	1984	0.1360	28.8200	60.3193
27	1985	0.1976	27.4100	50.1681
27	1986	0.2953	27.4100	48.2964
27	1987	0.1120	27.4700	46.7764
30	1979	1.9562	19.1900	33.8461
30	1980	2.2735	19.2400	34.6423
30	1981	1.2935	19.2400	36.0260
30	1982	1.7725	19.2600	36.2410
30	1983	1.3645	19.0800	36.8204
30	1984	1.2549	19.0700	38.8657
30	1985	1.0866	19.1000	41.4980
30	1986	0.6264	19.1300	38.5737
30	1987	0.4850	19.1200	38.1852
31	1979	1.4946	24.3300	29.7790
31	1980	1.0574	24.5800	32.4309
31	1981	0.8871	24.5600	33.4218
31	1982	0.9904	24.0300	28.3026
31	1983	0.7189	35.9400	33.5236
31	1984	0.8399	35.8900	36.7457
31	1985	0.6424	36.3900	36.2603
31	1986	0.8233	39.9600	33.7112
31	1987	0.6960	37.3300	33.6467
34	1979	1.8677	17.4100	57.8856
34	1980	1.6762	30.5800	52.4077
34	1981	0.6843	29.4800	58.5167
34	1982	0.5759	31.2000	48.4592
34	1983	0.7654	33.6400	55.4867
34	1984	1.2239	33.6400	63.4580
34	1985	0.9944	34.3100	54.7247
34	1986	0.0571	34.3100	58.8237
34	1987	0.4600	33.9600	65.5279
35	1979	9.7255	162.9400	131.6300
35	1980	5.9234	99.7400	109.4020

35	1981	4.0396	99.7200	99.1002
35	1982	3.2362	92.2900	84.9708
35	1983	2.5897	90.2500	80.9490
35	1984	3.3421	91.0800	87.5582
35	1985	1.6710	94.2000	71.8622
35	1986	2.3182	91.2600	79.6100
35	1987	3.2310	69.7700	84.9600
36	1979	13.6181	134.9100	336.2760
36	1980	10.4617	133.1400	290.7180
36	1981	9.7104	133.0900	284.8420
36	1982	7.5107	131.0500	251.9710
36	1983	7.7718	129.7100	255.4040
36	1984	10.6825	130.2500	263.0290
36	1985	5.4361	128.0000	221.9480
36	1986	5.4602	123.6500	251.9880
36	1987	9.3890	121.1200	258.0430
37	1979	17.8160	278.4400	678.3070
37	1980	15.7362	278.0100	685.4510
37	1981	12.4903	274.0600	623.6470
37	1982	8.8383	273.2200	518.6550
37	1983	7.0350	272.6400	526.0570
37	1984	8.4089	270.7600	549.7440
37	1985	8.3517	268.6600	531.3700
37	1986	13.1577	271.4500	540.4620
37	1987	8.6570	266.1800	569.0790

TABLE 1

CUNRAIL INCLUDED

CLWRCKS ACCOUNT

THE DATA ARE GIVEN IN THE FOLLOWING UNITS:

CLWRCKS MILLIONS OF DOLLARS PER YEAR
 TRK HUNDREDS OF MILES OF RUNNING TRACK
 TMI HUNDREDS OF THOUSANDS OF TRAIN MILES RUNNING

RAILROAD SPECIFIC MEANS OF THE DATA

RAILROAD	CLWRCKS	TRK	TMI
5	12.7491	248.0867	371.4421
8	0.8263	18.3189	33.0115
10	5.0191	210.9144	375.7618
18	2.9564	82.7956	114.8130
20	15.9126	310.8500	545.9449
21	3.6080	156.4756	389.4459
22	8.5363	325.7956	619.4922
23	4.4889	91.7209	113.9585
27	0.3099	25.7578	51.6508
30	1.3459	17.1589	37.1887
31	0.9056	31.4456	33.0914
34	0.9228	30.9478	57.2545
35	4.0085	99.0278	92.2269
36	8.8934	129.4356	268.2466
37	11.1657	272.6022	580.3080

OVERALL MEANS OF THE DATA

5.4432	137.0894	245.5891
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TABLE 2

CL WRCK'S ACCOUNT

OLS REGRESSION RESULTS FOR POOLED MODEL

COEFFICIENT	ESTIMATE	T-RATIO
CONST	-0.0165	-0.0310
TRK	0.0419	4.0528
TMI	-0.0012	-0.2221
TIME	-0.6869	-5.3949

ERROR VARIANCE	14.4805
RSD	0.6174
MODIFIED DW	1.0033
MODIFIED RHO	0.4984

F-STATISTIC FOR POOLING RAILROADS: $F(56 \ 75) = 22.80$ F-STATISTIC FOR POOLING YEARS: $F(24 \ 108) = 3.54$

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OLS REGRESSION ON MODEL WITH RAILROAD EFFECTS AND TIME TREND

F-STATISTIC FOR POOLING RAILROADS
IN THE FIXED EFFECTS MODEL: $F(42, 75) = 11.81$

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CLWRCKS ACCOUNT

OLS REGRESSION MODEL WITH RAILROAD EFFECTS AND TIME TREND

COEFFICIENT	ESTIMATE	T-RATIO
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TRF.	0.0913	4.2612
TMI	0.0545	7.1990
TIME	-0.1725	-1.5380

F5	-30.1508	-5.7368
F8	-2.6457	-2.7512
F10	-34.7211	-7.3541
F18	-10.8622	-5.0908
F20	-42.5029	-6.1551
F21	-31.9059	-7.8569
F22	-54.9782	-7.4435
F23	-10.0990	-4.9629
F27	-4.8573	-4.6075
F30	-2.4305	-2.4936
F31	-3.7697	-3.5346
F34	-5.0238	-4.5171
F35	-10.0618	-4.8059
F36	-17.5462	-5.5921
F37	-45.3552	-7.0006

ERROR VARIANCE	6.8501	
RSQ	0.8384	
MODIFIED DW	1.6426	
MODIFIED PBO	0.1787	
BREUSCH-PAGAN	329.8987	CHI-SQ(17)
RESET	65.5560	F(3 114)

OLS REGRESSION ON MODEL WITH RAILROAD EFFECTS AND NO TIME TREND

F-STATISTIC FOR TIME TREND: $F(1, 117) = 2.37$

F-STATISTIC FOR TIME TREND: $F(1, 117) = 2.37$

TABLE 6

CLWRCKS ACCOUNT

OLS REGRESSION ON MODEL WITH PAILROAD EFFECTS AND TIME EFFECTS

COEFFICIENT	ESTIMATE	T-RATIO
TRK	0.0956	5.3894
TMI	0.0489	5.8711
F5	-26.3179	-4.8338
F8	0.2833	0.2237
F10	-30.7053	-6.1614
F18	-7.7530	-3.5038
F20	-37.9787	-5.3471
F21	-27.5811	-6.2021
F22	-50.0952	-6.5768
F23	-7.0327	-3.0322
F27	-1.8562	-1.3395
F30	0.5182	0.4029
F31	-0.8964	-0.6568
F34	-2.0137	-1.3917
F35	-7.1478	-3.0507
F36	-13.7813	-3.9611
F37	-40.4632	-5.9660
T79	BASE YEAR	
T80	-2.5865	-2.8355
T81	-3.9449	-4.2654
T82	-2.7236	-2.6210
T83	-3.5658	-3.4296
T84	-3.6105	-3.6289
T85	-3.2904	-3.1422
T86	-2.7220	-2.5725
T87	-2.9662	-2.7789
ERROR VARIANCE		6.1797
RSQ		0.8629
MODIFIED DW		1.6149
MODIFIED RHO		0.1926
BREUSCH-PAGAN	249.4761	CHI-SQ(24)
RESLT	75.8625	F(3 107)

F-STATISTIC FOR TIME EFFECTS: F(8 110) = 2.79

OLS REGRESSION MODEL WITH RAILROAD EFFECTS AND TIME EFFECTS
STEP ONE IN GLS ESTIMATION

COEFFICIENT	ESTIMATE	T-RATIO
TRK	0.0956	5.3894
IMI	0.0489	5.8711
F5	-26.3179	-4.8338
F8	0.2833	0.2237
F10	-30.7053	-6.1614
F18	-7.7530	-3.5038
F20	-37.9787	-5.0471
F21	-27.5811	-6.2021
F22	-50.0952	-6.5768
F23	-7.0327	-3.0322
F27	-1.8562	-1.3395
F30	0.5182	0.4029
F31	-0.8964	-0.6568
F34	-2.0137	-1.3917
F35	-7.1478	-3.0507
F36	-13.7813	-3.9611
F37	-40.4632	-5.9660
T79	BASE YEAR	
T80	-2.5865	-2.8355
T81	-3.9449	-4.2654
T82	-2.7236	-2.6210
T83	-3.5658	-3.4296
T84	-3.6105	-3.6289
T85	-3.2904	-3.1422
T86	-2.7220	2.5725
T87	-2.9662	-2.7789
ERROR VARIANCE		6.1797
RSQ		0.8629
MODIFIED DW		1.6149
MODIFIED RHO		0.1926

FIXED-EFFECTS MODEL CORRECTED FOR AUTOCORRELATION:
STEP TWO OF GLS ESTIMATION

COEFFICIENT	ESTIMATE	ASY Z-RATIO
TRK	0.1018	7.2786
TMI	0.0405	6.3703
F5	-22.5913	-6.8020
F8	-1.7674	-1.6145
F10	-26.0558	-8.5276
F18	-8.1187	-5.0541
F20	-31.4979	-7.5406
F21	-23.0805	-8.3892
F22	-40.9992	-9.2396
F23	-7.6349	-4.5581
F27	3.4655	-2.9767
F30	-1.5854	-1.4321
F31	-2.8466	-2.4535
F34	-3.6076	-3.0053
F35	-7.8732	-4.6293
F36	-12.3156	-5.4664
F37	-33.0142	-8.2910
T79	BASE YEAR	
T80	0.0647	0.0767
T81	-0.9038	-1.0470
T82	0.2743	0.2822
T83	-0.7224	-0.7601
T84	-0.4626	-0.5024
T85	-0.2531	-0.2607
T86	0.3059	0.3135
T87	0.0624	0.0631
ERROR VARIANCE		3.9675
RSQ		0.8664
MODIFIED DW		2.0400
MODIFIED RHO		-0.0200

CLWRCKS ACCOUNT

WEIGHTED LEAST-SQUARES ESTIMATES OF FIXED-EFFECTS MODEL:
STEP THREE OF GLS ESTIMATION

COEFFICIENT	ESTIMATE	ASY Z-RATIO
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TRK	0.0607	7.8763
TMI	0.0234	6.7281

F5	-0.5126	-0.8217
F8	-0.7303	-1.2064
F10	-11.5875	-6.8726
F18	-0.9033	-1.5056
F20	-2.4710	-2.7364
F21	-5.7249	-5.6471
F22	-16.8686	-7.2749
F23	-4.5022	-3.2941
F27	-3.1007	-4.3934
F30	0.3263	0.6016
F31	-0.6660	-1.1896
F34	-1.0258	-1.7797
F35	-0.6841	-1.0778
F36	-1.5218	-1.6556
F37	-6.1599	-4.8555

	BASE YEAR	
T79		
T80	-0.7202	-2.1647
T81	-1.4978	-4.4512
T82	-1.2159	-3.1904
T83	-1.7770	-4.8423
T84	-1.5901	-4.4747
T85	-1.6785	-4.4866
T86	-1.4563	-3.8470
T87	-1.6189	-4.2089

ERROR VARIANCE	0.5946	
RSQ	0.9105	
MODIFIED DW	1.8341	
MODIFIED RHO	0.0830	
BREUSCH-PAGAN	47.3050	CHI-SQ(24)
RESET	10.5826	F(3 107)

COEFFICIENT	ESTIMATE	ASY Z-RATIO
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5	-0.5126	-0.8217
8	-0.7303	-1.2064
10	-11.5875	-6.8726
18	-0.9033	-1.5056
20	-2.4710	-2.7364
21	-5.7249	-5.6471
22	-16.8686	-7.2749
23	-4.5022	-3.2941
27	-3.1007	-4.3934
30	0.3263	0.6016
31	-0.6660	-1.1896
34	-1.0258	-1.7797
35	-0.6841	-1.0778
36	-1.5218	-1.6556
37	-6.1599	-4.8555

1979	-0.7202	-2.1647
1980	-1.4978	-4.4512
1981	-1.2159	-3.1904
1982	-1.7770	-4.8423
1983	-1.5901	-4.4747
1984	-1.6785	-4.4866
1985	-1.4563	-3.8470
1986	-1.6189	-4.2089

ERROR VARIANCE	0.5946
RSQ	0.9105
MODIFIED DW	1.8341
MODIFIED RHO	0.0830

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CLWRCKS ACCOUNT

RATIO AT OVERALL MEAN: 0.4082 SE: 0.0514