

DATE: 6/06/90

TABLE 0

CORRECTED DPR DATA INCLUDING CONRAIL

RRID	YEAR	LAROHX	TRK	CMP
5	1979	102.7800	287.6900	2142.4900
5	1980	82.0988	283.9000	1874.8800
5	1981	71.8829	277.5300	1693.1500
5	1982	52.9330	260.8900	1274.0300
5	1983	42.3748	248.6400	1229.9600
5	1984	45.3105	238.7300	1319.4200
5	1985	44.4174	218.4500	1290.3400
5	1986	44.2093	213.8800	1260.7400
5	1987	37.7140	203.0700	1339.4900
8	1979	10.6937	19.4800	165.6950
8	1980	8.8593	19.3700	137.2350
8	1981	12.9094	20.6200	149.9420
8	1982	12.6384	19.7200	123.1650
8	1983	8.9477	19.3100	128.4880
8	1984	6.3725	17.7400	148.0120
8	1985	7.4821	17.5800	147.3680
8	1986	5.9788	17.5500	148.4480
8	1987	5.6700	13.5000	126.6290
10	1979	85.8101	205.0600	2530.3200
10	1980	80.7601	204.7400	2501.5900
10	1981	84.4153	207.0800	2339.5100
10	1982	78.1572	209.3200	1944.6800
10	1983	61.0862	209.5600	1744.6900
10	1984	74.5622	207.2300	1888.3800
10	1985	87.8796	220.5700	1887.8500
10	1986	93.5376	219.2800	1837.6000
10	1987	96.4670	215.3900	1831.3300
18	1979	44.0633	107.7700	630.0510
18	1980	54.5591	104.1200	591.3990
18	1981	46.0690	99.7100	525.8290
18	1982	38.8296	94.9800	403.5950
18	1983	31.2590	90.3100	362.9950
18	1984	28.2373	85.9200	383.7840
18	1985	22.6249	64.3900	343.3540
18	1986	12.4967	52.9100	271.7470
18	1987	10.5070	45.0500	248.7790
20	1979	123.7170	334.4800	3015.4800
20	1980	106.1920	337.6500	3065.5800
20	1981	103.2860	336.2300	2905.3100
20	1982	109.1530	333.7500	2447.3900
20	1983	85.5548	315.2900	2352.6300
20	1984	99.4981	304.7300	2606.6100
20	1985	83.8580	300.5700	2461.3700
20	1986	86.5251	288.6300	2137.6500
20	1987	108.8160	274.3200	2251.8100
21	1979	45.1869	157.9100	1459.6000
21	1980	45.7372	157.5500	1456.0700
21	1981	44.9490	160.1500	1344.3700
21	1982	33.9520	159.6600	1051.6500
21	1983	38.2569	157.2000	1020.0200

21	1984	39.7144	155.5200	1086.1800
21	1985	28.6467	154.7200	960.9460
21	1986	28.7632	152.4400	902.7150
21	1987	26.2340	153.1300	945.3430
22	1979	106.9750	343.4900	2807.7600
22	1980	91.3602	343.6900	2572.1900
22	1981	88.7884	344.5600	2418.8800
22	1982	81.2933	341.8000	1881.1600
22	1983	77.2757	332.2100	1863.0300
22	1984	77.8346	326.0300	2062.6900
22	1985	54.7001	317.0100	1852.9200
22	1986	57.3828	303.1600	1871.3800
22	1987	60.7030	280.2100	2038.0300
23	1979	50.2910	106.1800	635.6950
23	1980	52.4463	94.0300	679.8490
23	1981	39.2253	98.8300	596.1010
23	1982	32.4213	95.5900	411.8860
23	1983	17.7028	95.1500	431.2800
23	1984	20.3081	90.5400	446.1200
23	1985	21.3861	89.1300	387.4650
23	1986	21.6612	78.5900	387.1370
23	1987	19.4690	77.5200	391.4400
27	1979	2.7261	23.1700	215.0820
27	1980	3.3736	23.1800	193.2830
27	1981	3.5494	22.7200	179.1370
27	1982	3.3572	22.7200	125.2690
27	1983	4.6621	28.9200	171.0060
27	1984	3.9136	28.8200	174.2470
27	1985	3.5711	27.4100	157.0990
27	1986	3.6235	27.4100	134.7580
27	1987	3.2500	27.4700	147.7590
30	1979	11.6427	19.1900	133.5260
30	1980	15.4834	19.2400	100.1590
30	1981	12.8633	19.2400	116.1500
30	1982	10.0292	19.2600	96.7630
30	1983	9.4952	19.0800	93.8730
30	1984	8.6290	19.0700	98.6280
30	1985	9.2931	19.1000	89.2590
30	1986	7.2547	19.1300	84.4940
30	1987	6.3920	19.1200	85.4500
31	1979	5.9225	24.3300	142.1840
31	1980	6.2312	24.5800	150.2480
31	1981	5.2336	24.5600	140.8970
31	1982	6.1122	24.0300	99.1920
31	1983	3.8923	35.9400	107.0910
31	1984	5.9270	35.8900	115.2300
31	1985	6.3854	36.3900	106.5520
31	1986	5.5914	39.9600	100.1120
31	1987	4.5030	37.3300	107.7390
34	1979	9.2330	17.4100	299.3820
34	1980	11.6677	30.5800	287.5640
34	1981	6.6314	29.4800	309.1270
34	1982	5.6884	31.2000	226.3900
34	1983	5.4688	33.6400	234.8260
34	1984	11.7854	33.6400	253.3740
34	1985	11.0676	34.3100	209.2680
34	1986	5.8375	34.3100	180.9150
34	1987	5.2330	33.9600	182.8600
35	1979	36.3100	162.9400	614.8520
35	1980	30.7164	99.7400	482.3640

35	1981	26.0392	99.7200	406.3510
35	1982	20.0307	92.2900	348.6160
35	1983	15.5007	90.2500	383.6130
35	1984	14.9692	91.0800	383.0170
35	1985	13.5863	94.2000	321.6270
35	1986	11.0792	91.2600	339.0090
35	1987	10.7890	69.7700	318.9640
36	1979	47.6254	134.9100	1812.5900
36	1980	39.0378	133.1400	1660.1300
36	1981	36.3090	133.0900	1484.4300
36	1982	32.4141	131.0500	1163.5000
36	1983	25.8489	129.7100	1076.1700
36	1984	36.6090	130.2500	1099.5300
36	1985	48.8707	128.0000	982.3370
36	1986	28.3331	123.6500	926.0890
36	1987	38.3760	121.1200	904.1250
37	1979	71.9297	278.4400	2952.0000
37	1980	80.4769	278.0100	2968.2700
37	1981	90.3573	274.0600	2601.2300
37	1982	72.0981	273.2200	1855.9400
37	1983	65.1629	272.6400	1850.0000
37	1984	55.1334	270.7600	1926.8000
37	1985	46.1920	268.6600	1858.0700
37	1986	33.7751	271.4500	1974.5500
37	1987	48.4190	266.1800	1943.1700

TABLE 1

CONRAIL INCLUDED

CAROHEX ACCOUNT

THE DATA ARE GIVEN IN THE FOLLOWING UNITS:

CAROHEX MILLIONS OF DOLLARS PER YEAR
 TRK HUNDREDS OF MILES OF RUNNING TRACK
 CMP HUNDREDS OF THOUSANDS OF CAR-MILES RR OWNED AND LE

ASED

RAILROAD SPECIFIC MEANS OF THE DATA

RAILROAD	CAROHEX	TRK	CMP
5	58.1912	248.0867	1491.6111
8	8.8391	18.3189	141.0647
10	82.5195	210.9144	2056.2167
18	32.0718	82.7956	418.2814
20	100.7333	313.8500	2582.6478
21	36.8267	156.4756	1136.3216
22	77.3681	325.7956	2152.0044
23	30.5457	91.7289	485.2192
27	3.5585	25.7578	166.4044
30	10.1203	19.1589	99.8113
31	5.5332	31.4456	118.8050
34	8.1675	30.9478	242.6340
35	19.8912	99.0278	399.8237
36	37.0471	129.4356	1234.3223
37	63.5716	272.6022	2214.4478

OVERALL MEANS OF THE DATA

	38.3323	137.0894	996.0144
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TABLE 2

CAROHEX ACCOUNT

OLS REGRESSION RESULTS FOR POOLED MODEL

COEFFICIENT	ESTIMATE	T-RATIO
CONST	3.0635	2.0017
TRK	0.0944	3.5681
CMP	0.0224	6.9440
TIME	0.9921	-2.5899
ERROR VARIANCE		118.8638
RSQ		0.8890
MODIFIED DW		0.4540
MODIFIED RHO		0.7730

F-STATISTIC FOR POOLING RAILROADS: $F(56 \ 75) = 7.85$

F-STATISTIC FOR POOLING YEARS: $F(24 \ 108) = 2.46$

OLS REGRESSION MODEL WITH RAILROAD EFFECTS AND TIME TREND

COEFFICIENT	ESTIMATE	T-RATIO
TRK	0.3157	5.8173
CMF	0.0191	4.9179
TIME	-0.5523	-1.5498
F5	-48.6020	-3.5151
F8	0.3517	0.1286
F10	-23.3158	-1.8100
F18	-2.0511	-0.3990
F20	-47.6473	-2.6179
F21	-34.2630	-3.7485
F22	-66.5636	-3.6536
F23	-7.6751	-1.3758
F27	-7.7496	-2.6694
F30	2.1666	0.7922
F31	6.6620	-2.1933
F34	-6.2341	-2.0223
F35	-19.0038	-3.2362
F36	-27.3767	-3.3765
F37	-64.7589	-4.0942
ERROR VARIANCE		57.6389
RSQ		0.9519
MODIFIED DW		1.1642
MODIFIED RHO		0.4179
BREUSCH-PAGAN		79.4979
RESET		1.9271
		CHI-SQ(17)
		F(3,114)

OLS REGRESSION ON MODEL WITH RAILROAD EFFECTS AND NO TIME TREND

F-STATISTIC FOR TIME TREND: F (1 117) = 2.40

F-STATISTIC FOR TIME TREND: F (1 117) = 2.40

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

COEFFICIENT	ESTIMATE	T-RATIO
TRK	0.3436	6.2074
CMP	0.0151	3.3607
F5	-46.0347	-3.1147
F8	3.9459	1.0311
F10	-17.4656	-1.2248
F18	0.8482	0.1372
F20	-42.5691	-2.1947
F21	-30.5581	-2.9760
F22	-63.5322	-3.3088
F23	-4.7583	-0.7185
F27	-4.2641	-1.0645
F30	5.5708	1.4788
F31	-3.5244	-0.8684
F34	-2.5898	-0.6084
F35	-16.6302	-2.4385
F36	-22.5285	-2.3851
F37	-59.9972	-3.5293
T79	BASE YEAR	
T80	-0.1098	-0.0396
T81	-1.4153	-0.4990
T82	-2.2556	0.6899
T83	-7.6289	-2.2891
T84	5.1973	-1.6260
T85	-5.7427	-1.7152
T86	-6.9253	-2.0065
T87	-2.5907	-0.7451
ERROR VARIANCE		56.8436
RSQ		0.9554
MODIFIED DW		1.1467
MODIFIED R110		0.4266

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

COEFFICIENT	ESTIMATE	ASY Z-RATIO
TRK	0.2833	6.2416
CMF	0.0107	2.7025
F5	-15.7876	-2.2670
F8	3.0718	0.9347
F10	3.0955	0.4756
F18	3.9373	0.9625
F20	-6.7743	-0.8247
F21	-10.5167	-1.9569
F22	-21.5501	-2.5631
F23	1.0487	0.2460
F27	-1.5270	-0.4534
F30	3.8707	1.1866
F31	-1.1192	-0.3276
F34	-0.2809	-0.0814
F35	-5.6777	-1.3041
F36	-5.6261	-1.1245
F37	-21.3503	-2.8523
T79	BASE YEAR	
T80	1.2006	0.4240
T81	-0.3073	-0.1078
T82	-1.6606	-0.5310
T83	-6.3756	-2.1129
T84	1.4368	-0.4850
T85	-3.5274	-1.1479
T86	-4.6574	-1.4981
T87	0.0454	0.0144
ERROR VARIANCE		37.2102
RSQ		0.9209
MODIFIED DW		1.8594
MODIFIED RHO		0.0703

CAROHEX ACCOUNT

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

COEFFICIENT	ESTIMATE	ASY Z-RATIO
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TRK	0.2425	6.7944
CMP	0.0141	3.2818

F5	-1.9405	-1.8030
F8	1.0374	1.7115
F10	0.7432	0.7314
F18	1.1190	1.6015
F20	-0.1240	-0.1299
F21	-1.8650	-1.8501
F22	-3.0566	-2.1914
F23	0.5061	0.7662
F27	-0.7464	-1.2024
F30	1.4458	2.4556
F31	-0.9952	-1.4023
F34	-0.1912	-0.2963
F35	-0.9267	-1.2255
F36	-0.4742	-0.6001
F37	-1.4753	-1.6581

	BASE YEAR	
T79		
T80	0.2417	0.5370
T81	-0.1637	-0.3539
T82	-0.2944	-0.5448
T83	-1.1856	-2.3553
T84	-0.4032	-0.8358
T85	-0.6446	-1.2462
T86	-1.0139	-1.9486
T87	-0.4681	-0.9077

ERROR VARIANCE	0.8361	
RSQ	0.8899	
MODIFIED DW	1.8216	
MODIFIED RHO	0.0892	
BREUSCH-PAGAN	25.0258	CHI-SQ(24)
RESET	1.1212	F(3 107)

COEFFICIENT	ESTIMATE	ASY Z-RATIO
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5	-1.9405	-1.8030
8	1.0374	1.7115
10	0.7432	0.7314
18	1.1190	1.6015
20	-0.1240	-0.1299
21	-1.8650	-1.8501
22	-3.0566	-2.1914
23	0.5061	0.7662
27	-0.7464	-1.2024
30	1.4458	2.4556
31	-0.9952	-1.4023
34	-0.1912	-0.2963
35	-0.9267	-1.2255
36	-0.4742	-0.6001
37	-1.4753	-1.6581

1979	0.2417	0.5370
1980	-0.1637	-0.3539
1981	-0.2944	-0.5448
1982	-1.1856	-2.3553
1983	-0.4032	-0.8358
1984	-0.6446	-1.2462
1985	-1.0139	-1.9486
1986	-0.4681	-0.9077

ERROR VARIANCE	0.8361
RSQ	0.8899
MODIFIED DW	1.8216
MODIFIED RHO	0.0892

DPR4.FRG

TABLE 11

CONRAIL INCLUDED

CAROHEX ACCOUNT

RAILROAD	RATIO	SE
5	0.26	0.0782
8	0.31	0.0872
10	0.36	0.0941
18	0.23	0.0715
20	0.32	0.0892
21	0.30	0.0850
22	0.28	0.0817
23	0.23	0.0733
27	0.27	0.0808
30	0.23	0.0727
31	0.18	0.0601
34	0.31	0.0876
35	0.19	0.0627
36	0.36	0.0935
37	0.32	0.0888

MEAN OF RATIOS: 0.2767

RATIO AT OVERALL MEAN: 0.2964 SE: 0.0850