

EAI

2
OVERALL SOCIO-ECONOMIC ANALYSIS
OF THE MSAT PROJECT
APPENDICES TO THE FINAL REPORT

Econanalysis Incorporated

LKC
P
91
.C655
E8962
1985
v.3

IC

P
91
C655
E896
1985
v. 3

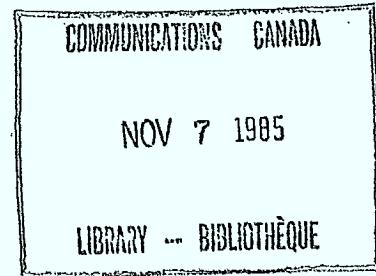
①
Evans, John C.

②
**OVERALL SOCIO-ECONOMIC ANALYSIS
OF THE MSAT PROJECT
APPENDICES TO THE FINAL REPORT**

prepared by

Econanalysis Incorporated
P. O. Box 2415
Station C
Downsview, Ontario
M3N 2V9

for the
Department of Communications
DSS File No. 01SM.36100-3-0278



May 1985

1985 8 10

DD 5776969
D 5776984

P
91

C655

E896

1985

v.3

**Table of Contents for the Appendices
to the Final Report**

- Appendix A Sensitivity Analysis of the Final Results
- Appendix B-1 Baseline Scenario: Total MSAT Project Economic Benefits
- Appendix B-2 Baseline Scenario: Total MSAT Project Annual Cash Flows and Economic Costs and Benefits
- Appendix B-3 Baseline Scenario: Cumulative Undiscounted Cash Flows and Economic Costs and Benefits
- Appendix B-4 Baseline Scenario: Telesat Cash Flows and Economic Costs and Benefits
- Appendix B-5 Baseline Scenario: Service Providers Cash Flows and Economic Costs and Benefits
- Appendix B-6 Baseline Scenario: Manufacturers Cash Flows and Economic Costs and Benefits
- Appendix B-7 Pessimistic Scenario: Total MSAT Project Economic Benefits
- Appendix B-8 Pessimistic Scenario: Total MSAT Project Annual Cash Flows and Economic Costs and Benefits
- Appendix B-9 Pessimistic Scenario: Cumulative Undiscounted Cash Flows and Economic Costs and Benefits
- Appendix B-10 Pessimistic Scenario: Telesat Cash Flows and Economic Costs and Benefits
- Appendix B-11 Pessimistic Scenario: Service Providers' Cash Flows and Economic Costs and Benefits
- Appendix B-12 Pessimistic Scenario: Manufacturers Cash Flows and Economic Costs and Benefits

- Appendix C-1 Baseline Scenario: Telesat's Financial Data Base
- Appendix C-2 Baseline Scenario: Service Providers' Financial Data Base
- Appendix C-3 Baseline Scenario: Manufacturers' Financial Data Base
- Appendix C-4 Pessimistic Scenario: Telesat's Financial Data Base
- Appendix C-5 Pessimistic Scenario: Service Providers' Financial Data Base
- Appendix C-6 Pessimistic Scenario: Manufacturers' Financial Data Base

Appendix A: Sensitivity Analysis of the Final Results

The purpose of this appendix is to examine the sensitivities of the NPV of MSAT's overall net economic benefits, as well as the NPV's of the net financial cash flows of each of the major participants, to alternate social and private discount rates, respectively. This will reveal the robustness of the results of both the baseline and pessimistic scenarios.

Figures A-1 and A-2 provide a graphical presentation of the annual net cash flows, externalities and net economic benefits for the baseline and pessimistic scenarios. The annual net cash flows plus the annual economic externalities equal the annual net economic benefits. After 1989 (the satellite launch date), the net economic benefits become very large in relation to the net cash flows because of the large size of the net user benefits (see Section 5 for a discussion of this issue). These benefits keep the NPV of the net economic benefits positive over a wide range of social discount rates, as shown in Figures A-3 and A-4. Therefore, even if very high social opportunity costs of capital or alternatively, very high risk premia, are imposed on MSAT, the project is still economically attractive.

Figures A-5 and A-6 provide a sensitivity analysis of the NPV of the net cash flows to Telesat at alternate private discount rates. Under the assumptions of the Baseline Scenario, Telesat's private discount rate can go as high as 10 per cent before the NPV falls to zero, which indicates that the internal rate of return on Telesat's invested funds is 10 per cent. In contrast, the internal rate of return to Telesat under the assumptions of the pessimistic scenario is much lower at roughly 2 per cent. Thus, for the baseline scenario Telesat's 10 per cent internal rate of return exceeds the required rate of return of 7.4 per cent by a

Figure A-1

TOTAL MSAT PROJECT: BASELINE MARKET

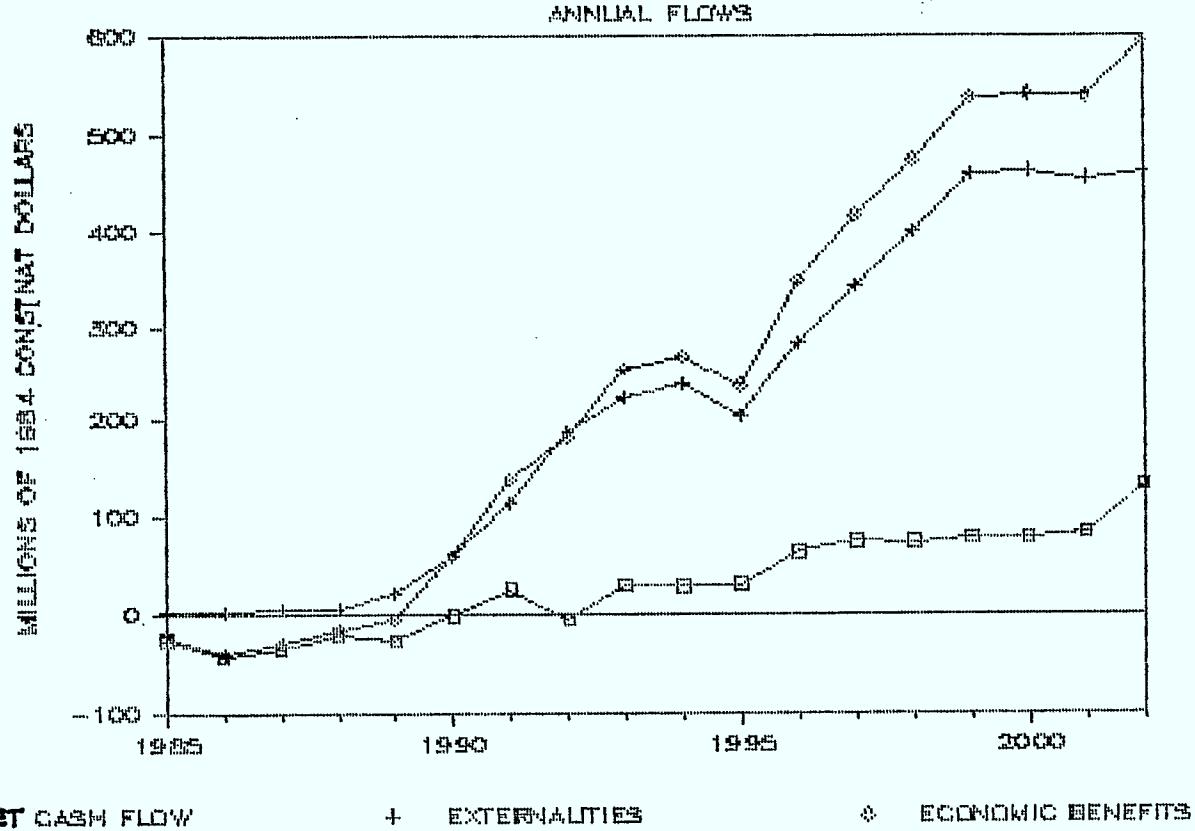


Figure A-2

TOTAL MSAT PROJECT: PESSIMISTIC MARKET

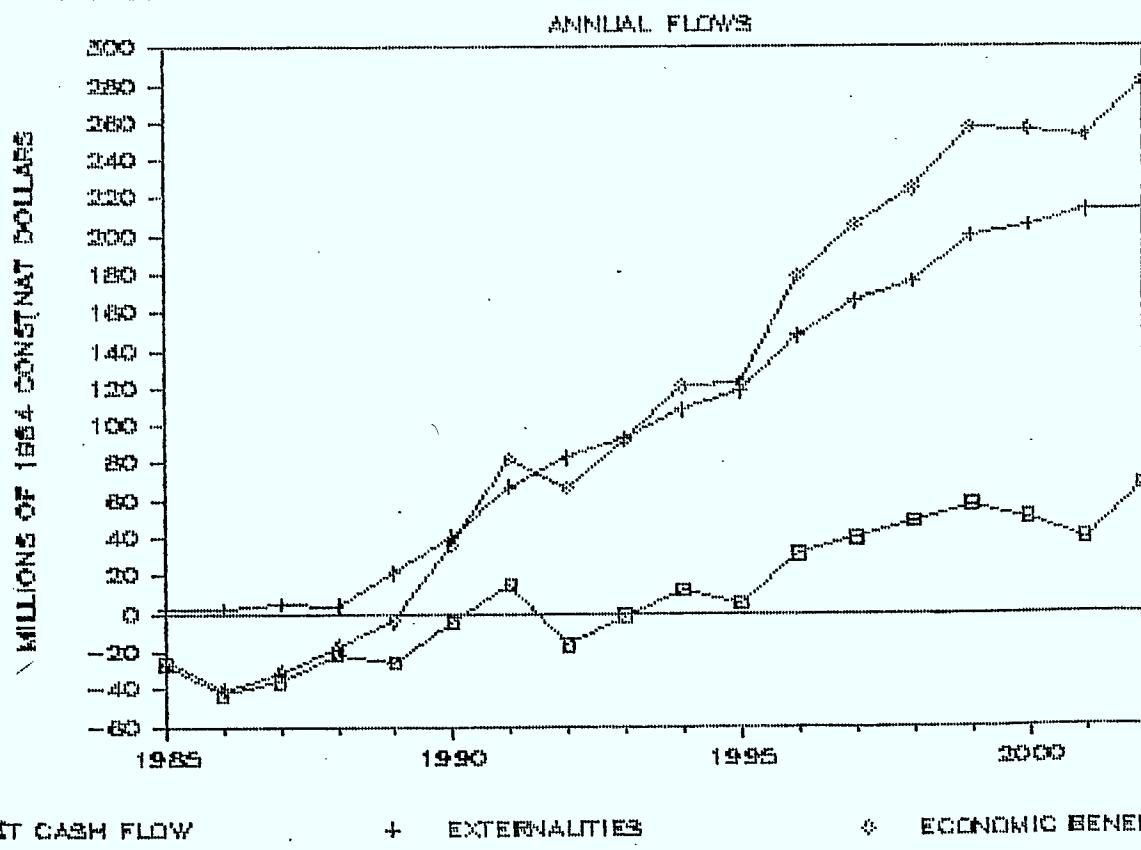


Figure A-3

TOTAL MSAT PROJECT: BASELINE SCENARIO

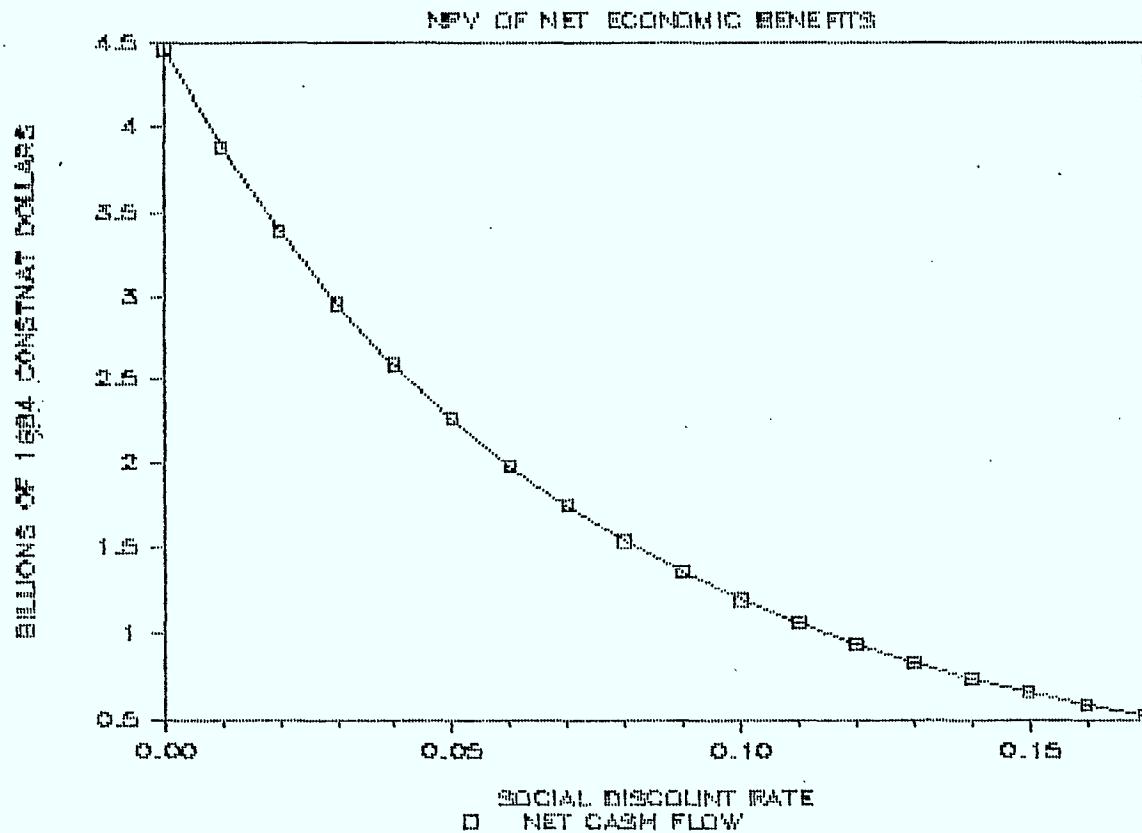


Figure A-4

TOTAL MSAT PROJECT: PESSIMISTIC SCENARIO

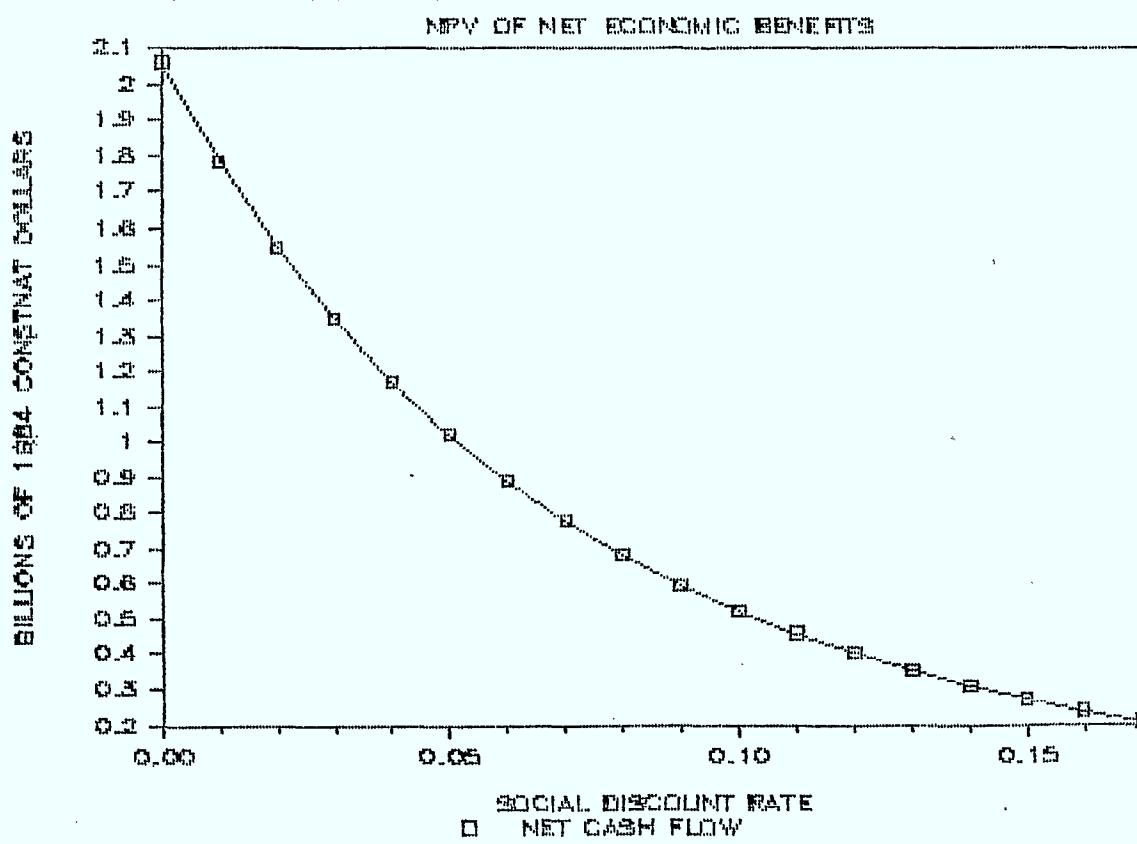


Figure A-5

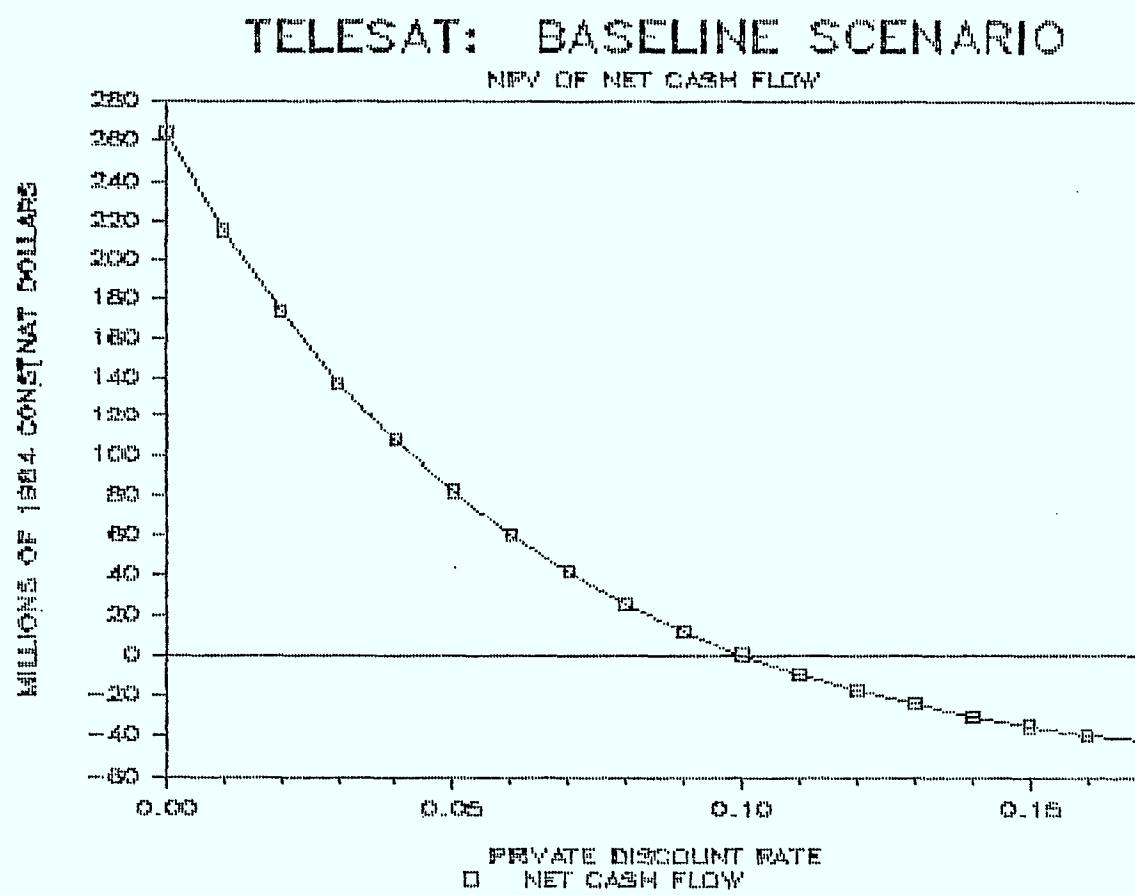
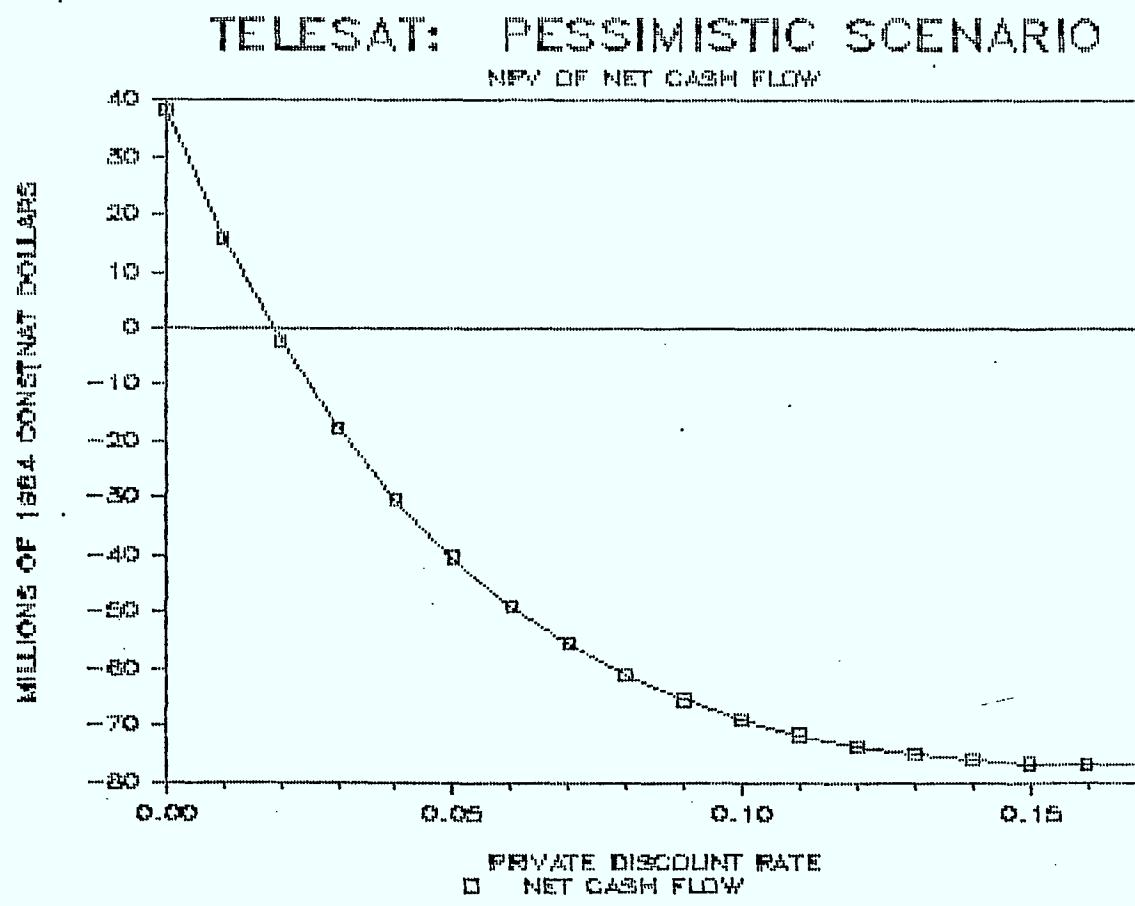


Figure A-6



significant margin. However, for the pessimistic scenario the internal rate of return of 2 per cent falls well short of the required rate. The financial attractiveness of the MSAT project to Telesat is more sensitive with respect to its private discount rate, than is the economic attractiveness with respect to the social discount rate.

Figures A-7 and A-8 illustrate the sensitivity of the NPV of the net cash flows to the Service Providers at alternate private discount rates for the baseline and pessimistic scenarios. Likewise, Figures A-9 and A-10 illustrate the sensitivity of net cash flows to the Manufacturers at alternate discount rates. Under the two types of market assumptions the NPV's of the net cash flows is positive even for private discount rates as high as 17 per cent. This indicates that unlike Telesat, the Service Providers and the Manufacturers face relatively little risk and may possibly enjoy large financial rewards for participating in the MSAT project.

Figure A-7

SERVICE PROVIDERS: BASELINE SCENARIO

NPV OF NET CASH FLOW

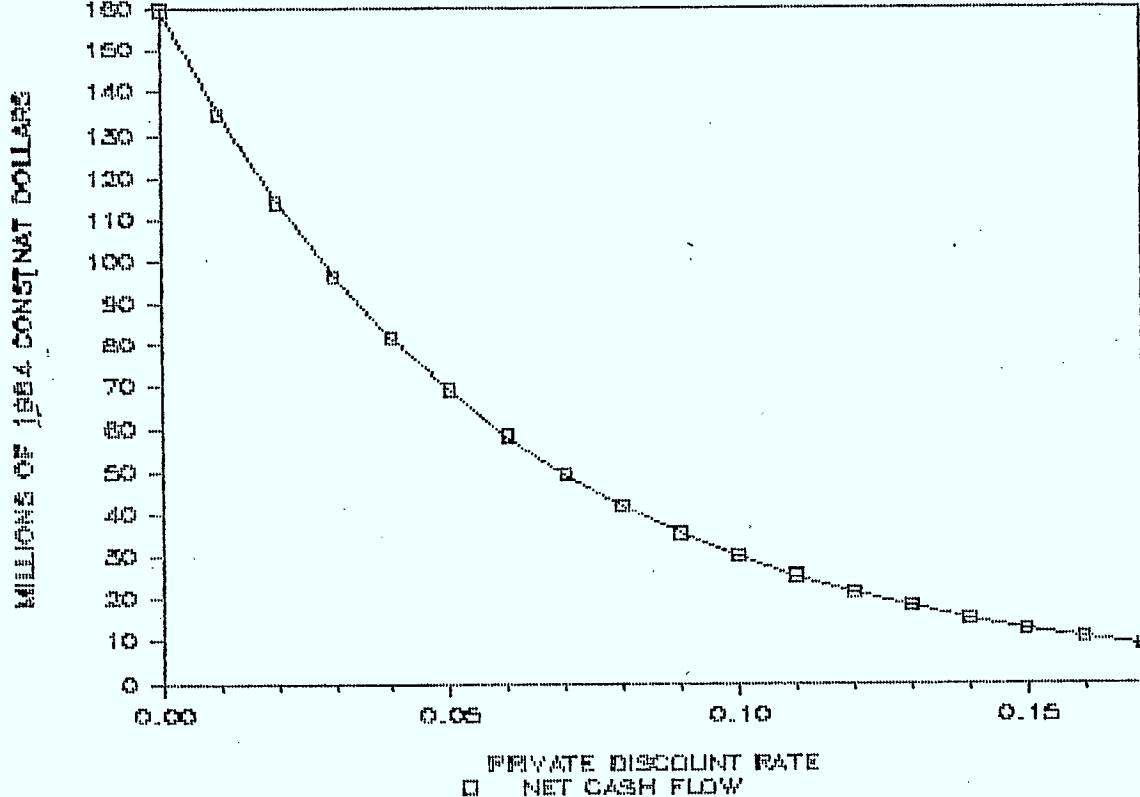


Figure A-8

SERVICE PROVIDERS: PESSIMISTIC SCENARIO

NPV OF NET CASH FLOW

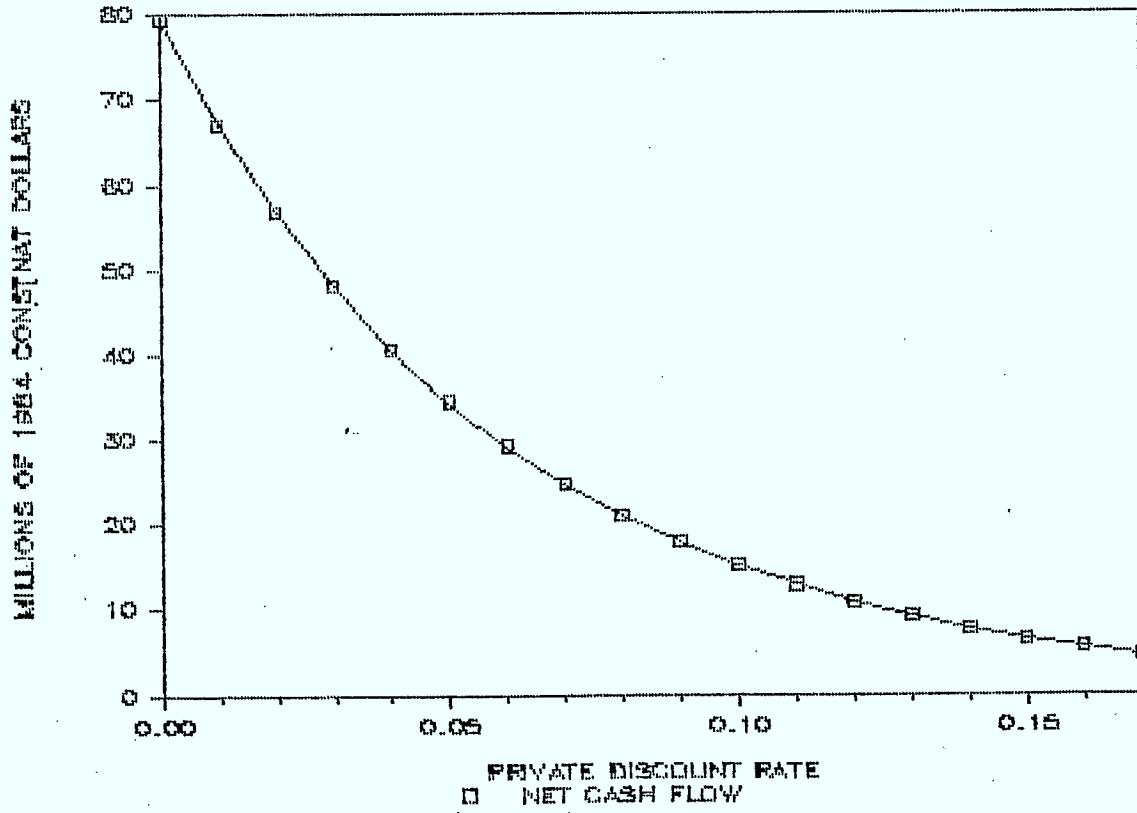


Figure A-9

MANUFACTURERS: BASELINE SCENARIO

NPV OF NET CASH FLOW

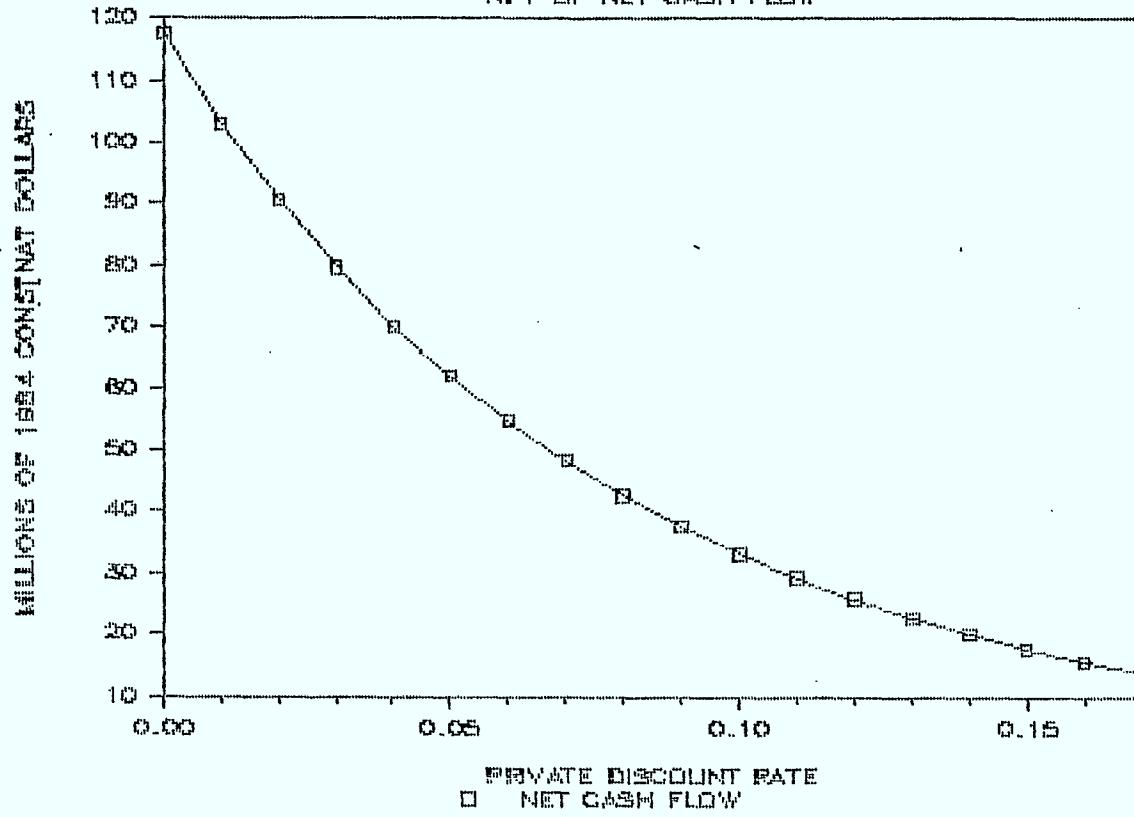
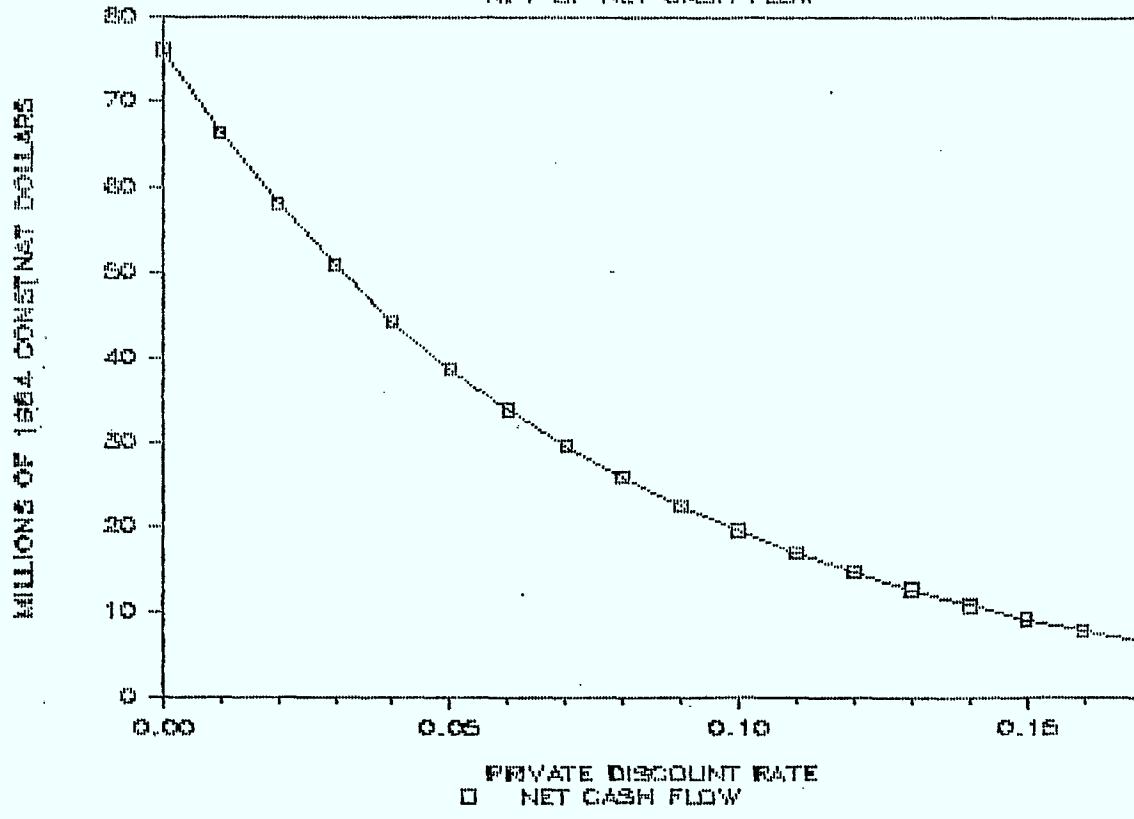


Figure A-10

MANUFACTURERS: PESSIMISTIC SCENARIO

NPV OF NET CASH FLOW



Appendix B-1

Baseline Scenario: Total MSAT Project Economic Benefits

NSAT ECONOMIC BENEFITS

	(\$'000's)			
	TELESAT	SERVICE PROVIDERS	MANUFACTURERS	TOTAL NSAT PROJECT
RETURNS TO PRIVATE INVESTORS				
<hr/>				
NPV OF NET CASH FLOW	\$59,944	\$58,541	\$54,641	\$173,126
COST OF ABNORMAL RISK	(\$27,187)	\$0	\$0	(\$27,187)
NPV OF RISK ADJUSTED NET CASH FLOW	<hr/> \$32,757	<hr/> \$58,541	<hr/> \$54,641	<hr/> \$145,939
RETURNS TO GOVERNMENT				
<hr/>				
FOREIGN EXCHANGE EXTERNALITY	(\$13,108)	\$0	\$16,711	\$3,604
TARIFFS AND SALES TAXES	\$1,888	\$48,934	(\$16,007)	\$34,815
LABOUR EXTERNALITY	\$2,136	\$4,861	\$16,582	\$23,578
INCOME TAXES	\$52,133	\$30,189	\$32,093	\$114,415
NORMAL TAXES AND EXTERNALITIES FORGONE	(\$59,061)	(\$28,359)	(\$21,442)	(\$108,866)
FOREIGN FINANCING EXTERNALITY	\$0	\$0	\$0	\$0
COST OF ABNORMAL RISK	(\$17,964)	\$0	\$0	(\$17,964)
NPV OF NET RETURNS TO GOVERNMENT	<hr/> (\$33,980)	<hr/> \$35,625	<hr/> \$27,937	<hr/> \$49,582
RETURNS TO USERS				
<hr/>				
NPV OF USER BENEFITS	\$0	\$806,564	\$0	\$806,564
COST OF ABNORMAL RISK	\$0	\$0	\$0	\$0
NPV OF RISK ADJUSTED USER BENEFITS	<hr/> \$0	<hr/> \$806,564	<hr/> \$0	<hr/> \$806,564
SOCIAL RETURNS				
<hr/>				
NPV OF INDIRECT SOCIAL BENEFITS	\$0	\$157,256	\$0	\$157,256
COST OF ABNORMAL RISK	\$0	\$0	\$0	\$0
NPV OF RISK ADJUSTED NET SOCIAL BENEFITS	<hr/> \$0	<hr/> \$157,256	<hr/> \$0	<hr/> \$157,256
 NPV OF RISK ADJUSTED NET ECONOMIC BENEFITS				
<hr/>				
	\$1,223	\$1,077,985	\$82,578	\$1,159,340

Appendix B-2

**Baseline Scenario: Total MSAT Project Annual
Cash Flows and Economic
Costs and Benefits**

BASELINE SCENARIO: RUN NO. 1-3		1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
SUMMARY OF CASH FLOWS													
Cash Receipts		21900	34700	41500	44600	58914	92468	146932	260433	252462	241435	207378	296615
Less:													
Operating Expenditures													
Equipment and Services	-10300	-15400	-18000	-18400	-19087	-19243	-25106	-51072	-33144	-35573	-24328	-29444	
Operating Labour	-4400	-7900	-10000	-11500	-15643	-21435	-26234	-39513	-32247	-26135	-22882	-38599	
Income Taxes	-1500	-2400	-3000	-3200	-3360	-3946	-5747	-11593	-10580	-33239	-9849	-14941	
Other Operating Expenditures	-3300	-5200	-6200	-6600	-12109	-26211	-46350	-81653	-90330	-88176	-80511	-114250	
Capital Expenditures													
Equipment and Services	-23867	-39075	-36164	-20932	-30461	-22507	-17672	-81783	-55169	-28443	-37884	-34945	
Capital Labour	-5045	-7768	-4028	-5041	-5252	-541	-443	-1230	-1248	-1104	-851	-410	
Change in Working Capital Items	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Cash Flow to Total Capital =	-26511	-43042	-35891	-21073	-26997	-1414	25380	-6412	29745	28765	31073	64026	
SUMMARY OF ECONOMIC ADJUSTMENTS AND EXTERNALITIES:													
Foreign Exchange Externality		-682	-1138	-574	461	61	722	1758	-355	-215	818	-872	1473
Commodity Sales Taxes, Tariffs & Economic Rents	5	-255	1323	-925	242	1829	4081	6345	7481	5974	5979	10096	
Labour Externality	1031	1563	1706	1785	2219	2387	3160	5556	4110	3921	3014	4305	
Income Taxes Less Grants & Subsidies	1500	2400	3000	3200	3360	3946	5747	11593	10580	33239	9849	14941	
User Benefits	0	0	0	0	13026	43393	82584	139930	169554	161362	153602	220684	
Indirect Social Benefits	0	0	0	0	2282	7987	15974	25079	31849	31849	31849	31849	
Project Financing Externality	0	0	0	0	0	0	0	0	0	0	0	0	0
Gross Economic Adj & Externalities	1853	2570	5455	4521	21191	60264	113304	188148	223360	237162	203422	283349	
SUMMARY OF ECONOMIC BENEFITS AND COSTS													
Cash Receipts		23429	36848	43893	46936	76022	145653	249217	435260	462900	446157	402324	558773
Less:													
Operating Expenditures													
Equipment and Services	-10983	-16408	-19155	-19569	-19567	-18714	-24330	-51752	-33210	-37867	-25877	-28542	
Operating Labour	-3489	-6521	-8388	-9833	-13593	-19086	-23126	-34023	-28205	-22246	-19895	-34342	
Income Taxes	0	0	0	0	0	0	0	0	0	0	0	0	
Other Operating Expenditures	-3531	-5564	-6634	-7062	-12465	-26461	-46637	-82444	-90758	-88746	-80810	-114561	
Capital Expenditures													
Equipment and Services	-25159	-41244	-36219	-22102	-31122	-22039	-16048	-84140	-56444	-30300	-40423	-33590	
Capital Labour	-4925	-7584	-3934	-4923	-5083	-503	-391	-1164	-1179	-1072	-824	-362	
Change in Working Capital Items	0	0	0	0	0	0	0	0	0	0	0	0	
Project Financing Externality	0	0	0	0	0	0	0	0	0	0	0	0	
Net Economic Costs & Benefits	-24658	-40472	-30436	-18552	-5806	58851	138684	181736	253104	265927	234495	347375	

BASELINE SCENARIO: RUN NO. I-J		1997	1998	1999	2000	2001	2002	Discount Rate	Risk Adjustd Disct Rate	NPV With Normal Risk	Cost of Abnormal Risk	NPV With Abnormal Risk
SUMMARY OF CASH FLOWS												
Cash Receipts		359751	382754	401095	373450	336430	381457	0.060	NA	1943850.	-79848	1864002
Less:												
Operating Expenditures												
Equipment and Services		-40916	-38396	-27331	-17311	-10454	-5049	0.060	NA	-256645	2667	-253978
Operating Labour		-46344	-49925	-46577	-38968	-28270	-26505	0.060	NA	-261011	5177	-255835
Income Taxes		-27700	-44072	-56365	-56698	-54497	-67828	0.060	NA	-184748	19045	-165703
Other Operating Expenditures		-135016	-147213	-164858	-162068	-153725	-146079	0.060	NA	-698918	0	-698916
Capital Expenditures												
Equipment and Services		-34519	-28363	-26798	-19588	-4634	-2337	0.060	NA	-341950	25235	-316715
Capital Labour		-789	-462	-403	-337	-247	-174	0.060	NA	-27454	538	-26917
Change In Working Capital Items		0	0	0	0	0	0	0.060	NA	0	0	0
Net Cash Flow to Total Capital =		74468	74323	78763	78479	84602	133485	0.060	NA	173126	-27187	145939
SUMMARY OF ECONOMIC ADJUSTMENTS AND EXTERNALITIES:												
		1997	1998	1999	2000	2001	2002	Discount Rate	Risk Adjustd Disct Rate	NPV With Normal Risk	Cost of Abnormal Risk	NPV With Abnormal Risk
Foreign Exchange Externality		3147	3891	3312	2152	972	1785	0.100	NA	3604	1797	5400
Commodity Sales Taxes, Tariffs & Economic Rents		11092	11326	12711	13226	13512	15810	0.100	NA	34815	-209	34605
Labour Externality		5719	5935	5058	3844	2686	2378	0.100	NA	23578	-506	23072
Income Taxes Less Grants & Subsidies		27700	44072	56365	56698	54497	67828	0.100	NA	114415	-19045	95370
User Benefits		254018	277392	318847	321049	312149	297284	0.100	NA	804564	0	804564
Indirect Social Benefits		41076	57158	62873	66645	71310	76300	0.100	NA	157256	0	157256
Project Financing Externality		0	0	0	0	0	0	0.100	NA	0	0	0
Gross Economic Adj & Externalities		342752	399774	459167	463613	455125	461385	0.100	NA	1140231	-17964	1122268
SUMMARY OF ECONOMIC BENEFITS AND COSTS												
		1997	1998	1999	2000	2001	2002	Discount Rate	Risk Adjustd Disct Rate	NPV With Normal Risk	Cost of Abnormal Risk	NPV With Abnormal Risk
Cash Receipts		667680	730550	796494	774589	734035	772552	0.100	NA	2293732	-79928	2213804
Less:												
Operating Expenditures												
Equipment and Services		-40848	-38434	-27088	-17050	-10582	-5144	0.100	NA	-192657	2773	-189884
Operating Labour		-40693	-44044	-41566	-35163	-25613	-24148	0.100	NA	-157385	4682	-152703
Income Taxes		0	0	0	0	0	0	0.100	NA	0	0	0
Other Operating Expenditures		-135614	-147845	-165256	-162189	-153569	-145904	0.100	NA	-449914	0	-449914
Capital Expenditures												
Equipment and Services		-32584	-25722	-24299	-17797	-4526	-2332	0.100	NA	-266185	26796	-239389
Capital Labour		-721	-408	-356	-298	-218	-154	0.100	NA	-23100	526	-22574
Change In Working Capital Items		0	0	0	0	0	0	0.100	NA	0	0	0
Project Financing Externality		0	0	0	0	0	0	0.100	NA	0	0	0
Net Economic Costs & Benefits		417220	474098	537929	542092	539727	594870	0.100	NA	1204491	-45151	1159340

Appendix B-3

**Baseline Scenario: Cumulative Undiscounted Cash Flows and
Economic Costs and Benefits**

CUMULATIVE UNDISCOUNTED ECONOMIC BENEFITS
THOUSANDS OF 1984 CONSTANT DOLLARS

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
RETURNS TO PROJECT INVESTORS												
TELSAT NET CASH FLOW	(\$22,311)	(\$59,254)	(\$95,045)	(\$114,958)	(\$135,833)	(\$135,995)	(\$111,052)	(\$127,901)	(\$112,183)	(\$110,557)	(\$103,238)	(\$49,594)
SERVICE PROVIDERS NET CASH FLOW	\$0	\$0	\$0	\$0	(\$5,863)	(\$13,115)	(\$20,577)	(\$23,740)	(\$19,014)	(\$674)	\$15,881	\$16,263
MANUFACTURERS NET CASH FLOW	(\$4,200)	(\$10,300)	(\$10,400)	(\$11,560)	(\$11,820)	(\$5,820)	\$2,080	\$15,680	\$24,980	\$33,780	\$40,980	\$50,980
TOTAL RETURNS TO PROJECT INVESTORS	(\$26,511)	(\$69,554)	(\$105,445)	(\$126,518)	(\$153,516)	(\$154,929)	(\$129,549)	(\$135,961)	(\$106,216)	(\$77,451)	(\$46,378)	\$17,649
RETURNS TO GOVERNMENT												
FOREIGN EXCHANGE EXTERNALITY	(\$682)	(\$1,820)	(\$2,394)	(\$1,933)	(\$1,872)	(\$1,150)	\$608	\$253	\$38	\$856	(\$16)	\$1,457
TARIFFS AND SALES TAXES	\$5	(\$250)	\$1,073	\$148	\$390	\$2,219	\$6,300	\$12,645	\$20,125	\$28,099	\$32,078	\$42,174
LABOUR EXTERNALITY	\$1,031	\$2,594	\$4,300	\$6,085	\$8,305	\$10,692	\$13,852	\$19,408	\$23,518	\$27,439	\$30,453	\$34,759
INCOME TAXES	\$1,500	\$3,900	\$6,900	\$10,100	\$13,460	\$17,406	\$23,153	\$34,746	\$45,326	\$78,565	\$88,414	\$103,355
FOREIGN FINANCING EXTERNALITY	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL RETURNS TO GOVERNMENT	\$1,853	\$4,424	\$9,879	\$14,400	\$20,283	\$29,167	\$43,912	\$67,051	\$89,007	\$132,959	\$150,929	\$181,745
USER BENEFITS	\$0	\$0	\$0	\$0	\$13,026	\$56,420	\$139,004	\$278,934	\$448,488	\$609,850	\$763,452	\$984,136
INDIRECT SOCIAL BENEFITS	\$0	\$0	\$0	\$0	\$2,282	\$10,269	\$26,243	\$51,322	\$83,171	\$115,020	\$146,869	\$178,718
TOTAL UNDISCOUNTED ECONOMIC BENEFITS	(\$24,658)	(\$65,130)	(\$95,566)	(\$12,118)	(\$17,925)	(\$59,074)	\$79,610	\$261,346	\$514,450	\$780,377	\$1,014,872	\$1,362,248

CUMULATIVE UNDISCOUNTED ECONOMIC BENEFITS
THOUSANDS OF 1984 CONSTANT DOLLARS

	1997	1998	1999	2000	2001	2002
RETURNS TO PROJECT INVESTORS						
TELSAT NET CASH FLOW	\$7,781	\$62,994	\$117,422	\$167,685	\$213,480	\$264,403
SERVICE PROVIDERS NET CASH FLOW	\$17,356	\$21,467	\$31,901	\$50,917	\$83,524	\$159,886
MANUFACTURERS NET CASH FLOW	\$66,980	\$81,980	\$95,880	\$105,080	\$111,280	\$117,480
TOTAL RETURNS TO PROJECT INVESTORS	\$92,117	\$166,440	\$245,203	\$323,682	\$408,284	\$541,769
RETURNS TO GOVERNMENT						
FOREIGN EXCHANGE EXTERNALITY	\$4,604	\$8,495	\$11,808	\$13,980	\$14,931	\$16,716
TARIFFS AND SALES TAXES	\$53,266	\$64,593	\$77,304	\$90,530	\$104,042	\$119,852
LABOUR EXTERNALITY	\$40,478	\$46,413	\$51,471	\$55,315	\$58,001	\$60,378
INCOME TAXES	\$131,055	\$175,126	\$231,491	\$288,189	\$342,686	\$410,514
FOREIGN FINANCING EXTERNALITY	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL RETURNS TO GOVERNMENT	\$229,403	\$294,627	\$372,074	\$447,993	\$519,660	\$607,460
USER BENEFITS	\$1,238,154	\$1,515,546	\$1,834,392	\$2,155,441	\$2,467,590	\$2,764,874
INDIRECT SOCIAL BENEFITS	\$219,794	\$276,952	\$339,825	\$406,470	\$477,780	\$554,080
TOTAL UNDISCOUNTED ECONOMIC BENEFITS	\$1,779,467	\$2,253,565	\$2,791,494	\$3,333,586	\$3,873,314	\$4,468,183

Appendix B-4

**Baseline Scenario: Telesat Cash Flows and
Economic Costs and Benefits**

TELESAT

BASELINE SCENARIO: RUN NO. 1-3

SUMMARY OF CASH FLOWS

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Cash Receipts	0	0	0	0	5404	17514	32433	53483	63029	58361	54038	75574
Less:												
Operating Expenditures												
Equipment and Services	0	0	0	0	-1393	-2351	-2259	-2119	-1988	-1873	-2928	-2748
Operating Labour	0	0	0	0	-2704	-4564	-4386	-4114	-3860	-3636	-5683	-5334
Income Taxes	0	0	0	0	0	0	0	0	-22306	0	0	0
Other Operating Expenditures	0	0	0	0	0	0	0	0	0	0	0	0
Capital Expenditures												
Equipment and Services	-2187	-36105	-34844	-19112	-21653	-10499	-848	-63286	-40658	-27910	-37351	-13948
Capital Labour	-425	-838	-948	-801	-530	-282	0	-813	-805	-1010	-757	0
Change In Working Capital Items	0	0	0	0	0	0	0	0	0	0	0	0
Net Cash Flow to Total Capital =	-22311	-36942	-35791	-19913	-20875	-162	24942	-16849	15719	1625	7319	53644

SUMMARY OF ECONOMIC ADJUSTMENTS
AND EXTERNALITIES^a

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Foreign Exchange Externality	-1451	-2408	-2197	-1316	-1596	-883	-204	-4342	-2853	-2030	-2783	-1127
Commodity Sales Taxes, Tariffs & Economic Rents	0	0	2035	0	44	81	75	70	64	60	59	252
Labour Externality	9	18	20	17	269	442	419	410	386	369	559	510
Income Taxes Less Grants & Subsidies	0	0	0	0	0	0	0	0	0	22306	0	0
User Benefits	0	0	0	0	0	0	0	0	0	0	0	0
Indirect Social Benefits	0	0	0	0	0	0	0	0	0	0	0	0
Project Financing Externality	0	0	0	0	0	0	0	0	0	0	0	0
Gross Economic Adj & Externalities	-1442	-2390	-142	-1299	-1282	-360	290	-3843	-2403	20705	-2165	-365

SUMMARY OF ECONOMIC BENEFITS
AND COSTS

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Cash Receipts	0	0	0	0	5404	17514	32433	53483	63029	58361	54038	75574
Less:												
Operating Expenditures												
Equipment and Services	0	0	0	0	-1438	-2420	-2328	-2105	-2051	-1934	-3059	-2868
Operating Labour	0	0	0	0	-2445	-4128	-3965	-3721	-3491	-3289	-5140	-4825
Income Taxes	0	0	0	0	0	0	0	0	0	0	0	0
Other Operating Expenditures	0	0	0	0	0	0	0	0	0	0	0	0
Capital Expenditures												
Equipment and Services	-23338	-38512	-35005	-20428	-23159	-11231	-907	-67493	-43384	-29820	-39944	-14603
Capital Labour	-416	-820	-928	-784	-519	-256	0	-794	-788	-988	-741	0
Change In Working Capital Items	0	0	0	0	0	0	0	0	0	0	0	0
Project Financing Externality	0	0	0	0	0	0	0	0	0	0	0	0
Net Economic Costs & Benefits	-23754	-39332	-35933	-21212	-22157	-522	25233	-20712	13316	22330	5154	53279

TELEGAT

BASELINE SCENARIO: RUN NO. 1-3

SUMMARY OF CASH FLOWS	1997	1998	1999	2000	2001	2002	Discount Rate	Risk Adjusted Discnt Rate	NPV With Normal Risk	Cost of Abnormal Risk	NPV With Abnormal Risk
Cash Receipts	84614	89878	100771	98673	93295	99982	0.060	NA	437420	-79848	357571
Less:											
Operating Expenditures											
Equipment and Services	-2627	-2503	-2352	-2205	-2076	-1949	0.060	NA	-16302	2667	-13636
Operating Labour	-5099	-4860	-4566	-4280	-4029	-3782	0.060	NA	-31646	5177	-26469
Income Taxes	-10335	-26154	-38361	-40941	-40484	-41977	0.060	NA	-90732	19045	-71687
Other Operating Expenditures	0	0	0	0	0	0	0.060	NA	0	0	0
Capital Expenditures											
Equipment and Services	-8931	-1149	-1063	-985	-912	-1351	0.060	NA	-233573	25235	-208338
Capital Labour	-248	0	0	0	0	0	0.060	NA	-5222	538	-4684
Change In Working Capital Items	0	0	0	0	0	0	0.060	NA	0	0	0
Net Cash Flow to Total Capital =	57375	55212	54428	50263	45795	50923	0.060	NA	59944	-27187	32757

SUMMARY OF ECONOMIC ADJUSTMENTS AND EXTERNALITIES:

	1997	1998	1999	2000	2001	2002	Discount Rate	Risk Adjusted Discnt Rate	NPV With Normal Risk	Cost of Abnormal Risk	NPV With Abnormal Risk
Foreign Exchange Externality	-794	-243	-227	-212	-198	728	0.100	NA	-13108	1797	-11311
Commodity Sales Taxes, Tariffs & Economic Rents	54	50	46	43	40	37	0.100	NA	1888	-209	1679
Labour Externality	492	464	436	409	385	361	0.100	NA	2136	-506	1630
Income Taxes Less Grants & Subsidies	10335	26154	38361	40941	40484	41977	0.100	NA	52133	-19045	33088
User Benefits	0	0	0	0	0	0	0.100	NA	0	0	0
Indirect Social Benefits	0	0	0	0	0	0	0.100	NA	0	0	0
Project Financing Externality	0	0	0	0	0	0	0.100	NA	0	0	0
Gross Economic Adj & Externalities	10087	26425	38616	41181	40710	43104	0.100	NA	43050	-17964	25086

SUMMARY OF ECONOMIC BENEFITS AND COSTS

	1997	1998	1999	2000	2001	2002	Discount Rate	Risk Adjusted Discnt Rate	NPV With Normal Risk	Cost of Abnormal Risk	NPV With Abnormal Risk
Cash Receipts	84614	89878	100771	98673	93295	100931	0.100	NA	277474	-79928	197546
Less:											
Operating Expenditures											
Equipment and Services	-2743	-2616	-2459	-2305	-2171	-2038	0.100	NA	-11444	2773	-8671
Operating Labour	-4612	-4395	-4130	-3871	-3644	-3421	0.100	NA	-19367	-4682	-14685
Income Taxes	0	0	0	0	0	0	0.100	NA	0	0	0
Other Operating Expenditures	0	0	0	0	0	0	0.100	NA	0	0	0
Capital Expenditures											
Equipment and Services	-9554	-1229	-1138	-1053	-975	-1445	0.100	NA	-198563	26796	-171767
Capital Labour	-243	0	0	0	0	0	0.100	NA	-4172	526	-3645
Change In Working Capital Items	0	0	0	0	0	0	0.100	NA	0	0	0
Project Financing Externality	0	0	0	0	0	0	0.100	NA	0	0	0
Net Economic Costs & Benefits	67463	81638	93045	91444	86505	94026	0.100	NA	43928	-45151	-1223

Appendix B-5

Baseline Scenario: Service Providers Cash Flows
and Economic Costs and Benefits

SERVICE PROVIDERS

BASELINE SCENARIO: RUN NO. 1-3

SUMMARY OF CASH FLOWS	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Cash Receipts	0	0	0	0	14510	43054	74999	115250	130632	110275	105641	168641
Less:												
Operating Expenditures												
Equipment and Services	0	0	0	0	-3995	-9792	-13447	-15153	-11256	0	0	-14296
Operating Labour	0	0	0	0	-2239	-6171	-9850	-12999	-13087	-8099	-8099	-17065
Income Taxes	0	0	0	0	-160	-746	-1747	-3893	-5380	-5933	-6749	-9441
Other Operating Expenditures	0	0	0	0	-6509	-21311	-40150	-67453	-81230	-77276	-73611	-105950
Capital Expenditures												
Equipment and Services	0	0	0	0	-6988	-12008	-16824	-18497	-14511	-533	-533	-21097
Capital Labour	0	0	0	0	-482	-279	-443	-417	-443	-94	-94	-410
Change In Working Capital Items	0	0	0	0	0	0	0	0	0	0	0	0
Net Cash Flow to Total Capital =	0	0	0	0	-5863	-7252	-7462	-3163	-4726	18340	16554	382

SUMMARY OF ECONOMIC ADJUSTMENTS

AND EXTERNALITIES:	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Foreign Exchange Externality	0	0	0	0	0	0	0	0	0	0	0	0
Commodity Sales Taxes, Tariffs & Economic Rents	0	0	0	0	1746	4425	7145	9956	10345	6665	6392	14072
Labour Externality	0	0	0	0	260	582	905	1144	1105	572	572	1425
Income Taxes Less Grants & Subsidies	0	0	0	0	160	746	1747	3893	5380	5933	6749	9441
User Benefits	0	0	0	0	13026	43393	82584	139930	169554	161362	153602	220684
Indirect Social Benefits	0	0	0	0	2282	7987	15974	25079	31849	31849	31849	31849
Project Financing Externality	0	0	0	0	0	0	0	0	0	0	0	0
Gross Economic Adj & Externalities	0	0	0	0	17475	57133	108355	180002	218233	206380	199163	277472

SUMMARY OF ECONOMIC BENEFITS

AND COSTS	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Cash Receipts	0	0	0	0	30549	96793	177778	286883	339714	309904	297246	431487
Less:												
Operating Expenditures												
Equipment and Services	0	0	0	0	-3714	-9019	-12352	-13875	-10249	0	0	-12916
Operating Labour	0	0	0	0	-2035	-5622	-8997	-11904	-12034	-7538	-7538	-15688
Income Taxes	0	0	0	0	0	0	0	0	0	0	0	0
Other Operating Expenditures	0	0	0	0	-6473	-21218	-40003	-67250	-81021	-77083	-73427	-105680
Capital Expenditures												
Equipment and Services	0	0	0	0	-6289	-10807	-15141	-16647	-13060	-480	-480	-18987
Capital Labour	0	0	0	0	-426	-246	-391	-368	-391	-83	-83	-362
Change In Working Capital Items	0	0	0	0	0	0	0	0	0	0	0	0
Project Financing Externality	0	0	0	0	0	0	0	0	0	0	0	0
Net Economic Costs & Benefits	0	0	0	0	11612	49881	100892	176839	222959	224720	215718	277854

SERVICE PROVIDERS

BASELINE SCENARIO: RUN NO. 1-3 SUMMARY OF CASH FLOWS						Discount Rate	Risk Adjustd Discnt Rate	NPV With Normal Risk	Cost of Abnormal Risk	NPV With Abnormal Risk	
	1997	1998	1999	2000	2001	2002					
Cash Receipts	191237	205876	229624	228577	219435	262075	0.060	0.060	981557	0	981557
Less:											
Operating Expenditures											
Equipment and Services	-13389	-11392	-8679	-5607	-2179	0	0.060	0.060	-60058	0	-60058
Operating Labour	-18845	-19765	-19911	-19388	-18141	-17123	0.060	0.060	-91999	0	-91999
Income Taxes	-9765	-9618	-10804	-10857	-12013	-24051	0.060	0.060	-49496	0	-49496
Other Operating Expenditures	-122016	-133313	-153658	-154768	-150525	-143379	0.060	0.060	-618913	0	-618913
Capital Expenditures											
Equipment and Services	-25388	-27215	-25735	-18604	-3723	-986	0.060	0.060	-99956	0	-99956
Capital Labour	-541	-462	-403	-337	-247	-174	0.060	0.060	-2593	0	-2593
Change In Working Capital Items	0	0	0	0	0	0	0.060	0.060	0	0	0
Net Cash Flow to Total Capital *	1093	4111	10434	19017	32607	76362	0.060	0.060	58541	0	58541

SUMMARY OF ECONOMIC ADJUSTMENTS AND EXTERNALITIES						Discount Rate	Risk Adjustd Discnt Rate	NPV With Normal Risk	Cost of Abnormal Risk	NPV With Abnormal Risk	
	1997	1998	1999	2000	2001	2002					
Foreign Exchange Externality	0	0	0	0	0	0	0.100	0.100	0	0	0
Commodity Sales Taxes, Tariffs & Economic Rents	16059	17096	18291	17261	14857	17411	0.100	0.100	48934	0	48934
Labour Externality	1552	1579	1545	1459	1315	1206	0.100	0.100	4861	0	4861
Income Taxes Less Grants & Subsidies	9765	9618	10804	10857	12013	24051	0.100	0.100	30189	0	30189
User Benefits	254018	277392	318847	321049	312149	297284	0.100	0.100	806564	0	806564
Indirect Social Benefits	41076	57158	62873	66645	71310	76300	0.100	0.100	157256	0	157256
Project Financing Externality	0	0	0	0	0	0	0.100	0.100	0	0	0
Gross Economic Adj & Externalities	322469	362843	412360	417270	411643	416252	0.100	0.100	1047803	0	1047803

SUMMARY OF ECONOMIC BENEFITS AND COSTS						Discount Rate	Risk Adjustd Discnt Rate	NPV With Normal Risk	Cost of Abnormal Risk	NPV With Abnormal Risk	
	1997	1998	1999	2000	2001	2002					
Cash Receipts	498224	553359	625835	630739	616787	652608	0.100	0.100	1620415	0	1620415
Less:											
Operating Expenditures											
Equipment and Services	-12095	-10291	-7840	-5065	-1968	0	0.100	0.100	-38252	0	-38252
Operating Labour	-17356	-18240	-18413	-17969	-16855	-15938	0.100	0.100	-54608	0	-54608
Income Taxes	0	0	0	0	0	0	0.100	0.100	0	0	0
Other Operating Expenditures	-121704	-132972	-153272	-154378	-150145	-143015	0.100	0.100	-387371	0	-387371
Capital Expenditures											
Equipment and Services	-23029	-24493	-23161	-16743	-3350	-887	0.100	0.100	-60615	0	-60615
Capital Labour	-478	-408	-356	-298	-218	-154	0.100	0.100	-1585	0	-1585
Change In Working Capital Items	0	0	0	0	0	0	0.100	0.100	0	0	0
Project Financing Externality	0	0	0	0	0	0	0.100	0.100	0	0	0
Net Economic Costs & Benefits	323562	366954	422794	436287	444250	492614	0.100	0.100	1077985	0	1077985

Appendix B-6

Baseline Scenario: Manufacturers Cash Flows
and Economic Costs and Benefits

MANUFACTURERS

BASELINE SCENARIO: RUN NO. 1-2

SUMMARY OF CASH FLOWS

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Cash Receipts	21900	34700	41500	44600	39000	31900	39500	91700	58800	72800	47700	52400
Less:												
Operating Expenditures												
Equipment and Services	-10300	-15400	-18000	-18400	-13700	-7100	-9400	-33800	-19900	-33700	-21400	-12400
Operating Labour	-4400	-7900	-10000	-11500	-10700	-10700	-12000	-22400	-15300	-14400	-9100	-16200
Income Taxes	-1500	-2400	-3000	-3200	-3200	-3200	-4000	-7700	-5200	-5000	-3100	-5500
Other Operating Expenditures	-3300	-5200	-6200	-6600	-5600	-4900	-6200	-14200	-9100	-10900	-6700	-8300
Capital Expenditures												
Equipment and Services	-1980	-2970	-1320	-1820	-1820	0	0	0	0	0	0	0
Capital Labour	-4620	-6930	-3080	-4240	-4240	0	0	0	0	0	0	0
Change In Working Capital Items	0	0	0	0	0	0	0	0	0	0	0	0
Net Cash Flow to Total Capital =	-4200	-6100	-100	-1160	-260	6000	7900	13600	9300	8800	7200	10000

SUMMARY OF ECONOMIC ADJUSTMENTS

AND EXTERNALITIES:

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Foreign Exchange Externality	769	1269	1623	1776	1657	1605	1962	3987	2638	2848	1911	2601
Commodity Sales Taxes, Tariffs & Economic Rents	5	-255	-712	-925	-1548	-2677	-3139	-3680	-2929	-751	-472	-4229
Labour Externality	1022	1545	1686	1769	1690	1364	1837	4001	2620	2981	1884	2370
Income Taxes Less Grants & Subsidies	1500	2400	3000	3200	3200	4000	7700	5200	5000	3100	5500	
User Benefits	0	0	0	0	0	0	0	0	0	0	0	0
Indirect Social Benefits	0	0	0	0	0	0	0	0	0	0	0	0
Project Financing Externality	0	0	0	0	0	0	0	0	0	0	0	0
Gross Economic Adj & Externalities	3296	4960	5597	5820	4999	3491	4659	12008	7530	10077	6423	6242

SUMMARY OF ECONOMIC BENEFITS

AND COSTS

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Cash Receipts	23429	36848	43893	46936	40669	31346	39006	94893	60156	77892	51040	51711
Less:												
Operating Expenditures												
Equipment and Services	-10983	-16408	-19155	-19569	-14414	-7275	-9649	-35692	-20910	-35933	-22818	-12758
Operating Labour	-3489	-6521	-8388	-8333	-9112	-9337	-10163	-18399	-12680	-11419	-7216	-13830
Income Taxes	0	0	0	0	0	0	0	0	0	0	0	0
Other Operating Expenditures	-3531	-5564	-6634	-7062	-5992	-5243	-6634	-15194	-9737	-11663	-7383	-8881
Capital Expenditures												
Equipment and Services	-1821	-2731	-1214	-1674	-1674	0	0	0	0	0	0	0
Capital Labour	-4509	-6764	-3006	-4138	-4138	0	0	0	0	0	0	0
Change In Working Capital Items	0	0	0	0	0	0	0	0	0	0	0	0
Project Financing Externality	0	0	0	0	0	0	0	0	0	0	0	0
Net Economic Costs & Benefits	-904	-1140	5497	4660	4739	9491	12559	25608	16830	18877	13623	16242

MANUFACTURERS

BASELINE SCENARIO: RUN NO. 1-3

SUMMARY OF CASH FLOWS

	1997	1998	1999	2000	2001	2002	Discount Rate	Risk Adjustd Disctn Rate	NPV With Normal Risk	Cost of Abnormal Risk	NPV With Abnormal Risk
Cash Receipts	83900	87000	70700	46200	23700	19400	0	0.060	524874	0	524874
Less:											
Operating Expenditures											
Equipment and Services	-24900	-24500	-16300	-9500	-6200	-3100	0	0.060	-180284	0	-180284
Operating Labour	-22400	-25300	-22100	-15300	-6100	-5600	0	0.060	-137366	0	-137366
Income Taxes	-7600	-8300	-7200	-4900	-2000	-1800	0	0.060	-44520	0	-44520
Other Operating Expenditures	-13000	-13900	-11200	-7300	-3200	-2700	0	0.060	-80003	0	-80003
Capital Expenditures											
Equipment and Services	0	0	0	0	0	0	0	0.060	-8421	0	-8421
Capital Labour	0	0	0	0	0	0	0	0.060	-19639	0	-19639
Change in Working Capital Items	0	0	0	0	0	0	0	0.060	0	0	0
Net Cash Flow to Total Capital =	16000	15000	13900	9200	6200	6200	0	0.060	54641	0	54641

SUMMARY OF ECONOMIC ADJUSTMENTS AND EXTERNALITIES:

	1997	1998	1999	2000	2001	2002	Discount Rate	Risk Adjustd Disctn Rate	NPV With Normal Risk	Cost of Abnormal Risk	NPV With Abnormal Risk
Foreign Exchange Externality	3941	4134	3539	2364	1170	1057	0	0.100	16711	0	16711
Commodity Sales Taxes, Tariffs & Economic Rents	-5020	-5819	-5626	-4078	-1384	-1638	0	0.100	-16007	0	-16007
Labour Externality	3674	3892	3077	1976	986	811	0	0.100	16582	0	16582
Income Taxes less Grants & Subsidies	7600	8300	7200	4900	2000	1800	0	0.100	32093	0	32093
User Benefits	0	0	0	0	0	0	0	0.100	0	0	0
Indirect Social Benefits	0	0	0	0	0	0	0	0.100	0	0	0
Project Financing Externality	0	0	0	0	0	0	0	0.100	0	0	0
Gross Economic Adj & Externalities	10195	10506	B190	5162	2772	2030	0	0.100	49379	0	49379

SUMMARY OF ECONOMIC BENEFITS AND COSTS

	1997	1998	1999	2000	2001	2002	Discount Rate	Risk Adjustd Disctn Rate	NPV With Normal Risk	Cost of Abnormal Risk	NPV With Abnormal Risk
Cash Receipts	B4841	B7314	69887	45177	23953	19013	0	0.100	395843	0	395843
Less:											
Operating Expenditures											
Equipment and Services	-26010	-25527	-16790	-9681	-6443	-3106	0	0.100	-142961	0	-142961
Operating Labour	-1B726	-21408	-19023	-13324	-5114	-4789	0	0.100	-83410	0	-83410
Income Taxes	0	0	0	0	0	0	0	0.100	0	0	0
Other Operating Expenditures	-13910	-14873	-11984	-7811	-3424	-2889	0	0.100	-62544	0	-62544
Capital Expenditures											
Equipment and Services	0	0	0	0	0	0	0	0.100	-7007	0	-7007
Capital Labour	0	0	0	0	0	0	0	0.100	-17344	0	-17344
Change in Working Capital Items	0	0	0	0	0	0	0	0.100	0	0	0
Project Financing Externality	0	0	0	0	0	0	0	0.100	0	0	0
Net Economic Costs & Benefits	26195	25506	22090	14382	8972	8230	0	0.100	82578	0	82578

Appendix B-7

Pessimistic Scenario: Total MSAT Project Economic Benefits

MSAT ECONOMIC BENEFITS

	(\$'000's)			
	TELESAT	SERVICE PROVIDERS	MANUFACTURERS	TOTAL MSAT PROJECT
RETURNS TO PRIVATE INVESTORS				
NPV OF NET CASH FLOW	(\$48.768)	\$29.277	\$33.968	\$14.478
COST OF ABNORMAL RISK	(\$7.734)	\$0	\$0	(\$7.734)
NPV OF RISK ADJUSTED NET CASH FLOW	(\$56.502)	\$29.277	\$33.968	\$6.744
RETURNS TO GOVERNMENT				
FOREIGN EXCHANGE EXTERNALITY	(\$11.572)	\$0	\$12.662	\$1.090
TARIFFS AND SALES TAXES	\$1.815	\$24.050	(\$10.015)	\$15.850
LABOUR EXTERNALITY	\$1.933	\$2.391	\$12.633	\$16.957
INCOME TAXES	\$8.180	\$14.990	\$23.495	\$46.664
NORMAL TAXES AND EXTERNALITIES FORGONE	(\$20.123)	(\$14.143)	(\$14.295)	(\$48.561)
FOREIGN FINANCING EXTERNALITY	\$0	\$0	\$0	\$0
COST OF ABNORMAL RISK	(\$2.768)	\$0	\$0	(\$2.768)
NPV OF NET RETURNS TO GOVERNMENT	(\$22.536)	\$27.287	\$24.480	\$29.231
RETURNS TO USERS				
NPV OF USER BENEFITS	\$0	\$410.267	\$0	\$410.267
COST OF ABNORMAL RISK	\$0	\$0	\$0	\$0
NPV OF RISK ADJUSTED USER BENEFITS	\$0	\$410.267	\$0	\$410.267
SOCIAL RETURNS				
NPV OF INDIRECT SOCIAL BENEFITS	\$0	\$66.967	\$0	\$66.967
COST OF ABNORMAL RISK	\$0	\$0	\$0	\$0
NPV OF RISK ADJUSTED NET SOCIAL BENEFITS	\$0	\$66.967	\$0	\$66.967
NPV OF RISK ADJUSTED NET ECONOMIC BENEFITS	\$79.038	\$533.798	\$58.448	\$513.208

Appendix B-8

Pessimistic Scenario: Total MSAT Project Annual Cash
Flows and Economic Costs
and Benefits

Pessimistic Scenario: Run No. 2-3												
SUMMARY OF CASH FLOWS												
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Cash Receipts	21900	34700	41500	44600	58799	62110	86992	118396	109728	145536	138582	148981
Less:												
Operating Expenditures												
Equipment and Services	-10300	-15400	-18000	-18400	-18976	-13121	-15623	-25548	-17640	-30002	-23002	-13530
Operating Labour	-4400	-7900	-10000	-11500	-15541	-15812	-16813	-18791	-16253	-21896	-20751	-19892
Income Taxes	-1500	-2400	-3000	-3200	-3393	-2572	-3338	-5362	-5027	-7398	-6740	-7228
Other Operating Expenditures	-3300	-5200	-6200	-6600	-12205	-17724	-27167	-38776	-37928	-46322	-47999	-58101
Capital Expenditures												
Equipment and Services	-23867	-39075	-36164	-20932	-29774	-17192	-9115	-47161	-32978	-26282	-33849	-18924
Capital Labour	-5045	-7768	-4028	-5041	-4134	-434	-206	-973	-950	-1179	-940	-185
Change In Working Capital Items	0	0	0	0	0	0	0	0	0	0	0	0
Net Cash Flow to Total Capital *	-26511	-43042	-35891	-21073	-25223	-4744	14730	-16225	-1048	12457	5301	31123
<hr/>												
SUMMARY OF ECONOMIC ADJUSTMENTS AND EXTERNALITIES												
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Foreign Exchange Externality	-682	-1138	-574	461	68	254	1061	-954	-656	826	-350	584
Commodity Sales Taxes, Tariffs & Economic Rents	5	-255	1323	-925	156	985	2171	2157	2712	3172	3839	4409
Labour Externality	1031	1563	1706	1785	2167	1698	2034	2803	2157	3253	2753	2198
Income Taxes Less Grants & Subsidies	1500	2400	3000	3200	3393	2572	3338	5362	5027	7398	6740	7228
User Benefits	0	0	0	0	13382	30231	49694	63040	71240	80882	90060	115862
Indirect Social Benefits	0	0	0	0	2282	5248	9053	10637	12552	12790	14836	17067
Project Financing Externality	0	0	0	0	0	0	0	0	0	0	0	0
Gross Economic Adj & Externalities	1853	2570	5455	4521	21449	40988	67351	83045	93031	108320	117878	147349
<hr/>												
SUMMARY OF ECONOMIC BENEFITS AND COSTS												
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Cash Receipts	23429	36848	43893	46936	76263	98877	148144	197303	197750	245836	249414	286737
Less:												
Operating Expenditures												
Equipment and Services	-10983	-16408	-19155	-19569	-19457	-12938	-15389	-26657	-18084	-31203	-23707	-13439
Operating Labour	-3489	-6521	-8388	-9833	-13505	-14139	-14803	-16024	-14130	-18685	-18035	-17715
Income Taxes	0	0	0	0	0	0	0	0	0	0	0	0
Other Operating Expenditures	-3531	-5564	-6634	-7062	-12568	-17893	-27341	-37201	-38179	-46834	-48317	-58259
Capital Expenditures												
Equipment and Services	-25159	-41244	-36219	-22102	-30504	-17255	-8348	-49664	-34458	-27200	-35273	-18690
Capital Labour	-4925	-7584	-3934	-4923	-4002	-408	-181	-937	-916	-1138	-903	-163
Change In Working Capital Items	0	0	0	0	0	0	0	0	0	0	0	0
Project Financing Externality	0	0	0	0	0	0	0	0	0	0	0	0
Net Economic Costs & Benefits	-24658	-40472	-30436	-16552	-3774	36244	82081	66820	91983	120777	123179	178471

Pessimistic Scenario: Run No. 2-3		1997	1998	1999	2000	2001	2002	Discount Rate	Risk Adjustd Discnt Rate	NPV With Normal Risk	Cost of Abnormal Risk	NPV With Abnormal Risk
SUMMARY OF CASH FLOWS												
Cash Receipts		185861	196672	196492	180285	177405	199889	0.060	NA	1097822	-39103	1058719
Less:												
Operating Expenditures												
Equipment and Services		-25638	-25762	-17221	-9998	-9829	-5210	0.060	NA	-189007	2299	-186708
Operating Labour		-25727	-28371	-24541	-20663	-19847	-17431	0.060	NA	-173543	4463	-169080
Income Taxes		-9131	-9729	-8918	-14094	-26358	-32419	0.060	NA	-71786	3615	-68171
Other Operating Expenditures		-67283	-71678	-78649	-76978	-75609	-70930	0.060	NA	-362692	0	-362692
Capital Expenditures												
Equipment and Services		-17903	-12599	-9302	-7664	-6176	-5545	0.060	NA	-260787	20453	-280334
Capital Labour		-426	-202	-227	-184	-119	-92	0.060	NA	-25529	538	-24991
Change In Working Capital Items		0	0	0	0	0	0	0.060	NA	0	0	0
Net Cash Flow to Total Capital =		39774	48332	57634	50702	39467	68261	0.060	NA	14478	-7734	6744
SUMMARY OF ECONOMIC ADJUSTMENTS AND EXTERNALITIES:												
Foreign Exchange Externality		1838	2515	1670	1076	1285	1645	0.100	NA	1090	1473	2564
Commodity Sales Taxes, Tariffs & Economic Rents		4990	4654	6106	6118	5404	7032	0.100	NA	15850	-188	15662
Labour Externality		3390	3585	2622	1961	2205	1779	0.100	NA	16957	-438	16519
Income Taxes Less Grants & Subsidies		9131	9729	8918	14094	26358	32419	0.100	NA	46664	-3615	43049
User Benefits		127135	134030	156343	157262	152603	145336	0.100	NA	410267	0	410267
Indirect Social Benefits		19280	21594	23968	25168	25419	25419	0.100	NA	68967	0	68967
Project Financing Externality		0	0	0	0	0	0	0.100	NA	0	0	0
Gross Economic Adj & Externalities		185764	176107	199627	205679	213275	213630	0.100	NA	557795	-2768	555026
SUMMARY OF ECONOMIC BENEFITS AND COSTS												
Cash Receipts		339475	359535	384083	369315	361956	379043	0.100	NA	1250562	-39160	1211402
Less:												
Operating Expenditures												
Equipment and Services		-26233	-26468	-17319	-9992	-10055	-5283	0.100	NA	-147138	2386	-144753
Operating Labour		-22363	-24809	-21945	-18723	-17655	-15663	0.100	NA	-106829	4037	-102792
Income Taxes		0	0	0	0	0	0	0.100	NA	0	0	0
Other Operating Expenditures		-67679	-72170	-78863	-77044	-75736	-70974	0.100	NA	-238655	0	-238655
Capital Expenditures												
Equipment and Services		-17263	-11471	-8494	-7011	-5663	-5152	0.100	NA	-212444	21709	-190735
Capital Labour		-400	-178	-200	-163	-105	-81	0.100	NA	-21785	526	-21259
Change in Working Capital Items		0	0	0	0	0	0	0.100	NA	0	0	0
Project Financing Externality		0	0	0	0	0	0	0.100	NA	0	0	0
Net Economic Costs & Benefits		205538	224439	257261	256382	252742	281890	0.100	NA	523711	-10502	513208

N

SERVICE PROVIDERS

Pessimistic Scenario: Run No. 2-3

SUMMARY OF CASH FLOWS	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Cash Receipts	0	0	0	0	14395	27441	42223	45184	51716	59355	66058	82020
Less:												
Operating Expenditures												
Equipment and Services	0	0	0	0	-3983	-5370	-6665	-7279	-3352	-4029	-4159	-4269
Operating Labour	0	0	0	0	-2237	-3648	-5229	-3977	-4793	-5760	-6514	-7291
Income Taxes	0	0	0	0	-193	-472	-1038	-1762	-2427	-2998	-3540	-4528
Other Operating Expenditures	0	0	0	0	-6505	-14424	-23467	-29476	-33128	-37622	-41899	-53901
Capital Expenditures												
Equipment and Services	0	0	0	0	-6301	-6693	-8268	-3811	-4393	-5248	-5468	-9154
Capital Labour	0	0	0	0	-364	-172	-206	-160	-145	-169	-184	-185
Change In Working Capital Items	0	0	0	0	0	0	0	0	0	0	0	0
Net Cash Flow to Total Capital =	0	0	0	0	-5188	-3338	-2648	3269	3478	3530	4295	2692

SUMMARY OF ECONOMIC ADJUSTMENTS

AND EXTERNALITIES:	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Foreign Exchange Externality	0	0	0	0	0	0	0	0	0	0	0	0
Commodity Sales Taxes, Tariffs & Economic Rents	0	0	0	0	1663	2636	3814	3228	3783	4458	4983	6435
Labour Externality	0	0	0	0	246	340	470	329	393	472	529	585
Income Taxes Less Grants & Subsidies	0	0	0	0	193	472	1038	1762	2427	2998	3540	4528
User Benefits	0	0	0	0	13382	30231	49694	63040	71240	80882	9060	115862
Indirect Social Benefits	0	0	0	0	2282	5248	9053	10637	12552	12790	14836	17067
Project Financing Externality	0	0	0	0	0	0	0	0	0	0	0	0
Gross Economic Adj & Externalities	0	0	0	0	17766	38927	64069	78996	90395	101600	113947	144477

SUMMARY OF ECONOMIC BENEFITS

AND COSTS	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Cash Receipts	0	0	0	0	30778	64401	103326	121390	138469	156497	174893	219921
Less:												
Operating Expenditures												
Equipment and Services	0	0	0	0	-3705	-4947	-6118	-2498	-3054	-3662	-3770	-3857
Operating Labour	0	0	0	0	-2033	-3328	-4783	-3667	-4417	-5308	-6007	-6728
Income Taxes	0	0	0	0	0	0	0	0	0	0	0	0
Other Operating Expenditures	0	0	0	0	-6469	-14362	-23382	-29390	-33043	-37525	-41790	-53765
Capital Expenditures												
Equipment and Services	0	0	0	0	-5671	-6024	-7441	-3430	-3953	-4723	-4922	-8239
Capital Labour	0	0	0	0	-321	-152	-181	-141	-128	-150	-162	-163
Change In Working Capital Items	0	0	0	0	0	0	0	0	0	0	0	0
Project Financing Externality	0	0	0	0	0	0	0	0	0	0	0	0
Net Economic Costs & Benefits	0	0	0	0	12579	35588	51421	72245	97777	115555	133333	151111

Appendix B-9

Pessimistic Scenario: Cumulative Undiscounted Cash Flows
and Economic Costs and Benefits

CUMULATIVE UNDISCOUNTED ECONOMIC BENEFITS
THOUSANDS OF 1984 CONSTANT DOLLARS

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
RETURNS TO PROJECT INVESTORS												
TELSAT NET CASH FLOW	(\$22,311)	(\$59,254)	(\$95,045)	(\$114,958)	(\$135,831)	(\$141,639)	(\$130,161)	(\$157,155)	(\$166,681)	(\$165,854)	(\$171,748)	(\$149,118)
SERVICE PROVIDERS NET CASH FLOW	\$0	\$0	\$0	\$0	(\$45,188)	(\$8,526)	(\$11,174)	(\$7,906)	(\$4,427)	(\$898)	\$3,398	\$6,090
MANUFACTURERS NET CASH FLOW	(\$4,200)	(\$10,300)	(\$10,400)	(\$11,560)	(\$10,720)	(\$6,320)	(\$420)	\$7,080	\$12,080	\$20,180	\$27,080	\$32,880
TOTAL RETURNS TO PROJECT INVESTORS	(\$26,511)	(\$69,554)	(\$105,445)	(\$126,518)	(\$151,741)	(\$156,485)	(\$141,756)	(\$157,980)	(\$159,028)	(\$146,572)	(\$141,270)	(\$110,148)
RETURNS TO GOVERNMENT												
FOREIGN EXCHANGE EXTERNALITY	(\$682)	(\$1,820)	(\$2,394)	(\$1,933)	(\$1,865)	(\$1,612)	(\$550)	(\$1,504)	(\$2,161)	(\$1,335)	(\$1,684)	(\$1,101)
TARIFFS AND SALES TAXES	\$5	(\$250)	\$1,073	\$148	\$304	\$1,289	\$3,460	\$5,617	\$8,328	\$11,500	\$15,339	\$19,748
LABOUR EXTERNALITY	\$1,031	\$2,594	\$4,300	\$6,085	\$8,252	\$9,951	\$11,985	\$14,788	\$16,944	\$20,197	\$22,950	\$25,148
INCOME TAXES	\$1,500	\$3,900	\$6,900	\$10,100	\$13,493	\$16,065	\$19,403	\$24,765	\$29,792	\$37,190	\$43,930	\$51,158
FOREIGN FINANCING EXTERNALITY	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL RETURNS TO GOVERNMENT	\$1,853	\$4,424	\$9,879	\$14,400	\$20,184	\$25,693	\$34,298	\$43,665	\$52,904	\$67,552	\$80,534	\$94,954
USER BENEFITS	\$0	\$0	\$0	\$0	\$13,382	\$43,614	\$93,307	\$156,348	\$227,588	\$308,470	\$398,530	\$514,392
INDIRECT SOCIAL BENEFITS	\$0	\$0	\$0	\$0	\$2,282	\$7,530	\$16,583	\$27,220	\$39,772	\$52,562	\$67,398	\$84,465
TOTAL UNDISCOUNTED ECONOMIC BENEFITS	(\$24,658)	(\$65,130)	(\$95,566)	(\$112,118)	(\$115,892)	(\$79,649)	\$2,432	\$69,233	\$161,236	\$282,012	\$405,191	\$583,663

CUMULATIVE UNDISCOUNTED ECONOMIC BENEFITS
THOUSANDS OF 1984 CONSTANT DOLLARS

	1997	1998	1999	2000	2001	2002
RETURNS TO PROJECT INVESTORS						
TELSAT NET CASH FLOW	(\$121,565)	(\$85,946)	(\$44,167)	(\$8,835)	\$12,555	\$38,405
SERVICE PROVIDERS NET CASH FLOW	\$8,610	\$12,024	\$20,579	\$31,149	\$42,927	\$79,437
MANUFACTURERS NET CASH FLOW	\$42,580	\$51,880	\$59,180	\$63,980	\$70,280	\$76,180
TOTAL RETURNS TO PROJECT INVESTORS	(\$70,374)	(\$22,042)	\$35,592	\$86,295	\$125,762	\$194,022
RETURNS TO GOVERNMENT						
FOREIGN EXCHANGE EXTERNALITY	\$737	\$3,253	\$4,923	\$5,999	\$7,284	\$8,929
TARIFFS AND SALES TAXES	\$24,738	\$29,392	\$35,497	\$41,615	\$47,019	\$54,051
LABOUR EXTERNALITY	\$28,538	\$32,123	\$34,746	\$36,707	\$38,912	\$40,691
INCOME TAXES	\$60,289	\$70,038	\$78,936	\$93,030	\$119,398	\$151,808
FOREIGN FINANCING EXTERNALITY	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL RETURNS TO GOVERNMENT	\$114,303	\$134,785	\$154,102	\$177,351	\$212,604	\$255,479
USER BENEFITS	\$641,527	\$775,557	\$931,899	\$1,089,161	\$1,241,764	\$1,397,101
INDIRECT SOCIAL BENEFITS	\$103,745	\$125,339	\$149,307	\$174,475	\$199,894	\$225,313
TOTAL UNDISCOUNTED ECONOMIC BENEFITS	\$789,200	\$1,013,639	\$1,270,900	\$1,527,282	\$1,780,024	\$2,061,915

Appendix B-10

Pessimistic Scenario: Telesat Cash Flows and Economic
Costs and Benefits

TELESAT

PESSIMISTIC SCENARIO: RUN NO. 2-J
SUMMARY OF CASH FLOWS

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Cash Receipts	0	0	0	0	5404	11869	18969	23402	25712	28381	30723	38461
Less:												
Operating Expenditures												
Equipment and Services	0	0	0	0	-1393	-2351	-2259	-2119	-1988	-1873	-2543	-2061
Operating Labour	0	0	0	0	-2704	-4564	-4394	-4114	-3860	-3636	-4937	-4001
Income Taxes	0	0	0	0	0	0	0	0	0	0	0	0
Other Operating Expenditures	0	0	0	0	0	0	0	0	0	0	0	0
Capital Expenditures												
Equipment and Services	-21887	-36105	-34844	-19112	-21653	-10499	-848	-43350	-28585	-21035	-28380	-9769
Capital Labour	-425	-838	-948	-801	-530	-262	0	-813	-805	-1010	-757	0
Change In Working Capital Items	0	0	0	0	0	0	0	0	0	0	0	0
Net Cash Flow to Total Capital =	-22311	-36942	-35791	-19913	-20875	-5806	11478	-26994	-9526	827	-5894	22630

SUMMARY OF ECONOMIC ADJUSTMENTS
AND EXTERNALITIES:

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Foreign Exchange Externality	-1451	-2408	-2197	-1316	-1596	-883	-204	-3019	-2047	-1562	-2136	-815
Commodity Sales Taxes, Tariffs & Economic Rents	0	0	2035	0	44	81	75	70	64	60	55	51
Labour Externality	9	18	20	17	269	442	419	410	386	369	488	392
Income Taxes Less Grants & Subsidies	0	0	0	0	0	0	0	0	0	0	0	0
User Benefits	0	0	0	0	0	0	0	0	0	0	0	0
Indirect Social Benefits	0	0	0	0	0	0	0	0	0	0	0	0
Project Financing Externality	0	0	0	0	0	0	0	0	0	0	0	0
Gross Economic Adj & Externalities	-1442	-2390	-142	-1299	-1282	-360	290	-2539	-1597	-1134	-1593	-382

SUMMARY OF ECONOMIC BENEFITS
AND COSTS

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Cash Receipts	0	0	0	0	5404	11869	18969	23402	25712	28381	30723	38461
Less:												
Operating Expenditures												
Equipment and Services	0	0	0	0	-1438	-2420	-2328	-2185	-2051	-1934	-2653	-2143
Operating Labour	0	0	0	0	-2445	-4128	-3965	-3721	-3491	-3289	-4465	-3619
Income Taxes	0	0	0	0	0	0	0	0	0	0	0	0
Other Operating Expenditures	0	0	0	0	0	0	0	0	0	0	0	0
Capital Expenditures												
Equipment and Services	-23338	-38512	-35005	-20428	-23159	-11231	-907	-46233	-30505	-22477	-30352	-10451
Capital Labour	-416	-820	-928	-784	-519	-256	0	-796	-788	-988	-741	0
Change In Working Capital Items	0	0	0	0	0	0	0	0	0	0	0	0
Project Financing Externality	0	0	0	0	0	0	0	0	0	0	0	0
Net Economic Costs & Benefits	-23754	-39332	-35933	-21212	-22157	-6166	11768	-29533	-11123	-307	-7487	22249

TELESAT

PESSIMISTIC SCENARIO: RUN NO. 2-3

SUMMARY OF CASH FLOWS	1997	1998	1999	2000	2001	2002	Discount Rate	Risk Adjustd Discnt Rate	NPV With Normal Risk	Cost of Abnormal Risk	NPV With Abnormal Risk
Cash Receipts	40503	42055	47828	46772	44126	50597	0.060	NA	216142	-39103	177039
Less:											
Operating Expenditures											
Equipment and Services	-2015	-1924	-1812	-1701	-1605	-1510	0.060	NA	-14464	2299	-12164
Operating Labour	-3912	-3735	-3517	-3301	-3117	-2932	0.060	NA	-28076	4463	-23613
Income Taxes	0	0	0	-5772	-17397	-19357	0.060	NA	-15515	3615	-11899
Other Operating Expenditures	0	0	0	0	0	0	0.060	NA	0	0	0
Capital Expenditures											
Equipment and Services	-6775	-777	-720	-667	-617	-947	0.060	NA	-201633	20453	-181180
Capital Labour	-248	0	0	0	0	0	0.060	NA	-5222	538	-4684
Change In Working Capital Items	0	0	0	0	0	0	0.060	NA	0	0	0
Net Cash Flow to Total Capital *	27553	35619	41779	35332	21389	25850	0.060	NA	-48768	-7734	-56502

SUMMARY OF ECONOMIC ADJUSTMENTS
AND EXTERNALITIES:

	1997	1998	1999	2000	2001	2002	Discount Rate	Risk Adjustd Discnt Rate	NPV With Normal Risk	Cost of Abnormal Risk	NPV With Abnormal Risk
Foreign Exchange Externality	-603	-179	-168	-157	-147	516	0.100	NA	-11572	1473	-10098
Commodity Sales Taxes, Tariffs & Economic Rents	47	44	41	38	35	32	0.100	NA	1815	-188	1627
Labour Externality	379	357	336	315	298	280	0.100	NA	1933	-438	1495
Income Taxes Less Grants & Subsidies	0	0	0	5772	17397	19357	0.100	NA	8180	-3615	4564
User Benefits	0	0	0	0	0	0	0.100	NA	0	0	0
Indirect Social Benefits	0	0	0	0	0	0	0.100	NA	0	0	0
Project Financing Externality	0	0	0	0	0	0	0.100	NA	0	0	0
Gross Economic Adj & Externalities	-177	222	209	5968	17583	20186	0.100	NA	355	-2768	-2413

SUMMARY OF ECONOMIC BENEFITS
AND COSTS

	1997	1998	1999	2000	2001	2002	Discount Rate	Risk Adjustd Discnt Rate	NPV With Normal Risk	Cost of Abnormal Risk	NPV With Abnormal Risk
Cash Receipts	40503	42055	47828	46772	44126	51277	0.100	NA	137965	-39160	98805
Less:											
Operating Expenditures											
Equipment and Services	-2098	-2005	-1889	-1773	-1675	-1576	0.100	NA	-10290	2386	-7904
Operating Labour	-3538	-3378	-3181	-2986	-2819	-2652	0.100	NA	-17446	4037	-13409
Income Taxes	0	0	0	0	0	0	0.100	NA	0	0	0
Other Operating Expenditures	0	0	0	0	0	0	0.100	NA	0	0	0
Capital Expenditures											
Equipment and Services	-7248	-832	-770	-713	-660	-1013	0.100	NA	-174592	21709	-152883
Capital Labour	-243	0	0	0	0	0	0.100	NA	-4172	526	-3645
Change In Working Capital Items	0	0	0	0	0	0	0.100	NA	0	0	0
Project Financing Externality	0	0	0	0	0	0	0.100	NA	0	0	0
Net Economic Costs & Benefits	27376	35841	41988	41300	38972	46036	0.100	NA	-68535	-10502	-79038

Appendix B-11

Pessimistic Scenario: Service Providers Cash Flows and
Economic Costs and Benefits

SERVICE PROVIDERS

Pessimistic Scenario: Run No. 2-3

SUMMARY OF CASH FLOWS	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Cash Receipts	0	0	0	0	14395	27441	42223	45184	51716	59355	66058	82020
Less:												
Operating Expenditures												
Equipment and Services	0	0	0	0	-3983	-5370	-6665	-2729	-3352	-4029	-4159	-4269
Operating Labour	0	0	0	0	-2237	-3648	-5229	-3977	-4793	-5760	-6514	-7291
Income Taxes	0	0	0	0	-193	-472	-1038	-1762	-2427	-2998	-3540	-4528
Other Operating Expenditures	0	0	0	0	-6505	-14424	-23467	-29476	-33128	-37622	-41899	-53901
Capital Expenditures												
Equipment and Services	0	0	0	0	-6301	-6693	-8268	-3811	-4393	-5248	-5468	-9154
Capital Labour	0	0	0	0	-364	-172	-206	-160	-145	-169	-184	-185
Change In Working Capital Items	0	0	0	0	0	0	0	0	0	0	0	0
Net Cash Flow to Total Capital =	0	0	0	0	-5188	-3338	-2648	3269	3478	3530	4295	2892

SUMMARY OF ECONOMIC ADJUSTMENTS
AND EXTERNALITIES:

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Foreign Exchange Externality	0	0	0	0	0	0	0	0	0	0	0	0
Commodity Sales Taxes, Tariffs & Economic Rents	0	0	0	0	1663	2636	3814	3228	3783	4458	4983	6635
Labour Externality	0	0	0	0	246	340	470	329	393	472	529	585
Income Taxes Less Grants & Subsidies	0	0	0	0	193	472	1038	1762	2427	2998	3540	4528
User Benefits	0	0	0	0	13382	30231	49694	63040	71240	80882	90060	115862
Indirect Social Benefits	0	0	0	0	2282	5248	9053	10637	12552	12790	14836	17067
Project Financing Externality	0	0	0	0	0	0	0	0	0	0	0	0
Gross Economic Adj & Externalities	0	0	0	0	17766	38927	64069	78996	90395	101600	113947	144477

SUMMARY OF ECONOMIC BENEFITS
AND COSTS

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Cash Receipts	0	0	0	0	30778	64401	103326	121390	138469	156497	174893	219921
Less:												
Operating Expenditures												
Equipment and Services	0	0	0	0	-3705	-4947	-6118	-2498	-3054	-3662	-3770	-3857
Operating Labour	0	0	0	0	-2033	-3328	-4783	-3667	-4417	-5308	-6007	-6728
Income Taxes	0	0	0	0	0	0	0	0	0	0	0	0
Other Operating Expenditures	0	0	0	0	-6469	-14362	-23382	-29390	-33043	-37525	-41790	-53765
Capital Expenditures												
Equipment and Services	0	0	0	0	-5671	-6024	-7441	-3430	-3953	-4723	-4922	-8239
Capital Labour	0	0	0	0	-321	-152	-181	-141	-128	-150	-162	-163
Change In Working Capital Items	0	0	0	0	0	0	0	0	0	0	0	0
Project Financing Externality	0	0	0	0	0	0	0	0	0	0	0	0
Net Economic Costs & Benefits	0	0	0	0	12579	35588	61421	82245	93873	105130	118243	147169

SERVICE PROVIDERS

Pessimistic Scenario: Run No. 2-J

SUMMARY OF CASH FLOWS	1997	1998	1999	2000	2001	2002	Discount Rate	Risk Adjustd Disct Rate	NPV With Normal Risk	Cost of Abnormal Risk	NPV With Abnormal Risk
Cash Receipts	90958	95017	110364	108912	104279	128092	0.060	0.060	483041	0	483041
Less:											
Operating Expenditures											
Equipment and Services	-4923	-4038	-4709	-2598	-924	0	0.060	0.060	-28877	0	-28877
Operating Labour	-8415	-8636	-9724	-9162	-8530	-8099	0.060	0.060	-44759	0	-44759
Income Taxes	-4631	-4529	-5618	-6022	-6161	-10962	0.060	0.060	-24516	0	-24516
Other Operating Expenditures	-59163	-62378	-72949	-73378	-71209	-67830	0.060	0.060	-303464	0	-303464
Capital Expenditures											
Equipment and Services	-11128	-11821	-8582	-6998	-5559	-4598	0.060	0.060	-50733	0	-50733
Capital Labour	-178	-202	-227	-184	-119	-92	0.060	0.060	-1415	0	-1415
Change In Working Capital Items	0	0	0	0	0	0	0.060	0.060	0	0	0
Net Cash Flow to Total Capital *	2521	3413	8555	10570	11778	38511	0.060	0.060	29277	0	29277

SUMMARY OF ECONOMIC ADJUSTMENTS AND EXTERNALITIES

	1997	1998	1999	2000	2001	2002	Discount Rate	Risk Adjustd Disct Rate	NPV With Normal Risk	Cost of Abnormal Risk	NPV With Abnormal Risk
Foreign Exchange Externality	0	0	0	0	0	0	0.100	0.100	0	0	0
Commodity Sales Taxes, Tariffs & Economic Rents	7341	7636	8416	7980	7378	8887	0.100	0.100	24050	0	24050
Labour Externality	671	677	764	692	617	571	0.100	0.100	2391	0	2391
Income Taxes Less Grants & Subsidies	4631	4529	5618	6022	6161	10962	0.100	0.100	14990	0	14990
User Benefits	127135	134030	156343	157262	152603	145336	0.100	0.100	410267	0	410267
Indirect Social Benefits	19280	21594	23968	25168	25419	25419	0.100	0.100	66967	0	66967
Project Financing Externality	0	0	0	0	0	0	0.100	0.100	0	0	0
Gross Economic Adj & Externalities	159059	168465	195109	197123	192178	191175	0.100	0.100	518664	0	518664

SUMMARY OF ECONOMIC BENEFITS AND COSTS

	1997	1998	1999	2000	2001	2002	Discount Rate	Risk Adjustd Disct Rate	NPV With Normal Risk	Cost of Abnormal Risk	NPV With Abnormal Risk
Cash Receipts	242976	256544	297592	298185	288853	307101	0.100	0.100	802004	0	802004
Less:											
Operating Expenditures											
Equipment and Services	-4448	-3647	-4254	-2346	-835	0	0.100	0.100	-18598	0	-18598
Operating Labour	-7765	-7983	-8986	-8492	-7927	-7538	0.100	0.100	-26749	0	-26749
Income Taxes	0	0	0	0	0	0	0.100	0.100	0	0	0
Other Operating Expenditures	-59012	-62219	-72764	-73192	-71028	-67657	0.100	0.100	-191139	0	-191139
Capital Expenditures											
Equipment and Services	-10015	-10639	-7724	-6298	-5003	-4138	0.100	0.100	-30844	0	-30844
Capital Labour	-157	-178	-200	-163	-105	-81	0.100	0.100	-876	0	-876
Change In Working Capital Items	0	0	0	0	0	0	0.100	0.100	0	0	0
Project Financing Externality	0	0	0	0	0	0	0.100	0.100	0	0	0
Net Economic Costs & Benefits	161579	171879	203664	207893	203956	227686	0.100	0.100	533798	0	533798

Appendix B-12

Pessimistic Scenario: Manufacturers Cash Flows and
Economic Costs and Benefits

H
MANUFACTURERS

PESSIMISTIC SCENARIO: RUN NO. 2-J

SUMMARY OF CASH FLOWS

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Cash Receipts	21900	34700	41500	44600	39000	22800	25800	49800	32300	57800	41800	28500
Less:												
Operating Expenditures												
Equipment and Services	-10300	-15400	-18000	-18400	-13600	-5400	-6700	-20700	-12300	-24100	-16300	-7200
Operating Labour	-4400	-7900	-10000	-11500	-10600	-7600	-7200	-10700	-7600	-12500	-9300	-8600
Income Taxes	-1500	-2400	-3000	-3200	-3200	-2100	-2300	-3600	-2600	-4400	-3200	-2700
Other Operating Expenditures	-3300	-5200	-6200	-6600	-5700	-3300	-3700	-7300	-4800	-8700	-6100	-4200
Capital Expenditures												
Equipment and Services	-1980	-2970	-1320	-1820	-1820	0	0	0	0	0	0	0
Capital Labour	-4620	-6930	-3080	-4240	-3240	0	0	0	0	0	0	0
Change In Working Capital Items	0	0	0	0	0	0	0	0	0	0	0	0
Net Cash Flow to Total Capital =	-4200	-6100	-100	-1160	840	4400	5900	7500	5000	8100	6900	5800

SUMMARY OF ECONOMIC ADJUSTMENTS

AND EXTERNALITIES:

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Foreign Exchange Externality	769	1269	1623	1776	1664	1137	1265	2065	1390	2388	1786	1399
Commodity Sales Taxes, Tariffs & Economic Rents	5	-255	-712	-925	-1550	-1732	-1718	-1140	-1136	-1346	-1200	-2077
Labour Externality	1022	1545	1686	1769	1651	917	1145	2063	1378	2412	1737	1231
Income Taxes Less Grants & Subsidies	1500	2400	3000	3200	3200	2100	2300	3600	2600	4400	3200	2700
User Benefits	0	0	0	0	0	0	0	0	0	0	0	0
Indirect Social Benefits	0	0	0	0	0	0	0	0	0	0	0	0
Project Financing Externality	0	0	0	0	0	0	0	0	0	0	0	0
Gross Economic Adj & Externalities	3296	4960	5597	5820	4965	2422	2992	6588	4233	7854	5523	3253

SUMMARY OF ECONOMIC BENEFITS

AND COSTS

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Cash Receipts	23429	36848	43893	46936	40080	22607	25849	52510	33569	60959	43798	28355
Less:												
Operating Expenditures												
Equipment and Services	-10983	-16408	-19155	-19569	-14314	-5571	-6943	-21974	-12979	-25607	-17284	-7438
Operating Labour	-3489	-6521	-8388	-9833	-9027	-6683	-6055	-8637	-6222	-10088	-7563	-7369
Income Taxes	0	0	0	0	0	0	0	0	0	0	0	0
Other Operating Expenditures	-3531	-5564	-6634	-7062	-6099	-3531	-3959	-7811	-5136	-9309	-6527	-4494
Capital Expenditures												
Equipment and Services	-1821	-2731	-1214	-1674	-1674	0	0	0	0	0	0	0
Capital Labour	-4509	-6764	-3006	-4138	-3162	0	0	0	0	0	0	0
Change In Working Capital Items	0	0	0	0	0	0	0	0	0	0	0	0
Project Financing Externality	0	0	0	0	0	0	0	0	0	0	0	0
Net Economic Costs & Benefits	-904	-1140	5497	4660	5805	6822	8892	14088	9233	15954	12423	9053

MANUFACTURERS

PESSIMISTIC SCENARIO: RUN NO. 2-J
SUMMARY OF CASH FLOWS

	1997	1998	1999	2000	2001	2002	Discount Rate	Risk Adjustd Discnt Rate	NPV With Normal Risk	Cost of Abnormal Risk	NPV With Abnormal Risk
Cash Receipts	54400	59600	38300	24600	29000	21200	0.060	0.060	398639	0	398639
Less:											
Operating Expenditures											
Equipment and Services	-18700	-19800	-10700	-5700	-7300	-3700	0.060	0.060	-145666	0	-145666
Operating Labour	-13400	-16000	-11300	-8200	-8200	-6400	0.060	0.060	-100709	0	-100709
Income Taxes	-4500	-5200	-3300	-2300	-2800	-2100	0.060	0.060	-31756	0	-31756
Other Operating Expenditures	-8100	-9300	-5700	-3600	-4400	-3100	0.060	0.060	-59228	0	-59228
Capital Expenditures											
Equipment and Services	0	0	0	0	0	0	0.060	0.060	-8421	0	-8421
Capital Labour	0	0	0	0	0	0	0.060	0.060	-18892	0	-18892
Change In Working Capital Items	0	0	0	0	0	0	0.060	0.060	0	0	0
Net Cash Flow to Total Capital =	9700	9300	7300	4800	6300	5900	0.060	0.060	33968	0	33968

SUMMARY OF ECONOMIC ADJUSTMENTS
AND EXTERNALITIES:

	1997	1998	1999	2000	2001	2002	Discount Rate	Risk Adjustd Discnt Rate	NPV With Normal Risk	Cost of Abnormal Risk	NPV With Abnormal Risk
Foreign Exchange Externality	2441	2694	1838	1233	1432	1129	0.100	0.100	12662	0	12662
Commodity Sales Taxes, Tariffs & Economic Rents	-2399	-3026	-2351	-1899	-2009	-1887	0.100	0.100	-10015	0	-10015
Labour Externality	2340	2551	1522	955	1291	927	0.100	0.100	12633	0	12633
Income Taxes Less Grants & Subsidies	4500	5200	3300	2300	2800	2100	0.100	0.100	23495	0	23495
User Benefits	0	0	0	0	0	0	0.100	0.100	0	0	0
Indirect Social Benefits	0	0	0	0	0	0	0.100	0.100	0	0	0
Project Financing Externality	0	0	0	0	0	0	0.100	0.100	0	0	0
Gross Economic Adj & Externalities	6882	7420	4309	2588	3514	2269	0.100	0.100	38775	0	38775

SUMMARY OF ECONOMIC BENEFITS
AND COSTS

	1997	1998	1999	2000	2001	2002	Discount Rate	Risk Adjustd Discnt Rate	NPV With Normal Risk	Cost of Abnormal Risk	NPV With Abnormal Risk
Cash Receipts	55997	60936	38663	24357	28977	20665	0.100	0.100	310593	0	310593
Less:											
Operating Expenditures											
Equipment and Services	-19687	-20816	-11177	-5872	-7545	-3707	0.100	0.100	-118251	0	-118251
Operating Labour	-11060	-13449	-9778	-7246	-6909	-5473	0.100	0.100	-62633	0	-62633
Income Taxes	0	0	0	0	0	0	0.100	0.100	0	0	0
Other Operating Expenditures	-8667	-9951	-6099	-3852	-4708	-3317	0.100	0.100	-47516	0	-47516
Capital Expenditures											
Equipment and Services	0	0	0	0	0	0	0.100	0.100	-7007	0	-7007
Capital Labour	0	0	0	0	0	0	0.100	0.100	-16738	0	-16738
Change In Working Capital Items	0	0	0	0	0	0	0.100	0.100	0	0	0
Project Financing Externality	0	0	0	0	0	0	0.100	0.100	0	0	0
Net Economic Costs & Benefits	16582	16720	11609	7388	9814	8167	0.100	0.100	58448	0	58448

Appendix C-1

Baseline Scenario: Telesat's Financial Data Base

TELESAT FINANCIAL DATABASE			1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
RUM NO. 1-25																				
MRS	SHF	PRICE	0.00	0.00	0.00	0.00	1.06	0.98	0.91	0.95	0.88	0.82	0.76	0.82	0.76	0.71	0.72	0.67	0.62	0.57
	QTY		0.00	0.00	0.00	0.00	2989.22	10573.23	21264.12	33249.46	41839.28	41899.04	41605.54	52935.81	63863.77	73098.14	80061.06	84569.13	86259.89	86259.89
UHF	PRICE	0.00	0.00	0.00	0.00	1.06	0.98	0.91	0.95	0.88	0.82	0.76	0.82	0.76	0.71	0.72	0.67	0.62	0.57	
	QTY		0.00	0.00	0.00	0.00	313.79	1135.77	2362.68	3817.94	4908.52	5048.76	5142.26	6676.39	8217.23	9592.06	10711.12	11423.07	11762.71	11762.71
MTS	SHF	PRICE	0.00	0.00	0.00	0.00	1.06	0.98	0.91	0.95	0.88	0.82	0.76	0.82	0.76	0.71	0.72	0.67	0.62	0.57
	QTY		0.00	0.00	0.00	0.00	1137.15	3838.95	7479.54	11810.97	15441.30	15441.30	20323.35	24576.12	28192.77	30947.58	32727.69	33418.53	33418.53	
UHF	PRICE	0.00	0.00	0.00	0.00	1.06	0.98	0.91	0.95	0.88	0.82	0.76	0.82	0.76	0.71	0.72	0.67	0.62	0.57	
	QTY		0.00	0.00	0.00	0.00	59.85	202.05	393.66	621.63	812.70	812.70	812.70	1069.65	1293.48	1483.83	1628.82	1722.51	1758.87	1758.87
MPS	SHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	QTY		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
UHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	QTY		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MDS (ALARM) SHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	QTY		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
(POLLING) SHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	QTY		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Access Charges:																				
MRS	PRICE	0.00	0.00	0.00	0.00	254.32	235.48	218.04	228.81	211.86	196.16	181.63	195.38	180.91	167.51	174.74	161.79	149.81	138.71	
	QTY		0.00	0.00	0.00	0.00	1.84	6.51	13.13	20.59	25.97	25.97	25.97	33.12	40.05	45.94	50.43	53.33	54.46	
MTS	PRICE	0.00	0.00	0.00	0.00	254.32	235.48	218.04	228.81	211.86	196.16	181.63	195.38	180.91	167.51	174.74	161.79	149.81	138.71	
	QTY		0.00	0.00	0.00	0.00	0.67	2.25	4.37	6.91	9.03	9.03	11.89	14.37	16.49	18.10	19.14	19.54	19.54	
MPS	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	QTY		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MDS (DACS)	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	QTY		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Connect charges:																				
MRS	SHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	QTY		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
UHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	QTY		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MTS	SHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	QTY		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
UHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	QTY		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MPS	SHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	QTY		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
UHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	QTY		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MDS (DACS) SHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	QTY		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
UHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	QTY		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Other Cash Receipts:																				
Grants	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Subsidies	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NTV - fix assets	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13597.48	
Equipment & Services:																				
Space Segment	PRICE	0.00	0.00	0.00	0.00	1142.35	1887.06	1828.83	1721.39	1619.83	1532.04	2589.64	2414.08	2317.53	2217.23	2087.26	1959.23	1848.34	1738.19	
	QTY	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Earth Segment	PRICE	0.00	0.00	0.00	0.00	250.52	464.15	429.77	397.93	368.46	341.16	338.14	333.84	309.11	286.21	265.01	245.38	227.20	210.37	

TELESAT FINANCIAL DATABASE

RELEASER NAME
RUN NO. 1-2

Appendix C-2

**Baseline Scenario: Service Providers' Financial
Data Base**

SERV. PROVIDERS FINANCIAL	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002		
DATABASE RUN NO. 1-J																				
Operating Labour:																				
Sales:Incremental Selling Costs																				
MRS	(1)	AMOUNT	0.00	0.00	0.00	0.00	1014.00	2682.00	4016.00	4847.00	4101.00	1423.00	1423.00	5373.00	5643.00	5452.00	4999.00	4366.00	3545.00	2983.00
MTS	(1)	AMOUNT	0.00	0.00	0.00	0.00	399.00	987.00	1409.00	1778.00	1683.00	536.00	536.00	2248.00	2197.00	2121.00	1945.00	1699.00	1379.00	1161.00
MPS	(1)	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDS(DACS)	(1)	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Clerical: Billing & Bad Debt																				
MRS	(1)	AMOUNT	0.00	0.00	0.00	0.00	33.00	117.00	236.00	371.00	467.00	467.00	467.00	596.00	721.00	827.00	908.00	960.00	980.00	980.00
MTS	(1)	AMOUNT	0.00	0.00	0.00	0.00	12.00	40.00	79.00	124.00	163.00	163.00	214.00	259.00	297.00	326.00	345.00	352.00	352.00	
MPS	(1)	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDS(DACS)	(1)	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Technicians:																				
Labour Training Costs																				
MRS	(1)	AMOUNT	0.00	0.00	0.00	0.00	4.00	13.00	26.00	41.00	52.00	52.00	52.00	66.00	80.00	92.00	101.00	107.00	109.00	109.00
MTS	(1)	AMOUNT	0.00	0.00	0.00	0.00	1.00	4.00	9.00	14.00	18.00	18.00	24.00	29.00	33.00	36.00	38.00	39.00	39.00	
MPS	(1)	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDS(DACS)	(1)	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Repair Labour Costs																				
MRS	(.33)	AMOUNT	0.00	0.00	0.00	0.00	142.00	504.00	1017.00	1596.00	2013.00	2013.00	2013.00	2567.00	3103.00	3560.00	3908.00	4133.00	4220.00	4220.00
MTS	(.33)	AMOUNT	0.00	0.00	0.00	0.00	52.00	174.00	339.00	535.00	700.00	700.00	700.00	921.00	1114.00	1278.00	1403.00	1483.00	1515.00	1515.00
MPS	(1)	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDS(DACS)	(.89)	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Installation Labour Cost																				
MRS	(.33)	AMOUNT	0.00	0.00	0.00	0.00	401.00	1137.00	1860.00	2456.00	2484.00	1650.00	1650.00	3212.00	3619.00	3833.00	3901.00	3839.00	3636.00	3461.00
MTS	(.33)	AMOUNT	0.00	0.00	0.00	0.00	145.00	388.00	608.00	832.00	903.00	574.00	574.00	1198.00	1299.00	1376.00	1400.00	1378.00	1305.00	1242.00
MPS	(0)	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDS(DACS)	(.66)	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Removal Labour Costs																				
MRS	(1)	AMOUNT	0.00	0.00	0.00	0.00	26.00	93.00	188.00	296.00	373.00	373.00	373.00	475.00	575.00	659.00	724.00	765.00	781.00	781.00
MTS	(1)	AMOUNT	0.00	0.00	0.00	0.00	10.00	32.00	63.00	99.00	130.00	130.00	130.00	171.00	206.00	237.00	260.00	275.00	280.00	280.00
MPS	(0)	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDS(DACS)	(1)	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Operating Expenditures:																				
Airtime Costs:																				
MRS	SHF	PRICE	0.00	0.00	0.00	0.00	1.18	1.12	1.07	1.15	1.10	1.04	0.99	1.11	1.06	1.01	1.06	1.01	0.96	0.91
		QTY	0.00	0.00	0.00	0.00	2989.22	10573.23	21284.12	33249.46	41839.28	41699.04	41605.54	52935.81	63863.77	73098.14	80051.08	84569.13	86259.89	86259.89
	UHF	PRICE	0.00	0.00	0.00	0.00	1.18	1.12	1.07	1.15	1.10	1.04	0.99	1.11	1.06	1.01	1.06	1.01	0.96	0.91
		QTY	0.00	0.00	0.00	0.00	313.79	1135.77	2382.68	3817.94	4908.52	5048.76	5142.26	6676.59	8217.23	9592.06	10711.12	11423.07	11762.71	11762.71
MTS	SHF	PRICE	0.00	0.00	0.00	0.00	1.18	1.12	1.07	1.15	1.10	1.04	0.99	1.11	1.06	1.01	1.06	1.01	0.96	0.91
	UHF	PRICE	0.00	0.00	0.00	0.00	1137.15	3838.95	7479.54	11B10.97	15441.30	15441.30	20323.35	24576.12	28197.77	30947.58	32727.69	33418.53	33418.53	
		QTY	0.00	0.00	0.00	0.00	59.85	202.05	373.66	621.63	B12.70	B12.70	1069.65	1293.48	1483.83	1628.82	1722.51	1758.87	1758.87	
MPS	SHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	UHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
		QTY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MDS (ALARMSH)	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
(POLLING) SHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	QTY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Access Charges:																				
MRS	PRICE	0.00	0.00	0.00	0.00	282.07	268.64	255.85	276.15	263.00	250.48	238.55	263.94	251.37	239.40	256.86	244.63	232.98	221.89	

Replant Inv in Rntr Tmnts:

Appendix C-3

Baseline Scenario: Manufacturers' Financial
Data Base

INCREMENTAL CASH FLOWS

DATA BASE: MANUFACTURERS

RUN NO. 1-3

INCREMENTAL CASH FLOWS DATA BASE: MANUFACTURE

BINN BUREAU OF INVESTIGATORS

ARM RD. 1-3

INCREMENTAL CASH FLOWS DATA BASE: MANUFACTURERS

BIBL. NO. 1-3

RDM RD. I-3

Operating Labour

SPARE

INCREMENTAL CASH FLOWS

DATA BASE: MANUFACTURERS

RUN NO. 1-3

INCREMENTAL CASH FLOWS DATA BASE: MANUFACTURERS

BUN NR. 1-1

ROW NO. 1-3

Appendix C-4

Pessimistic Scenario: Telesat's Financial Data Base

TELESAT FINANCIAL DATABASE			1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
RUN NO. 25																				
MRS	SHF	PRICE	0.00	0.00	0.00	0.00	1.06	0.98	0.91	0.95	0.88	0.82	0.76	0.82	0.76	0.71	0.72	0.67	0.62	0.57
		QTY	0.00	0.00	0.00	0.00	3054.38	7229.78	12289.88	14376.40	17021.83	20224.14	23591.05	27089.68	30739.72	34393.79	38210.36	40311.04	41025.60	41025.60
UHF	PRICE	0.00	0.00	0.00	0.00	1.06	0.98	0.91	0.95	0.88	0.82	0.76	0.82	0.76	0.71	0.72	0.67	0.62	0.57	
		QTY	0.00	0.00	0.00	0.00	320.63	776.62	1363.32	1650.80	1996.97	2448.66	2915.75	3416.72	3955.23	4513.21	5112.04	5444.96	5594.40	5594.40
MTS	SHF	PRICE	0.00	0.00	0.00	0.00	1.06	0.98	0.91	0.95	0.88	0.82	0.76	0.82	0.76	0.71	0.72	0.67	0.62	0.57
		QTY	0.00	0.00	0.00	0.00	1125.00	2667.60	4789.80	5632.20	6581.60	7965.00	9313.20	10719.00	12191.40	13671.00	15220.80	16075.80	16380.00	16380.00
UHF	PRICE	0.00	0.00	0.00	0.00	1.06	0.98	0.91	0.95	0.88	0.82	0.76	0.82	0.76	0.71	0.72	0.67	0.62	0.57	
		QTY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MPS	SHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		QTY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		QTY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDS (ALARM) SHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		QTY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(POLLING) SHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		QTY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Access Charges:																				
MRS	SHF	PRICE	0.00	0.00	0.00	0.00	254.32	235.48	218.04	228.81	211.86	196.16	181.63	195.38	180.91	167.51	174.74	161.79	149.81	138.71
		QTY	0.00	0.00	0.00	0.00	1.88	4.45	7.57	8.70	10.57	12.60	14.73	16.95	19.28	21.62	24.07	25.42	25.90	25.90
MTS	SHF	PRICE	0.00	0.00	0.00	0.00	254.32	235.48	218.04	228.81	211.86	196.16	181.63	195.38	180.91	167.51	174.74	161.79	149.81	138.71
		QTY	0.00	0.00	0.00	0.00	0.63	1.48	2.66	3.13	3.71	4.43	5.17	5.98	6.77	7.60	8.46	8.93	9.10	9.10
MPS	SHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		QTY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDS (DACS)	SHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		QTY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Connect charges:																				
MRS	SHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		QTY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		QTY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTS	SHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		QTY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		QTY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MPS	SHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		QTY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		QTY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDS (DACS) SHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		QTY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		QTY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Cash Receipts:																				
Grants	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Subsidies	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTV - fix assets	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9739.61
Equipment & Services:																				
Space Segment	PRICE	0.00	0.00	0.00	0.00	1142.35	1887.06	1828.83	1721.39	1619.83	1532.04	2227.28	1768.55	1744.34	1673.17	1579.60	1485.67	1406.43	1326.09	
	QTY	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Earth Segment	PRICE	0.00	0.00	0.00	0.00	250.52	464.15	429.77	397.93	368.46	341.16	315.89	292.49	270.83	250.76	232.19	214.99	199.07	184.32	

TELESAT FINANCIAL DATABASE
BUH NO. 25

TELESAT FINAN
RUX NO. 25

Appendix C-5

Pessimistic Scenario: Service Providers' Financial
Data Base

SERV. PROVIDERS FINANCIAL
DATABASE RUN ND. 2-J

SERV. PROVIDERS FINANCIAL	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
DATABASE RUN NO. 2-J																			
Operating Labour:																			
Sales:Incremental Selling Costs																			
MRS (I)	AMOUNT	0.00	0.00	0.00	0.00	1034.00	1525.00	1972.00	1150.00	1406.00	1701.00	1867.00	2035.00	2403.00	2180.00	2540.00	2066.00	1658.00	1419.00
MTS (I)	AMOUNT	0.00	0.00	0.00	0.00	375.00	551.00	795.00	439.00	535.00	648.00	712.00	775.00	844.00	895.00	967.00	787.00	632.00	541.00
MPS (I)	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDS(DACS) (I)	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Clerical: Billing & Bad Debt																			
MRS (I)	AMOUNT	0.00	0.00	0.00	0.00	34.00	80.00	136.00	160.00	190.00	227.00	265.00	305.00	353.00	389.00	433.00	458.00	466.00	466.00
MTS (I)	AMOUNT	0.00	0.00	0.00	0.00	11.00	27.00	48.00	56.00	67.00	80.00	93.00	107.00	122.00	137.00	152.00	161.00	164.00	164.00
MPS (I)	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDS(DACS) (I)	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Technicians:																			
Labour Training Costs																			
MRS (I)	AMOUNT	0.00	0.00	0.00	0.00	4.00	9.00	15.00	18.00	21.00	25.00	29.00	34.00	39.00	43.00	48.00	51.00	52.00	52.00
MTS (I)	AMOUNT	0.00	0.00	0.00	0.00	1.00	3.00	5.00	6.00	7.00	9.00	10.00	12.00	14.00	15.00	17.00	18.00	18.00	18.00
MPS (I)	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDS(DACS) (I)	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Repair Labour Costs																			
MRS (.33)	AMOUNT	0.00	0.00	0.00	0.00	145.00	345.00	587.00	690.00	819.00	976.00	1141.00	1313.00	1520.00	1675.00	1865.00	1970.00	2007.00	2007.00
MTS (.33)	AMOUNT	0.00	0.00	0.00	0.00	48.00	115.00	206.00	242.00	288.00	343.00	401.00	462.00	525.00	587.00	655.00	692.00	705.00	705.00
MPS (.19)	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDS(DACS) (.89)	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Installation Labour Cost																			
MRS (.33)	AMOUNT	0.00	0.00	0.00	0.00	410.00	681.00	966.00	772.00	929.00	1115.00	1266.00	1421.00	1660.00	1684.00	1910.00	1825.00	1720.00	1646.00
MTS (.33)	AMOUNT	0.00	0.00	0.00	0.00	137.00	227.00	352.00	271.00	326.00	392.00	445.00	499.00	557.00	610.00	671.00	641.00	605.00	578.00
MPS (0)	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDS(DACS) (.66)	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Removal Labour Costs																			
MRS (I)	AMOUNT	0.00	0.00	0.00	0.00	27.00	64.00	109.00	128.00	152.00	181.00	211.00	243.00	281.00	310.00	345.00	365.00	372.00	372.00
MTS (I)	AMOUNT	0.00	0.00	0.00	0.00	9.00	21.00	38.00	45.00	53.00	63.00	74.00	85.00	97.00	109.00	121.00	128.00	131.00	131.00
MPS (0)	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDS(DACS) (I)	AMOUNT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Operating Expenditures:																			
Airtime Costs:																			
MRS SHF	PRICE	0.00	0.00	0.00	0.00	1.18	1.12	1.07	1.15	1.10	1.04	0.99	1.11	1.06	1.01	1.06	1.01	0.96	0.91
	QTY	0.00	0.00	0.00	0.00	3375.00	8006.40	13633.20	16027.20	19018.80	22672.80	26506.80	30506.40	35307.00	38907.00	43322.40	45756.00	46620.00	46620.00
UHF	PRICE	0.00	0.00	0.00	0.00	1.88	1.79	1.71	1.84	1.75	1.67	1.59	1.78	1.70	1.62	1.69	1.61	1.54	1.46
	QTY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTS SHF	PRICE	0.00	0.00	0.00	0.00	1.18	1.12	1.07	1.15	1.10	1.04	0.99	1.11	1.06	1.01	1.06	1.01	0.96	0.91
	QTY	0.00	0.00	0.00	0.00	1125.00	2667.60	4789.80	5632.20	6681.60	7965.00	9313.20	10719.00	12191.40	13671.00	15220.80	16075.80	16380.00	16380.00
UHF	PRICE	0.00	0.00	0.00	0.00	1.88	1.79	1.71	1.84	1.75	1.67	1.59	1.78	1.70	1.62	1.69	1.61	1.54	1.46
	QTY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MPS SHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	QTY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	QTY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDS (ALARM) SHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	QTY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(POLLING) SHF	PRICE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	QTY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Access Charges:																			
MRS	PRICE	0.00	0.00	0.00	0.00	282.07	268.64	255.85	276.15	263.00	250.48	238.55	263.94	251.37	239.40	256.86	244.63	232.98	221.89

Appendix C-6

Pessimistic Scenario: Manufacturers' Financial
Data Base

**INCREMENTAL CASH FLOWS
DATA BASE: MANUFACTURERS
RIIN NO. 2-1**

RUN NO. 2-J

www.wps.org

INCREMENTAL CASH FLOWS

DATA BASE: MANUFACTURER

RUM NO. 2-3

Operating Expenditure:

Egypt & Services: Domestic

Expat & Servcs:Imported

Total AMOUNT 0.00 0.00 0.00 0.00 100.00 0.00

Terminals: MRS AMOUNT 0.00 0.00 0.00 0.00 500.00 700.00 800.00 200.00 500.00 600.00 600.00 100.00 1100.00 1400.00 900.00 800.00 1100.00 1100.00

MIS AMOUNT 0.00 0.00 0.00 0.00 200.00 300.00 400.00 200.00 200.00 200.00 300.00 500.00 600.00 700.00 400.00 400.00 500.00 500.00

INCREMENTAL CASH FLOWS
DATA BASE: MANUFACTURERS
RUN NO. 2-3

RUN NO. 2-3

RUM MD.

Operating Labour

SPARE

INCREMENTAL CASH FLOWS DATA BASE: MANUFACTURERS

DATA BASE: VARIOUS ACTORS.

INCREMENTAL CASH FLOWS

DATA BASE: MANUFACTURERS

BISH NO. 2-1

CACC / CCAC



38604

EVANS, JOHN C.
--Overall socio-economic analysis
of the MSAT project.

LKC

P91 .C655 E8962 1985 v.3
Overall socio-economic
analysis of the MSAT project

1985

v.3

DATE DUE
DATE DE RETOUR

27 FEB 1986

MAR 14 1986

NOV 25 1986

JUL 10 1991

SEP 15 1991

MAR 2 1992

