BASIC CASE

--- CASE 1 ---

NET PRESENT VALUE = 17229.3 (MIL. SUCRES)

B / C = 1.644

IRR = 17.8 (%)

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 1 ---

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
TRAFFIC DEMAND													
WITH PROJECT													
VEH .KM (MIL.V.KMS)	0.0	0.0	0.0	2934.4	3316.6	3698.7	4080.8	4462.9	4845.0	5227.2	5609.3	5991.4	6373.5
VEH .H (MIL.V.HOURS)	0.0	0.0	0.0	88.7	102.0	115.3	128.6	142.0	155.3	168.6	181.9	195.2	208.5
PASS.H (MIL.P.HOURS)	0.0	0.0	0.0	26.7	28.0	29.4	30.7	31.7	32.7	33.6	34.6	35.6	36.5
WITHOUT PROJECT													
VEH .KM (MIL.V.KMS)	0.0	0.0	0.0	3099.4	3496.2	3893.0	4289.7	4685.6	5081.5	5477.4	5873.3	6269.2	6665.1
VEH .H (MIL.V.HOURS)	0.0	0.0	0.0	96.2	112.0	127.7	143.4	159.1	174.7	190.4	206.1	221.7	237.4
BENEFIT													
TOTAL BENEFIT	0.0	0.0	0.0	1481.2	1781.2	1982.8	2122.3	2200.3	2237.1	2251.7	2236.4	2190.9	2137.3
TIME SAVING	0.0	0.0	0.0	93.3	313.9	474.4	598.9	689.5	753.8	803.9	833.3	842.4	845.3
V-TIME DIFF.	0.0	0.0	0.0	7.5	10.0	12.4	14.8	17.1	19.4	21.8	24.2	26.5	28.9
V-TIME SAVE BEF. DISC.	0.0	0.0	0.0	1252.5	1670.0	2070.8	2471.6	2855.7	3239.8	3640.6	4041.4	4425.5	4826.3
MRT PASS. TIME SPENT	0.0	0.0	0.0	1121.4	1176.0	1234.8	1289.4	1331.4	1373.4	1411.2	1453.2	1495.2	1533.0
COST SAVING	0.0	0.0	0.0	1387.9	1467.3	1508.4	1523.4	1510.8	1483.3	1447.8	1403.1	1348.5	1292.0
V-TIME DIFF.	0.0	0.0	0.0	7.5	10.0	12.4	14.8	17.1	19.4	21.8	24.2	26.5	28.9
V-DIST DIFF.	0.0	0.0	0.0	165.0	179.6	194.3	208.9	222.7	236.5	250.2	264.0	277.8	291.6
V-COST SAVE BEF. DISC.	0.0	0.0	0.0	1949.9	2308.8	2658.3	3007.0	3339.9	3672.7	4014.9	4357.9	4690.8	5033.7
COST													
MRT PROJECT COST	217.0	10747.3	9595.0	411.1	718.5	1060.2	316.3	282.4	903.2	241.7	215.8	192.7	305.0
CURRENT INVESTMENT	217.0	12037.0	12036.0	0.0	553.0	1291.0	0.0	0.0	1612.0	0.0	0.0	0.0	518.0
CURRENT MAINT.&OPERAT.	0.0	0.0	0.0	577.5	577.5	577.5	624.3	624.3	624.3	670.2	670.2	670.2	670.2
DISCOUNT RATIO	$(1.12)^{0}$	$(1.12)^{1}$	$(1.12)^{2}$	$(1.12)^{3}$	$(1.12)^{4}$	$(1.12)^{5}$	$(1.12)^{6}$	$(1.12)^{7}$	$(1.12)^{8}$	$(1.12)^{9}$	$(1.12)^{10}$	$(1.12)^{11}$	$(1.12)^{12}$
B - C	-217.0	-10747.3	-9595.0	1070.1	1062.7	922.6	1806.0	1917.9	1333.9	2010.0	2020.6	1998.2	1832.3

BASIC CASE

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 1 ---

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
TRAFFIC DEMAND													
WITH PROJECT													
VEH .KM (MIL.V.KMS)	6755.6	7137.8	7519.9	7902.0	8284.1	8666.2	9048.3	9430.5	9812.6	10194.7	10576.8	10958.9	11341.1
VEH .H (MIL.V.HOURS)	221.9	235.2	248.5	261.8	275.1	288.4	301.8	315.1	328.4	341.7	355.0	368.4	381.7
PASS.H (MIL.P.HOURS)	37.5	38.3	39.1	40.0	40.8	41.6	42.4	43.2	44.1	44.9	45.7	45.7	45.7
WITHOUT PROJECT													
VEH .KM (MIL.V.KMS)	7061.0	7456.9	7852.7	8248.6	8644.5	9040.4	9436.4	9832.3	10228.3	10624.2	11020.2	11415.4	11810.7
VEH .H (MIL.V.HOURS)	253.1	268.7	284.4	300.0	315.7	331.4	347.0	362.7	378.4	394.0	409.7	425.3	440.9
BENEFIT													
TOTAL BENEFIT	2063.0	1981.7	1899.0	1806.3	1716.2	1624.6	1526.9	1436.9	1348.3	1260.4	1177.7	1096.7	1021.1
TIME SAVING	833.1	815.6	795.3	766.6	737.9	706.6	669.7	636.0	601.4	566.0	532.4	499.6	468.7
V-TIME DIFF.	31.2	33.5	35.9	38.2	40.6	43.0	45.2	47.6	50.0	52.3	54.7	56.9	59.2
V-TIME SAVE BEF. DISC.	5210.4	5594.5	5995.3	6379.4	6780.2	7181.0	7548.4	7949.2	8350.0	8734.1	9134.9	9502.3	9886.4
MRT PASS. TIME SPENT	1575.0	1608.6	1642.2	1680.0	1713.6	1747.2	1780.8	1814.4	1852.2	1885.8	1919.4	1919.4	1919.4
COST SAVING	1229.9	1166.1	1103.7	1039.7	978.3	918.0	857.2	800.9	746.9	694.4	645.3	597.1	552.4
V-TIME DIFF.	31.2	33.5	35.9	38.2	40.6	43.0	45.2	47.6	50.0	52.3	54.7	56.9	59.2
V-DIST DIFF.	305.4	319.1	332.8	346.6	360.4	374.2	388.1	401.8	415.7	429.5	443.4	456.5	469.6
V-COST SAVE BEF. DISC.	5366.6	5698.7	6040.9	6373.8	6716.8	7059.7	7383.2	7725.4	8069.1	8402.0	8745.7	9063.3	9391.1
COST													
MRT PROJECT COST	164.5	146.8	131.1	117.1	104.5	93.3	83.3	74.4	66.4	254.3	61.6	55.0	49.1
CURRENT INVESTMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2350.0	0.0	0.0	0.0
CURRENT MAINT.&OPERAT.	717.6	717.6	717.6	717.6	717.6	717.6	717.6	717.6	717.6	717.6	835.1	835.1	835.1
	13	14	15	16	17	18	19	20	21	22	23	24	25
DISCOUNT RATIO	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)
B - C	1898.5	1834.9	1767.9	1689.2	1611.7	1531.3	1443.6	1362.5	1281.9	1006.1	1116.1	1041.7	972.0

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 1 ---

	2013	2014	2015	2016
TRAFFIC DEMAND				
WITH PROJECT				
VEH .KM (MIL.V.KMS)	11723.2	12105.3	12487.4	12869.5
VEH .H (MIL.V.HOURS)	395.0	408.3	421.6	434.9
PASS.H (MIL.P.HOURS)	45.7	45.7	45.7	45.7
WITHOUT PROJECT				
VEH .KM (MIL.V.KMS)	12205.9	12601.1	12996.3	13391.5
VEH .H (MIL.V.HOURS)	456.6	472.2	487.8	503.4
BENEFIT				
TOTAL BENEFIT	950.5	882.0	817.3	756.4
TIME SAVING	439.5	410.4	382.5	355.9
V-TIME DIFF.	61.6	63.9	66.2	68.5
V-TIME SAVE BEF. DISC.	10287.2	10671.3	11055.4	11439.5
MRT PASS. TIME SPENT	1919.4	1919.4	1919.4	1919.4
COST SAVING	511.0	471.6	434.8	400.5
V-TIME DIFF.	61.6	63.9	66.2	68.5
V-DIST DIFF.	482.7	495.8	508.9	522.0
V-COST SAVE BEF. DISC.	9729.0	10056.8	10384.6	10712.4
COST				
MRT PROJECT COST	43.9	39.2	35.0	31.2
CURRENT INVESTMENT	0.0	0.0	0.0	0.0
CURRENT MAINT.&OPERAT.	835.1	835.1	835.1	835.1
	26	27	28	29
DISCOUNT RATIO	(1.12)	(1.12)	(1.12)	(1.12)
B - C	906.6	842.8	782.3	725.2

CASE A-1

--- CASE 3 ---

NET PRESENT VALUE = 17980.1 (MIL. SUCRES)

B / C = 1.772

IRR = 19.1 (%)

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 3 ---

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
TRAFFIC DEMAND													
WITH PROJECT													
VEH .KM (MIL.V.KMS)	0.0	0.0	0.0	3045.7	3436.3	3826.9	4080.8	4462.9	4845.0	5227.2	5609.3	5991.4	6373.5
VEH .H (MIL.V.HOURS)	0.0	0.0	0.0	92.5	107.2	121.9	128.6	142.0	155.3	168.6	181.9	195.2	208.5
PASS.H (MIL.P.HOURS)	0.0	0.0	0.0	8.3	8.8	9.3	30.7	31.7	32.7	33.6	34.6	35.6	36.5
WITHOUT PROJECT													
VEH .KM (MIL.V.KMS)	0.0	0.0	0.0	3099.4	3496.2	3893.0	4289.7	4685.6	5081.5	5477.4	5873.3	6269.2	6665.1
VEH .H (MIL.V.HOURS)	0.0	0.0	0.0	96.2	112.0	127.7	143.4	159.1	174.7	190.4	206.1	221.7	237.4
BENEFIT													
TOTAL BENEFIT	0.0	0.0	0.0	734.4	858.4	932.2	2122.3	2200.3	2237.1	2251.7	2236.4	2190.9	2137.3
TIME SAVING	0.0	0.0	0.0	191.7	274.5	328.0	598.9	689.5	753.8	803.9	833.3	842.4	845.3
V-TIME DIFF.	0.0	0.0	0.0	3.7	4.8	5.8	14.8	17.1	19.4	21.8	24.2	26.5	28.9
V-TIME SAVE BEF. DISC.	0.0	0.0	0.0	617.9	801.6	968.6	2471.6	2855.7	3239.8	3640.6	4041.4	4425.5	4826.3
MRT PASS. TIME SPENT	0.0	0.0	0.0	348.6	369.6	390.6	1289.4	1331.4	1373.4	1411.2	1453.2	1495.2	1533.0
COST SAVING	0.0	0.0	0.0	542.7	583.9	604.2	1523.4	1510.8	1483.3	1447.8	1403.1	1348.5	1292.0
V-TIME DIFF.	0.0	0.0	0.0	3.7	4.8	5.8	14.8	17.1	19.4	21.8	24.2	26.5	28.9
V-DIST DIFF.	0.0	0.0	0.0	53.7	59.9	66.1	208.9	222.7	236.5	250.2	264.0	277.3	291.6
V-COST SAVE BEF. DISC.	0.0	0.0	0.0	762.4	918.7	1064.8	3007.0	3339.9	3672.7	4014.9	4357.9	4670.8	5033.7
COST													
MRT PROJECT COST	133.0	5132.1	4582.3	359.1	4825.8	4308.2	293.1	261.7	884.7	241.7	215.8	192.7	305.0
CURRENT INVESTMENT	133.0	5748.0	5748.0	213.0	7302.0	7301.0	0.0	0.0	1612.0	0.0	0.0	0.0	518.0
CURRENT MAINT.&OPERAT.	0.0	0.0	0.0	291.5	291.5	291.5	578.6	578.6	578.6	670.2	670.2	670.2	670.2
DISCOUNT RATIO	$(1.12)^0$	$(1.12)^1$	$(1.12)^2$	$(1.12)^3$	$(1.12)^4$	$(1.12)^5$	$(1.12)^6$	$(1.12)^7$	$(1.12)^8$	$(1.12)^9$	$(1.12)^{10}$	$(1.12)^{11}$	$(1.12)^{12}$
B - C	-133.0	-5132.1	-4592.3	375.3	-3967.4	-3376.0	1829.2	1938.6	1352.4	2010.0	2020.6	1998.2	1832.3

CASE A-1

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 3 ---

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
TRAFFIC DEMAND													
WITH PROJECT													
VEH .KM (MIL.V.KMS)	6755.6	7137.8	7519.9	7902.0	8284.1	8666.2	9048.3	9430.5	9812.6	10194.7	10576.8	10958.9	11341.1
VEH .H (MIL.V.HOURS)	221.9	235.2	248.5	261.8	275.1	288.4	301.8	315.1	328.4	341.7	355.0	368.4	381.7
PASS.H (MIL.P.HOURS)	37.5	38.3	39.1	40.0	40.8	41.6	42.4	43.2	44.1	44.9	45.7	45.7	45.7
WITHOUT PROJECT													
VEH .KM (MIL.V.KMS)	7061.0	7456.9	7852.7	8248.6	8644.5	9040.4	9436.4	9832.3	10228.3	10624.2	11020.2	11415.4	11810.7
VEH .H (MIL.V.HOURS)	253.1	268.7	284.4	300.0	315.7	331.4	347.0	362.7	378.4	394.0	409.7	425.3	440.9
BENEFIT													
TOTAL BENEFIT	2063.0	1981.7	1399.0	1806.3	1716.2	1624.6	1526.9	1436.9	1348.3	1260.4	1177.7	1096.7	1021.1
TIME SAVING	833.1	815.6	795.3	766.6	737.9	706.6	669.7	636.0	601.4	566.0	532.4	499.6	458.7
V-TIME DIFF.	31.2	33.5	35.9	38.2	40.6	43.0	45.2	47.6	50.0	52.3	54.7	56.9	59.2
V-TIME SAVE BEF. DISC.	5210.4	5594.5	5995.3	6379.4	6780.2	7181.0	7548.4	7949.2	8350.0	8734.1	9134.9	9502.3	9856.4
MRT PASS. TIME SPENT	1575.0	1608.6	1642.2	1680.0	1713.6	1747.2	1780.8	1814.4	1852.2	1885.8	1919.4	1919.4	1919.4
COST SAVING	1229.9	1166.1	1103.7	1039.7	978.3	918.0	857.2	800.9	746.9	694.4	645.3	597.1	552.4
V-TIME DIFF.	31.2	33.5	35.9	38.2	40.6	43.0	45.2	47.6	50.0	52.3	54.7	56.9	59.2
V-DIST DIFF.	305.4	319.1	332.8	346.6	360.4	374.2	388.1	401.8	415.7	429.5	443.4	456.5	469.6
V-COST SAVE BEF. DISC.	5366.6	5698.7	6040.9	6373.8	6716.8	7059.7	7383.2	7725.4	8069.1	8402.0	8745.7	9053.3	9391.1
COST													
MRT PROJECT COST	164.5	146.8	131.1	117.1	104.5	93.3	83.3	74.4	66.4	254.3	61.6	55.0	49.1
CURRENT INVESTMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2160.0	0.0	0.0	0.0
CURRENT MAINT.&OPERAT.	717.6	717.6	717.6	717.6	717.6	717.6	717.6	717.6	717.6	717.6	835.1	835.1	835.1
	13	14	15	16	17	18	19	20	21	22	23	24	25
DISCOUNT RATIO	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)
B - C	1898.5	1834.9	1767.9	1689.2	1611.7	1531.3	1443.6	1362.5	1281.9	1006.1	1116.1	1041.7	972.0

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 3 ---

	2013	2014	2015	2016
TRAFFIC DEMAND				
WITH PROJECT				
VEH .KM (MIL.V.KMS)	11723.2	12105.3	12487.4	12869.5
VEH .H (MIL.V.HOURS)	395.0	408.3	421.6	434.9
PASS.H (MIL.P.HOURS)	45.7	45.7	45.7	45.7
WITHOUT PROJECT				
VEH .KM (MIL.V.KMS)	12205.9	12601.1	12996.3	13391.5
VEH .H (MIL.V.HOURS)	456.6	472.2	487.8	503.4
BENEFIT				
TOTAL BENEFIT	950.5	882.0	817.3	756.4
TIME SAVING	439.5	410.4	382.5	355.9
V-TIME DIFF.	61.6	63.9	66.2	68.5
V-TIME SAVE BEF. DISC.	10287.2	10671.3	11055.4	11439.5
MRT PASS. TIME SPENT	1919.4	1919.4	1919.4	1919.4
COST SAVING	511.0	471.6	434.8	400.5
V-TIME DIFF.	61.6	63.9	66.2	68.5
V-DIST DIFF.	482.7	495.8	508.9	522.0
V-COST SAVE BEF. DISC.	9729.0	10056.8	10384.6	10712.4
COST				
MRT PROJECT COST	43.9	39.2	35.0	31.2
CURRENT INVESTMENT	0.0	0.0	0.0	0.0
CURRENT MAINT.&OPERAT.	835.1	835.1	835.1	835.1
	26	27	28	29
DISCOUNT RATIO	(1.12)	(1.12)	(1.12)	(1.12)
B - C	906.6	842.8	792.3	725.2

CASE A-2

--- CASE 4 ---

NET PRESENT VALUE = 17596.3 (MIL. SUCRES)

B / C = 1.821

IRR = 19.5 (%)

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 4 ---

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
TRAFFIC DEMAND													
WITH PROJECT													
VEH .KM (MIL.V.KMS)	0.0	0.0	0.0	3045.7	3436.3	3826.9	4177.8	4564.2	4950.6	5227.2	5609.3	5991.4	6373.5
VEH .H (MIL.V.HOURS)	0.0	0.0	0.0	92.5	107.2	121.9	133.6	147.7	161.7	169.6	181.9	195.2	208.5
PASS.H (MIL.P.HOURS)	0.0	0.0	0.0	8.3	8.8	9.3	16.8	17.2	17.6	33.6	34.6	35.6	36.5
WITHOUT PROJECT													
VEH .KM (MIL.V.KMS)	0.0	0.0	0.0	3099.4	3496.2	3893.0	4289.7	4665.6	5081.5	5477.4	5873.3	6269.2	6665.1
VEH .H (MIL.V.HOURS)	0.0	0.0	0.0	96.2	112.0	127.7	143.4	159.1	174.7	190.4	206.1	221.7	237.4
BENEFIT													
TOTAL BENEFIT	0.0	0.0	0.0	734.4	858.4	932.2	1384.0	1453.4	1492.0	2251.7	2236.4	2190.9	2137.3
TIME SAVING	0.0	0.0	0.0	191.7	274.5	328.0	471.7	534.4	578.3	803.9	833.3	842.4	845.3
V-TIME DIFF.	0.0	0.0	0.0	3.7	4.8	5.8	9.8	11.4	13.0	21.8	24.2	26.5	28.9
V-TIME SAVE BEF. DISC.	0.0	0.0	0.0	617.9	801.6	968.6	1636.6	1903.8	2171.0	3640.6	4041.4	4425.5	4826.3
MRT PASS. TIME SPENT	0.0	0.0	0.0	358.6	369.6	390.6	705.6	722.4	739.2	1411.2	1453.2	1495.2	1533.0
COST SAVING	0.0	0.0	0.0	542.7	583.9	604.2	912.3	919.0	913.7	1447.8	1403.1	1348.5	1292.0
V-TIME DIFF.	0.0	0.0	0.0	3.7	4.8	5.8	9.8	11.4	13.0	21.8	24.2	26.5	28.9
V-DIST DIFF.	0.0	0.0	0.0	53.7	59.9	66.1	111.9	121.4	130.9	250.2	254.0	277.8	291.6
V-COST SAVE BEF. DISC.	0.0	0.0	0.0	762.4	918.7	1064.8	1800.8	2031.5	2262.4	4014.9	4357.9	4630.8	5033.7
COST													
MRT PROJECT COST	133.0	5132.1	4582.3	258.7	1870.4	1674.8	270.4	2644.8	2361.0	241.7	215.8	192.7	305.0
CURRENT INVESTMENT	133.0	5748.0	5748.0	72.0	2661.0	2660.0	167.0	5480.0	5479.0	0.0	0.0	0.0	518.0
CURRENT MAINT.&OPERAT.	0.0	0.0	0.0	291.5	291.5	291.5	366.8	366.8	366.8	670.2	670.2	670.2	670.2
DISCOUNT RATIO	$(1.12)^0$	$(1.12)^1$	$(1.12)^2$	$(1.12)^3$	$(1.12)^4$	$(1.12)^5$	$(1.12)^6$	$(1.12)^7$	$(1.12)^8$	$(1.12)^9$	$(1.12)^{10}$	$(1.12)^{11}$	$(1.12)^{12}$
B - C	-133.0	-5132.1	-4582.3	475.7	-1018.0	-742.6	1113.6	-1191.4	-869.0	2010.0	2020.6	1998.2	1632.3

CASE A-2

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 4 ---

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
TRAFFIC DEMAND													
WITH PROJECT													
VEH .KM (MIL.V.KMS)	6755.6	7137.8	7519.9	7902.0	8284.1	8666.2	9048.3	9430.5	9812.6	10194.7	10576.8	10958.9	11341.1
VEH .H (MIL.V.HOURS)	221.9	235.2	248.5	261.8	275.1	288.4	301.8	315.1	328.4	341.7	355.0	368.4	381.7
PASS.H (MIL.P.HOURS)	37.5	38.3	39.1	40.0	40.8	41.6	42.4	43.2	44.1	44.9	45.7	45.7	45.7
WITHOUT PROJECT													
VEH .KM (MIL.V.KMS)	7061.0	7456.9	7852.7	8248.6	8644.5	9040.4	9436.4	9832.3	10228.3	10624.2	11020.2	11415.4	11810.7
VEH .H (MIL.V.HOURS)	253.1	268.7	284.4	300.0	315.7	331.4	347.0	362.7	378.4	394.0	409.7	425.3	440.9
BENEFIT													
TOTAL BENEFIT	2063.0	1981.7	1899.0	1806.3	1716.2	1624.6	1526.9	1436.9	1349.3	1260.4	1177.7	1096.7	1021.1
TIME SAVING	833.1	815.6	795.3	766.6	737.9	706.6	669.7	636.0	601.4	566.0	532.4	499.6	468.7
V-TIME DIFF.	31.2	33.5	35.9	38.2	40.6	43.0	45.2	47.6	50.0	52.3	54.7	56.9	59.2
V-TIME SAVE BEF. DISC.	5210.4	5594.5	5995.3	6379.4	6780.2	7181.0	7548.4	7949.2	8350.0	8734.1	9134.9	9502.3	9886.4
MRT PASS. TIME SPENT	1575.0	1608.6	1642.2	1680.0	1713.6	1747.2	1780.8	1814.4	1852.2	1885.8	1919.4	1919.4	1919.4
COST SAVING	1229.9	1166.1	1103.7	1039.7	978.3	918.0	857.2	800.9	746.9	694.4	645.3	597.1	552.6
V-TIME DIFF.	31.2	33.5	35.9	38.2	40.6	43.0	45.2	47.6	50.0	52.3	54.7	56.9	59.2
V-DIST DIFF.	305.4	319.1	332.8	346.6	360.4	374.2	388.1	401.8	415.7	429.5	443.4	456.5	469.6
V-COST SAVE BEF. DISC.	5366.6	5698.7	6040.9	6373.8	6716.3	7059.7	7383.2	7725.4	8069.1	8402.0	8745.7	9063.3	9393.1
COST													
MRT PROJECT COST	164.5	146.8	131.1	117.1	104.5	93.3	83.3	74.4	66.4	254.3	61.6	55.0	49.1
CURRENT INVESTMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2360.0	0.0	0.0	0.0
CURRENT MAINT.&OPERAT.	717.6	717.6	717.6	717.6	717.6	717.6	717.6	717.6	717.6	717.6	835.1	835.1	835.1
	13	14	15	16	17	18	19	20	21	22	23	24	25
DISCOUNT RATIO	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)
B - C	1898.5	1834.9	1767.9	1689.2	1611.7	1531.3	1443.6	1362.5	1281.9	1006.1	1116.1	1041.7	972.0

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 4 ---

	2013	2014	2015	2016
TRAFFIC DEMAND				
WITH PROJECT				
VEH .KM (MIL.V.KMS)	11723.2	12105.3	12487.4	12869.5
VEH .H (MIL.V.HOURS)	395.0	408.3	421.6	434.9
PASS.H (MIL.P.HOURS)	45.7	45.7	45.7	45.7
WITHOUT PROJECT				
VEH .KM (MIL.V.KMS)	12205.9	12601.1	12996.3	13391.5
VEH .H (MIL.V.HOURS)	456.6	472.2	487.8	503.4
BENEFIT				
TOTAL BENEFIT	950.5	882.0	817.3	756.4
TIME SAVING	439.5	410.4	382.5	355.9
V-TIME DIFF.	61.6	63.9	66.2	68.5
V-TIME SAVE BEF. DISC.	10287.2	10671.3	11055.4	11439.5
MRT PASS. TIME SPENT	1919.4	1919.4	1919.4	1919.4
COST SAVING	511.0	471.6	434.8	400.5
V-TIME DIFF.	61.6	63.9	66.2	68.5
V-DIST DIFF.	482.7	495.8	508.9	522.0
V-COST SAVE BEF. DISC.	9729.0	10056.8	10384.6	10712.4
COST				
MRT PROJECT COST	43.9	39.2	35.0	31.2
CURRENT INVESTMENT	0.0	0.0	0.0	0.0
CURRENT MAINT.&OPERAT.	835.1	835.1	835.1	835.1
	26	27	28	29
DISCOUNT RATIO	(1.12)	(1.12)	(1.12)	(1.12)
B - C	906.6	842.6	782.3	725.2

CASE B-1

--- CASE 5 ---

NET PRESENT VALUE = 17648.9 (MIL. SUCRES)

B / C = 1.723

IRR = 18.6 (%)

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 5 ---

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
TRAFFIC DEMAND													
WITH PROJECT													
VEH .KM (MIL.V.KMS)	0.0	0.0	0.0	3017.9	3404.5	3791.2	4080.8	4462.9	4845.0	5227.2	5609.3	5991.4	6373.5
VEH .H (MIL.V.HOURS)	0.0	0.0	0.0	91.4	105.5	119.5	128.6	142.0	155.3	168.6	181.9	195.2	208.5
PASS.H (MIL.P.HOURS)	0.0	0.0	0.0	14.4	15.2	16.0	30.7	31.7	32.7	33.6	34.6	35.6	36.5
WITHOUT PROJECT													
VEH .KM (MIL.V.KMS)	0.0	0.0	0.0	3099.4	3496.2	3893.0	4289.7	4685.6	5081.5	5477.4	5873.3	6269.2	6665.1
VEH .H (MIL.V.HOURS)	0.0	0.0	0.0	96.2	112.0	127.7	143.4	159.1	174.7	190.4	206.1	221.7	237.4
BENEFIT													
TOTAL BENEFIT	0.0	0.0	0.0	904.8	1123.2	1294.1	2122.3	2200.3	2237.1	2251.7	2236.4	2190.9	2137.3
TIME SAVING	0.0	0.0	0.0	140.1	284.1	395.7	598.9	689.5	753.8	803.9	833.3	842.4	845.3
V-TIME DIFF.	0.0	0.0	0.0	4.8	6.5	8.2	14.8	17.1	19.4	21.8	24.2	26.5	28.9
V-TIME SAVE BEF. DISC.	0.0	0.0	0.0	801.6	1085.5	1369.4	2471.6	2855.7	3239.8	3640.6	4041.4	4425.5	4826.3
MRT PASS. TIME SPENT	0.0	0.0	0.0	604.8	638.4	672.0	1289.4	1331.4	1373.4	1411.2	1453.2	1495.2	1533.0
COST SAVING	0.0	0.0	0.0	764.7	839.1	898.4	1523.4	1510.8	1483.3	1447.8	1403.1	1348.5	1292.0
V-TIME DIFF.	0.0	0.0	0.0	4.8	6.5	8.2	14.8	17.1	19.4	21.8	24.2	26.5	28.9
V-DIST DIFF.	0.0	0.0	0.0	81.5	91.7	101.8	208.9	222.7	236.5	250.2	264.0	277.8	291.6
V-COST SAVE BEF. DISC.	0.0	0.0	0.0	1074.3	1320.3	1565.6	3007.0	3339.9	3672.7	4014.9	4357.9	4690.8	5033.7
COST													
MRT PROJECT COST	162.0	6812.5	6082.6	378.8	3677.2	3283.3	316.3	282.4	901.2	241.7	215.8	192.7	305.0
CURRENT INVESTMENT	162.0	7630.0	7630.0	167.0	5421.0	5421.0	0.0	0.0	1612.0	0.0	0.0	0.0	516.0
CURRENT MAINT.&OPERAT.	0.0	0.0	0.0	365.2	365.2	365.2	624.3	624.3	624.3	670.2	670.2	670.2	670.2
DISCOUNT RATIO	$(1.12)^{0}$	$(1.12)^{1}$	$(1.12)^{2}$	$(1.12)^{3}$	$(1.12)^{4}$	$(1.12)^{5}$	$(1.12)^{6}$	$(1.12)^{7}$	$(1.12)^{8}$	$(1.12)^{9}$	$(1.12)^{10}$	$(1.12)^{11}$	$(1.12)^{12}$
B - C	-162.0	-6812.5	-6082.6	526.0	-2554.0	-1999.2	1806.0	1917.9	1333.9	2010.0	2020.6	1998.2	1632.3

CASE B-1

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 5 ---

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
TRAFFIC DEMAND													
WITH PROJECT													
VEH .KM (MIL.V.KMS)	6755.6	7137.8	7519.9	7902.0	8284.1	8666.2	9048.3	9430.5	9812.6	10194.7	10576.0	10958.9	11341.1
VEH .H (MIL.V.HOURS)	221.9	235.2	248.5	261.8	275.1	288.4	301.8	315.1	328.4	341.7	355.0	368.4	381.7
PASS.H (MIL.P.HOURS)	37.5	38.3	39.1	40.0	40.8	41.6	42.4	43.2	44.1	44.9	45.7	45.7	45.7
WITHOUT PROJECT													
VEH .KM (MIL.V.KMS)	7061.0	7456.9	7852.7	8248.6	8644.5	9040.4	9436.4	9832.3	10228.3	10624.2	11020.2	11415.4	11810.7
VEH .H (MIL.V.HOURS)	253.1	268.7	284.4	300.0	315.7	331.4	347.0	362.7	378.4	394.0	409.7	425.3	440.9
BENEFIT													
TOTAL BENEFIT	2063.0	1981.7	1899.0	1806.3	1716.2	1624.6	1526.9	1436.9	1348.3	1260.4	1177.7	1096.7	1021.1
TIME SAVING	833.1	815.6	795.3	766.6	737.9	706.6	669.7	636.0	601.4	566.0	532.4	499.6	468.7
V-TIME DIFF.	31.2	33.5	35.9	38.2	40.6	43.0	45.2	47.6	50.0	52.3	54.7	56.9	59.2
V-TIME SAVE BEF. DISC.	5210.4	5594.5	5995.3	6379.4	6780.2	7181.0	7548.4	7949.2	8350.0	8734.1	9134.9	9502.3	9896.4
MRT PASS. TIME SPENT	1575.0	1608.6	1642.2	1680.0	1713.6	1747.2	1780.8	1814.4	1852.2	1885.8	1919.4	1919.4	1919.4
COST SAVING	1229.9	1166.1	1103.7	1039.7	978.3	918.0	857.2	800.9	746.9	694.4	645.3	597.1	552.4
V-TIME DIFF.	31.2	33.5	35.9	38.2	40.6	43.0	45.2	47.6	50.0	52.3	54.7	56.9	59.2
V-DIST DIFF.	305.4	319.1	332.6	346.6	360.4	374.2	388.1	401.8	415.7	429.5	443.4	456.5	459.6
V-COST SAVE BEF. DISC.	5356.6	5698.7	6040.9	6373.3	6716.6	7059.7	7383.2	7725.4	8069.1	8402.0	8745.7	9053.3	9391.1
COST													
MRT PROJECT COST	164.5	146.8	131.1	117.1	104.5	93.3	83.3	74.4	66.4	254.3	61.6	55.0	49.1
CURRENT INVESTMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2340.0	0.0	0.0	0.0
CURRENT MAINT.&OPERAT.	717.6	717.6	717.6	717.6	717.6	717.6	717.6	717.6	717.6	717.6	835.1	835.1	835.1
DISCOUNT RATIO	13 (1.12)	14 (1.12)	15 (1.12)	16 (1.12)	17 (1.12)	18 (1.12)	19 (1.12)	20 (1.12)	21 (1.12)	22 (1.12)	23 (1.12)	24 (1.12)	25 (1.12)
B - C	1898.5	1834.9	1767.9	1699.2	1611.7	1531.3	1443.6	1362.5	1281.9	1096.1	1116.1	1041.7	972.0

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 5 ---

	2013	2014	2015	2016
TRAFFIC DEMAND				
WITH PROJECT				
VEH .KM (MIL.V.KMS)	11723.2	12105.3	12487.4	12869.5
VEH .H (MIL.V.HOURS)	395.0	408.3	421.6	434.9
PASS.H (MIL.P.HOURS)	45.7	45.7	45.7	45.7
WITHOUT PROJECT				
VEH .KM (MIL.V.KMS)	12205.9	12601.1	12996.3	13391.5
VEH .H (MIL.V.HOURS)	456.6	472.2	497.8	503.4
BENEFIT				
TOTAL BENEFIT	950.5	892.0	817.3	756.4
TIME SAVING	439.5	410.4	382.5	355.9
V-TIME DIFF.	61.6	63.9	66.2	68.5
V-TIME SAVE BEF. DISC.	10297.2	10671.3	11055.4	11439.5
MRT PASS. TIME SPENT	1919.4	1919.4	1919.4	1919.4
COST SAVING	511.0	471.6	434.8	400.5
V-TIME DIFF.	61.6	63.9	66.2	68.5
V-DIST DIFF.	482.7	495.8	508.9	522.0
V-COST SAVE BEF. DISC.	9729.0	10056.8	10384.6	10712.4
COST				
MRT PROJECT COST	43.9	39.2	35.0	31.2
CURRENT INVESTMENT	0.0	0.0	0.0	0.0
CURRENT MAINT.&OPERAT.	835.1	835.1	835.1	835.1
DISCOUNT RATIO	26 (1.12)	27 (1.12)	28 (1.12)	29 (1.12)
B - C	906.6	842.3	782.3	725.2

CASE C-1

--- CASE 6 ---

NET PRESENT VALUE = 16774.4 (MIL. SUCRES)

B / C = 1.693

IRR = 18.4 (%)

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 6 ---

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
TRAFFIC DEMAND													
WITH PROJECT													
VEH.KM (MIL.V.KMS)	0.0	0.0	0.0	3056.7	3450.4	3844.2	4080.8	4462.9	4845.0	5227.2	5609.3	5991.4	6373.5
VEH.H (MIL.V.HOURS)	0.0	0.0	0.0	93.2	108.4	123.6	128.6	142.0	155.3	168.6	181.9	195.2	208.5
PASS.H (MIL.P.HOURS)	0.0	0.0	0.0	2.5	2.6	2.6	30.7	31.7	32.7	33.6	34.6	35.6	36.5
WITHOUT PROJECT													
VEH.KM (MIL.V.KMS)	0.0	0.0	0.0	3099.4	3496.2	3893.0	4289.7	4685.6	5081.5	5477.4	5373.3	5269.2	5665.1
VEH.H (MIL.V.HOURS)	0.0	0.0	0.0	96.2	112.0	127.7	143.4	159.1	174.7	190.4	206.1	221.7	237.4
BENEFIT													
TOTAL BENEFIT	0.0	0.0	0.0	717.6	754.6	762.2	2122.3	2200.3	2237.1	2251.7	2236.4	2190.9	2137.3
TIME SAVING	0.0	0.0	0.0	281.9	312.7	326.6	598.9	689.5	753.8	803.9	833.3	842.4	845.3
V-TIME DIFF.	0.0	0.0	0.0	3.0	3.6	4.1	14.8	17.1	19.4	21.8	24.2	26.5	28.9
V-TIME SAVE BEF. DISC.	0.0	0.0	0.0	501.0	601.2	684.7	2471.6	2855.7	3239.8	3640.6	4041.4	4425.5	4326.3
MRT PASS. TIME SPENT	0.0	0.0	0.0	105.0	109.2	109.2	1289.4	1331.4	1373.4	1411.2	1453.2	1495.2	1533.0
COST SAVING	0.0	0.0	0.0	435.7	441.9	435.6	1523.4	1510.8	1483.3	1447.8	1403.1	1348.5	1292.0
V-TIME DIFF.	0.0	0.0	0.0	3.0	3.6	4.1	14.8	17.1	19.4	21.8	24.2	26.5	28.9
V-DIST DIFF.	0.0	0.0	0.0	42.7	45.8	48.8	208.9	222.7	236.5	250.2	254.0	277.8	291.6
V-COST SAVE BEF. DISC.	0.0	0.0	0.0	612.1	695.3	767.7	3007.0	3339.9	3672.7	4014.9	4357.9	4690.8	5033.7
COST													
MRT PROJECT COST	112.0	5215.2	4656.4	336.8	5215.8	4657.0	316.3	282.4	903.2	241.7	215.8	192.7	305.0
CURRENT INVESTMENT	112.0	5841.0	5841.0	241.0	7975.0	7975.0	0.0	0.0	1612.0	0.0	0.0	0.0	513.0
CURRENT MAINT.&OPERAT.	0.0	0.0	0.0	232.2	232.2	232.2	624.3	624.3	624.3	670.2	670.2	670.2	670.2
DISCOUNT RATIO	$(1.12)^{0}$	$(1.12)^{1}$	$(1.12)^{2}$	$(1.12)^{3}$	$(1.12)^{4}$	$(1.12)^{5}$	$(1.12)^{6}$	$(1.12)^{7}$	$(1.12)^{8}$	$(1.12)^{9}$	$(1.12)^{10}$	$(1.12)^{11}$	$(1.12)^{12}$
B - C	-112.0	-5215.2	-4656.4	380.8	-4461.2	-3894.8	1806.0	1917.9	1333.9	2010.0	2020.6	1998.2	1832.3

CASE C-1

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 6 ---

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
TRAFFIC DEMAND													
WITH PROJECT													
VEH .KM (MIL.V.KMS)	6755.6	7137.8	7519.9	7902.0	8284.1	8666.2	9048.3	9430.5	9812.6	10194.7	10576.8	10958.9	11341.1
VEH .H (MIL.V.HOURS)	221.9	235.2	248.5	261.3	275.1	288.4	301.8	315.1	328.4	341.7	355.0	368.4	381.7
PASS.H (MIL.P.HOURS)	31.5	38.3	39.1	40.0	40.8	41.6	42.4	43.2	44.1	44.9	45.7	45.7	45.7
WITHOUT PROJECT													
VEH .KM (MIL.V.KMS)	7061.0	7456.9	7852.7	8248.6	8644.5	9040.4	9436.4	9832.3	10228.3	10624.2	11020.2	11415.4	11810.7
VEH .H (MIL.V.HOURS)	253.1	268.7	284.4	300.0	315.7	331.4	347.0	362.7	378.4	394.0	409.7	425.3	440.9
BENEFIT													
TOTAL BENEFIT	2063.0	1981.7	1899.0	1806.3	1716.2	1624.6	1526.9	1436.9	1348.3	1260.4	1177.7	1096.7	1021.1
TIME SAVING	833.1	815.6	795.3	766.6	737.9	706.6	669.7	636.0	601.4	566.0	532.4	499.6	468.7
V-TIME DIFF.	31.2	33.5	35.9	38.2	40.6	43.0	45.2	47.6	50.0	52.3	54.7	56.9	59.2
V-TIME SAVE BEF. DISC.	5210.4	5594.5	5995.3	6379.4	6780.2	7181.0	7568.5	7969.2	8350.0	8735.1	9134.9	9502.3	9886.4
MRT PASS. TIME SPENT	1575.0	1608.6	1642.2	1680.0	1713.6	1747.2	1780.8	1814.4	1852.2	1885.8	1919.4	1919.4	1919.4
COST SAVING	1229.9	1166.1	1103.7	1039.7	978.3	918.0	857.2	800.9	746.9	694.4	645.3	597.1	552.4
V-TIME DIFF.	31.2	33.5	35.9	38.2	40.6	43.0	45.2	47.6	50.0	52.3	54.7	56.9	59.2
V-DIST DIFF.	305.4	319.1	332.8	346.6	360.4	374.2	388.1	401.8	415.7	429.5	443.4	456.5	469.6
V-COST SAVE BEF. DISC.	5366.6	5598.7	6040.9	6373.8	6716.8	7059.7	7383.2	7725.4	8069.1	8402.0	8745.7	9063.3	9391.1
COST													
MRT PROJECT COST	164.5	146.8	131.1	117.1	104.5	93.3	83.3	74.4	66.4	254.3	61.6	55.0	49.1
CURRENT INVESTMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2350.0	0.0	0.0	0.0
CURRENT MAINT.&OPERAT.	717.6	717.6	717.6	717.6	717.6	717.6	717.6	717.6	717.6	717.6	835.1	835.1	835.1
	13	14	15	16	17	18	19	20	21	22	23	24	25
DISCOUNT RATIO	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)
B - C	1898.5	1834.9	1767.9	1689.2	1611.7	1531.3	1443.6	1362.5	1281.9	1006.1	1116.1	1041.7	972.0

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 5 ---

	2013	2014	2015	2016
TRAFFIC DEMAND				
WITH PROJECT				
VEH .KM (MIL.V.KMS)	11723.2	12105.3	12487.4	12869.5
VEH .H (MIL.V.HOURS)	395.0	408.3	421.6	434.9
PASS.H (MIL.P.HOURS)	45.7	45.7	45.7	45.7
WITHOUT PROJECT				
VEH .KM (MIL.V.KMS)	12205.9	12601.1	12996.3	13391.5
VEH .H (MIL.V.HOURS)	456.6	472.2	487.8	503.4
BENEFIT				
TOTAL BENEFIT	950.5	882.0	817.3	756.4
TIME SAVING	439.5	410.4	382.5	355.9
V-TIME DIFF.	61.6	63.9	66.2	68.5
V-TIME SAVE BEF. DISC.	10287.2	10671.3	11055.4	11439.5
MRT PASS. TIME SPENT	1919.4	1919.4	1919.4	1919.4
COST SAVING	511.0	471.6	434.8	400.5
V-TIME DIFF.	61.6	63.9	66.2	68.5
V-DIST DIFF.	482.7	495.8	508.9	522.0
V-COST SAVE BEF. DISC.	9729.0	10056.8	10384.6	10712.4
COST				
MRT PROJECT COST	43.9	39.2	35.0	31.2
CURRENT INVESTMENT	0.0	0.0	0.0	0.0
CURRENT MAINT.&OPERAT.	835.1	835.1	835.1	835.1
	26	27	28	29
DISCOUNT RATIO	(1.12)	(1.12)	(1.12)	(1.12)
B - C	906.6	842.8	782.3	725.2

CASE C-2

--- CASE 7 ---

NET PRESENT VALUE = 16143.8 (MIL. SUCRES)

B / C = 1.729

IRR = 18.6 (%)

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 7 ---

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
TRAFFIC DEMAND													
WITH PROJECT													
VEH.KM (MIL.V.KMS)	0.0	0.0	0.0	3056.7	3450.4	3844.2	4182.6	4571.2	4959.8	5227.2	5609.3	5991.4	6373.5
VEH.H (MIL.V.HOURS)	0.0	0.0	0.0	93.2	108.4	123.6	135.2	149.6	164.0	168.6	181.9	195.2	208.5
PASS.H (MIL.P.HOURS)	0.0	0.0	0.0	2.5	2.6	2.6	11.4	11.6	11.8	33.6	34.6	35.6	36.5
WITHOUT PROJECT													
VEH.KM (MIL.V.KMS)	0.0	0.0	0.0	3099.4	3496.2	3893.0	4289.7	4685.6	5081.5	5477.4	5873.3	6269.2	6665.1
VEH.H (MIL.V.HOURS)	0.0	0.0	0.0	96.2	112.0	127.7	143.4	159.1	174.7	190.4	206.1	221.7	237.4
BENEFIT													
TOTAL BENEFIT	0.0	0.0	0.0	717.6	754.6	762.2	1263.7	1306.2	1314.2	2251.7	2236.4	2190.9	2137.3
TIME SAVING	0.0	0.0	0.0	281.9	312.7	326.6	451.2	497.3	521.5	803.9	833.3	842.4	845.3
V-TIME DIFF.	0.0	0.0	0.0	3.0	3.6	4.1	8.2	9.5	10.7	21.8	24.2	26.5	28.9
V-TIME SAVE BEF. DISC.	0.0	0.0	0.0	501.0	601.2	684.7	1369.4	1586.5	1786.9	3640.6	4041.4	4425.5	4826.3
MRT PASS. TIME SPENT	0.0	0.0	0.0	105.0	109.2	109.2	478.8	487.2	495.6	1411.2	1453.2	1495.2	1533.0
COST SAVING	0.0	0.0	0.0	435.7	441.9	435.6	812.5	808.9	792.7	1447.6	1403.1	1348.5	1292.0
V-TIME DIFF.	0.0	0.0	0.0	3.0	3.6	4.1	8.2	9.5	10.7	21.8	24.2	26.5	28.9
V-DIST DIFF.	0.0	0.0	0.0	42.7	45.0	48.8	107.1	114.4	121.7	250.2	264.0	277.8	291.6
V-COST SAVE BEF. DISC.	0.0	0.0	0.0	612.1	695.3	767.7	1603.8	1798.3	1962.7	4014.9	4357.9	4690.8	5033.7
COST													
MRT PROJECT COST	112.0	5214.3	4655.6	215.8	2017.9	1801.7	287.9	2823.7	2521.2	241.7	215.8	192.7	305.0
CURRENT INVESTMENT	112.0	5840.0	5640.0	71.0	2943.0	2943.0	199.0	5873.0	5373.0	0.0	0.0	0.0	518.0
CURRENT MAINT.&OPERAT.	0.0	0.0	0.0	232.2	232.2	232.2	369.3	369.3	369.3	670.2	670.2	670.2	670.2
DISCOUNT RATIO	$(1.12)^{0}$	$(1.12)^{1}$	$(1.12)^{2}$	$(1.12)^{3}$	$(1.12)^{4}$	$(1.12)^{5}$	$(1.12)^{6}$	$(1.12)^{7}$	$(1.12)^{8}$	$(1.12)^{9}$	$(1.12)^{10}$	$(1.12)^{11}$	$(1.12)^{12}$
B - C	-112.0	-5214.3	-4655.6	501.8	-1263.3	-1039.5	975.8	-1517.5	-1207.0	2010.0	2020.6	1998.2	1832.3

CASE C-2

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 7 ---

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
TRAFFIC DEMAND													
WITH PROJECT													
VEH .KM (MIL.V.KMS)	6755.6	7137.8	7519.9	7902.0	8284.1	8666.2	9048.3	9430.5	9812.6	10194.7	10576.8	10958.9	11341.1
VEH .H (MIL.V.HOURS)	221.9	235.2	243.5	261.8	275.1	288.4	301.8	315.1	328.4	341.7	355.0	368.4	381.7
PASS.H (MIL.P.HOURS)	37.5	38.3	39.1	40.0	40.9	41.6	42.4	43.2	44.1	44.9	45.7	45.7	45.7
WITHOUT PROJECT													
VEH .KM (MIL.V.KMS)	7061.0	7456.9	7852.7	8248.6	8644.5	9040.4	9436.4	9832.3	10228.3	10624.2	11020.2	11415.4	11810.7
VEH .H (MIL.V.HOURS)	253.1	268.7	284.4	300.0	315.7	331.4	347.0	362.7	378.4	394.0	409.7	425.3	440.9
BENEFIT													
TOTAL BENEFIT	2063.0	1931.7	1899.0	1800.3	1716.2	1624.6	1526.9	1436.9	1348.3	1260.4	1177.7	1096.7	1021.1
TIME SAVING	833.1	815.6	795.3	760.6	737.9	706.6	669.7	636.0	601.4	566.0	532.4	499.6	468.7
V-TIME DIFF.	31.2	33.5	35.9	38.2	40.6	43.0	45.2	47.6	50.0	52.3	54.7	56.9	59.2
V-TIME SAVE BEF. DISC.	5210.4	5594.5	5975.3	6379.4	6780.2	7181.0	7548.4	7949.2	8350.0	8734.1	9134.9	9502.3	9886.4
MRT PASS. TIME SPENT	1575.0	1608.6	1642.2	1680.0	1713.6	1747.2	1780.8	1814.4	1852.2	1885.8	1919.4	1919.4	1919.4
COST SAVING	1229.9	1166.1	1103.7	1039.7	978.3	918.0	857.2	800.9	746.9	694.4	645.3	597.1	552.4
V-TIME DIFF.	31.2	33.5	35.9	38.2	40.6	43.0	45.2	47.6	50.0	52.3	54.7	56.9	59.2
V-DIST DIFF.	305.4	319.1	332.8	346.6	360.4	374.2	388.1	401.8	415.7	429.5	443.4	456.5	469.6
V-COST SAVE BEF. DISC.	5366.6	5698.7	6040.9	6373.8	6716.8	7059.7	7383.2	7725.4	8069.1	8402.0	8745.7	9053.3	9391.1
COST													
MRT PROJECT COST	156.5	145.8	131.1	117.1	104.5	93.3	83.3	74.4	66.5	254.3	61.6	55.0	49.1
CURRENT INVESTMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2360.0	0.0	0.0	0.0
CURRENT MAINT.&OPERAT.	717.6	717.6	717.6	717.6	717.6	717.6	717.6	717.6	717.6	717.6	835.1	835.1	835.1
	13	14	15	16	17	18	19	20	21	22	23	24	25
DISCOUNT RATIO	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)
B - C	1698.5	1634.9	1767.9	1689.2	1611.7	1531.3	1443.6	1362.5	1281.9	1006.1	1116.1	1041.7	972.0

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 7 ---

	2013	2014	2015	2016
TRAFFIC DEMAND				
WITH PROJECT				
VEH .KM (MIL.V.KMS)	11723.2	12105.3	12497.4	12869.5
VEH .H (MIL.V.HOURS)	395.0	408.3	421.6	434.9
PASS.H (MIL.P.HOURS)	45.7	45.7	45.7	45.7
WITHOUT PROJECT				
VEH .KM (MIL.V.KMS)	12205.9	12601.1	12996.3	13391.5
VEH .H (MIL.V.HOURS)	456.6	472.2	487.8	503.4
BENEFIT				
TOTAL BENEFIT	950.5	882.0	817.3	756.4
TIME SAVING	439.5	410.4	392.5	355.9
V-TIME DIFF.	61.6	63.9	66.2	68.5
V-TIME SAVE BEF. DISC.	10287.2	10671.3	11055.4	11439.5
MRT PASS. TIME SPENT	1919.4	1919.4	1919.4	1919.4
COST SAVING	511.0	471.6	434.8	400.5
V-TIME DIFF.	61.6	63.9	66.2	68.5
V-DIST DIFF.	482.7	495.8	508.9	522.0
V-COST SAVE BEF. DISC.	9729.0	10056.8	10384.6	10712.4
COST				
MRT PROJECT COST	43.9	39.2	35.0	31.2
CURRENT INVESTMENT	0.0	0.0	0.0	0.0
CURRENT MAINT.&OPERAT.	835.1	835.1	835.1	835.1
	26	27	28	29
DISCOUNT RATIO	(1.12)	(1.12)	(1.12)	(1.12)
B - C	906.6	842.8	782.3	725.2

CASE D-1

--- CASE 8 ---

NET PRESENT VALUE = 16331.9 (MIL. SUCRES)

B / C = 1.637

IRR = 17.8 (%)

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 8 ---

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
TRAFFIC DEMAND													
WITH PROJECT													
VEH .KM (MIL.V.KMS)	0.0	0.0	0.0	3014.1	3403.6	3793.1	4080.8	4462.9	4845.0	5227.2	5609.3	5991.4	6373.5
VEH .H (MIL.V.HOURS)	0.0	0.0	0.0	91.9	106.4	120.8	128.6	142.0	155.3	168.6	181.9	195.2	208.5
PASS.H (MIL.P.HOURS)	0.0	0.0	0.0	10.5	10.8	11.1	30.7	31.7	32.7	33.6	34.6	35.6	36.5
WITHOUT PROJECT													
VEH .KM (MIL.V.KMS)	0.0	0.0	0.0	3099.4	3496.2	3893.0	4289.7	4685.6	5021.5	5477.4	5873.3	6269.2	6665.1
VEH .H (MIL.V.HOURS)	0.0	0.0	0.0	96.2	112.0	127.7	143.4	159.1	174.7	190.4	206.1	221.7	237.4
BENEFIT													
TOTAL BENEFIT	0.0	0.0	0.0	945.3	1091.3	1195.0	2122.3	2200.3	2237.1	2251.7	2236.4	2190.9	2137.3
TIME SAVING	0.0	0.0	0.0	197.2	306.1	389.3	598.9	689.5	753.8	803.9	833.3	842.4	845.3
V-TIME DIFF.	0.0	0.0	0.0	4.3	5.6	6.9	14.8	17.1	19.4	21.8	24.2	26.5	28.9
V-TIME SAVE BEF. DISC.	0.0	0.0	0.0	718.1	935.2	1152.3	2471.6	2855.7	3239.8	3640.6	4041.4	4425.5	4826.3
MRT PASS. TIME SPENT	0.0	0.0	0.0	451.0	453.6	466.2	1289.4	1331.4	1373.4	1411.2	1453.2	1495.2	1533.0
COST SAVING	0.0	0.0	0.0	748.1	785.2	805.7	1523.4	1510.8	1483.3	1447.8	1403.1	1348.5	1292.0
V-TIME DIFF.	0.0	0.0	0.0	4.3	5.6	6.9	14.8	17.1	19.4	21.8	24.2	26.5	28.9
V-DIST DIFF.	0.0	0.0	0.0	85.3	92.6	99.9	208.9	222.7	236.5	250.2	264.0	277.8	291.6
V-COST SAVE BEF. DISC.	0.0	0.0	0.0	1051.0	1235.5	1420.0	3007.0	3339.9	3672.7	4014.9	4357.9	4690.8	5033.7
COST													
MRT PROJECT COST	141.0	7359.6	6579.2	399.1	3774.2	3369.8	316.3	282.4	903.2	241.7	215.8	192.7	305.0
CURRENT INVESTMENT	141.0	8254.0	9253.0	199.0	5577.0	5577.0	0.0	0.0	1612.0	0.0	0.0	0.0	518.0
CURRENT MAINT.&OPERAT.	0.0	0.0	0.0	361.7	361.7	361.7	624.3	624.3	624.3	670.2	670.2	670.2	670.2
	0	1	2	3	4	5	6	7	8	9	10	11	12
DISCOUNT RATIO	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)
B - C	-141.0	-7369.6	-6579.2	546.2	-2682.9	-2174.8	1806.0	1917.9	1333.9	2010.0	2020.6	1998.2	1832.3

CASE D-1

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 8 ---

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
TRAFFIC DEMAND													
WITH PROJECT													
VEH .KM (MIL.V.KMS)	6755.6	7137.8	7519.9	7902.0	8284.1	8666.2	9048.3	9430.5	9812.6	10194.7	10576.8	10958.9	11341.1
VEH .H (MIL.V.HOURS)	221.9	235.2	248.5	261.8	275.1	298.4	301.8	315.1	328.4	341.7	355.0	368.4	381.7
PASS.H (MIL.P.HOURS)	37.5	38.3	39.1	40.0	40.8	41.6	42.4	43.2	44.1	44.9	45.7	45.7	45.7
WITHOUT PROJECT													
VEH .KM (MIL.V.KMS)	7061.0	7456.9	7852.7	8248.6	8644.5	9040.4	9436.4	9832.3	10228.3	10624.2	11020.2	11415.4	11810.7
VEH .H (MIL.V.HOURS)	253.1	268.7	284.4	300.0	315.7	331.4	347.0	362.7	378.4	394.0	409.7	425.3	440.9
BENEFIT													
TOTAL BENEFIT	2063.0	1991.7	1899.0	1806.3	1716.2	1624.6	1526.9	1436.9	1348.3	1260.4	1172.7	1096.7	1021.1
TIME SAVING	833.1	815.6	795.3	766.6	737.9	706.6	669.7	636.0	601.4	566.0	532.4	499.6	468.7
V-TIME DIFF.	31.2	33.5	35.9	38.2	40.6	43.0	45.2	47.6	50.0	52.3	54.7	56.9	59.2
V-TIME SAVE BEF. DISC.	5210.4	5594.5	5995.3	6379.4	6780.2	7181.0	7548.4	7949.2	8350.0	8734.1	9134.9	9502.3	9886.4
MRT PASS. TIME SPENT	1575.0	1608.6	1642.2	1690.0	1713.6	1747.2	1780.3	1814.4	1852.2	1885.8	1919.4	1919.4	1919.4
COST SAVING	1229.9	1166.1	1103.7	1039.7	978.3	918.0	857.2	800.9	746.9	694.4	645.3	597.1	552.4
V-TIME DIFF.	31.2	33.5	35.9	38.2	40.6	43.0	45.2	47.6	50.0	52.3	54.7	56.9	59.2
V-DIST DIFF.	305.4	319.1	332.8	346.6	360.4	374.2	388.1	401.3	415.7	429.5	443.4	456.5	469.6
V-COST SAVE BEF. DISC.	5366.6	5698.7	6040.9	6373.8	6716.8	7059.7	7383.2	7725.4	8069.1	8402.0	8745.7	9063.3	9391.1
COST													
MRT PROJECT COST	164.5	146.8	131.1	117.1	104.5	93.3	83.3	74.4	66.4	254.3	61.6	55.0	49.1
CURRENT INVESTMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2360.0	0.0	0.0	0.0
CURRENT MAINT.&OPERAT.	717.6	717.6	717.6	717.6	717.6	717.6	717.6	717.6	717.6	717.6	835.1	835.1	835.1
DISCOUNT RATIO	13 (1.12)	14 (1.12)	15 (1.12)	16 (1.12)	17 (1.12)	18 (1.12)	19 (1.12)	20 (1.12)	21 (1.12)	22 (1.12)	23 (1.12)	24 (1.12)	25 (1.12)
B - C	1898.5	1634.9	1767.9	1699.2	1611.7	1531.3	1443.6	1362.5	1281.9	1006.1	1116.1	1041.7	972.0

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 9 ---

	2013	2014	2015	2016
TRAFFIC DEMAND				
WITH PROJECT				
VEH .KM (MIL.V.KMS)	11723.2	12105.3	12487.4	12869.5
VEH .H (MIL.V.HOURS)	395.0	408.3	421.6	434.9
PASS.H (MIL.P.HOURS)	45.7	45.7	45.7	45.7
WITHOUT PROJECT				
VEH .KM (MIL.V.KMS)	12205.9	12601.1	12996.3	13391.5
VEH .H (MIL.V.HOURS)	456.6	472.2	487.8	503.4
BENEFIT				
TOTAL BENEFIT	950.5	882.0	817.3	756.4
TIME SAVING	439.5	410.4	382.5	355.9
V-TIME DIFF.	61.6	63.9	66.2	68.5
V-TIME SAVE BEF. DISC.	10287.2	10671.3	11055.4	11439.5
MRT PASS. TIME SPENT	1919.4	1919.4	1919.4	1919.4
COST SAVING	511.0	471.6	434.8	400.5
V-TIME DIFF.	61.6	63.9	66.2	68.5
V-DIST DIFF.	482.7	495.8	508.9	522.0
V-COST SAVE BEF. DISC.	9729.0	10056.8	10384.6	10712.4
COST				
MRT PROJECT COST	43.9	39.2	35.0	31.2
CURRENT INVESTMENT	0.0	0.0	0.0	0.0
CURRENT MAINT.&OPERAT.	835.1	835.1	835.1	835.1
DISCOUNT RATIO	26 (1.12)	27 (1.12)	28 (1.12)	29 (1.12)
B - C	906.6	842.6	782.3	725.2

CASE E

--- CASE 9 ---

NET PRESENT VALUE = 7096.4 (MIL. SUCRES)

B / C = 1.560

IRR = 17.0 (%)

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 9 ---

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
TRAFFIC DEMAND													
WITH PROJECT													
VEH .KM (MIL.V.KMS)	0.0	0.0	0.0	3045.7	3436.3	3826.9	4217.5	4607.5	4997.6	5387.7	5777.7	6167.8	6557.8
VEH .H (MIL.V.HOURS)	0.0	0.0	0.0	92.5	107.2	121.9	136.6	151.3	166.0	180.6	195.3	210.0	224.7
PASS.H (MIL.P.HOURS)	0.0	0.0	0.0	8.3	8.8	9.3	9.8	10.1	10.3	10.6	10.9	11.2	11.4
WITHOUT PROJECT													
VEH .KM (MIL.V.KMS)	0.0	0.0	0.0	3099.4	3496.2	3893.0	4289.7	4685.6	5081.5	5477.4	5873.3	6269.2	6665.1
VEH .H (MIL.V.HOURS)	0.0	0.0	0.0	96.2	112.0	127.7	143.4	159.1	174.7	190.4	206.1	221.7	237.4
BENEFIT													
TOTAL BENEFIT	0.0	0.0	0.0	734.4	858.4	932.2	980.0	1009.9	1012.8	1021.3	1008.0	977.9	950.7
TIME SAVING	0.0	0.0	0.0	191.7	274.5	328.0	366.8	397.3	412.1	429.6	433.3	426.5	421.5
V-TIME DIFF.	0.0	0.0	0.0	3.7	4.8	5.8	6.8	7.8	8.7	9.8	10.8	11.7	12.7
V-TIME SAVE BEF. DISC.	0.0	0.0	0.0	617.9	801.6	968.6	1135.6	1302.6	1452.7	1636.6	1803.6	1953.9	2129.9
MRT PASS. TIME SPENT	0.0	0.0	0.0	348.6	369.6	390.6	411.6	424.2	432.6	445.2	457.8	470.4	478.8
COST SAVING	0.0	0.0	0.0	542.3	583.9	604.2	613.2	612.6	600.7	591.7	574.7	551.4	529.2
V-TIME DIFF.	0.0	0.0	0.0	3.7	4.8	5.8	6.8	7.8	8.7	9.8	10.8	11.7	12.7
V-DIST DIFF.	0.0	0.0	0.0	53.7	59.9	66.1	72.2	78.1	83.9	89.7	95.6	101.4	107.3
V-COST SAVE BEF. DISC.	0.0	0.0	0.0	762.4	918.7	1064.8	1210.3	1354.2	1487.4	1640.8	1734.8	1917.9	2061.9
COST													
MRT PROJECT COST	134.0	5139.3	4597.9	207.6	454.8	727.2	156.1	139.4	124.5	113.8	101.6	90.8	81.0
CURRENT INVESTMENT	134.0	5356.0	5755.0	0.0	424.0	990.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CURRENT MAINT.&OPERAT.	0.0	0.0	0.0	231.6	291.6	291.6	308.2	308.2	308.2	315.7	315.7	315.7	315.7
DISCOUNT RATIO	(1.12)^0	(1.12)^1	(1.12)^2	(1.12)^3	(1.12)^4	(1.12)^5	(1.12)^6	(1.12)^7	(1.12)^8	(1.12)^9	(1.12)^10	(1.12)^11	(1.12)^12
B - C	-134.0	-5139.3	-4587.9	526.8	403.6	205.0	823.9	870.5	888.3	907.5	906.4	887.1	869.7

CASE E

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 9 ---

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
TRAFFIC DEMAND													
WITH PROJECT													
VEH .KM (MIL.V.KMS)	6947.9	7337.9	7728.0	8118.1	8508.1	8898.2	9288.3	9678.4	10068.5	10458.6	10848.7	11238.4	11628.0
VEH .H (MIL.V.HOURS)	239.3	254.0	268.7	283.3	298.0	312.7	327.3	342.0	356.7	371.4	386.0	400.7	415.3
PASS.H (MIL.P.HOURS)	11.7	12.0	12.2	12.5	12.7	13.0	13.2	13.5	13.8	14.0	14.3	14.3	14.3
WITHOUT PROJECT													
VEH .KM (MIL.V.KMS)	7061.0	7456.9	7852.7	8248.6	8644.5	9040.4	9436.4	9832.3	10228.3	10624.2	11020.2	11415.4	11810.7
VEH .H (MIL.V.HOURS)	253.1	266.7	284.4	300.0	315.7	331.4	347.0	352.7	378.4	394.0	409.7	425.3	440.9
BENEFIT													
TOTAL BENEFIT	923.2	879.9	840.6	799.1	757.5	715.1	673.6	632.3	592.2	551.4	516.3	479.6	446.4
TIME SAVING	415.5	399.2	385.4	369.3	352.8	335.1	317.6	299.6	281.8	263.3	247.7	231.1	216.2
V-TIME DIFF.	13.8	14.7	15.7	16.7	17.7	18.7	19.7	20.7	21.7	22.6	23.7	24.6	25.6
V-TIME SAVE BEF. DISC.	2304.6	2454.9	2521.9	2738.9	2955.9	3122.9	3289.9	3456.9	3623.9	3774.2	3957.9	4108.2	4275.2
MRT PASS. TIME SPENT	491.4	504.0	512.4	525.0	533.4	546.0	554.4	567.0	579.6	588.0	600.6	600.6	600.6
COST SAVING	507.7	480.7	455.2	429.8	404.7	380.0	356.0	332.7	310.4	288.1	268.6	248.5	230.2
V-TIME DIFF.	13.8	14.7	15.7	16.7	17.7	18.7	19.7	20.7	21.7	22.6	23.7	24.6	25.6
V-DIST DIFF.	113.1	119.0	124.7	130.5	136.4	142.2	148.1	153.9	159.8	165.6	171.5	177.0	182.7
V-COST SAVE BEF. DISC.	2215.3	2349.1	2491.7	2635.0	2779.0	2922.2	3066.2	3209.5	3353.4	3496.6	3640.7	3771.7	3914.2
COST													
MRT PROJECT COST	72.4	54.6	57.7	51.5	46.0	41.1	36.7	32.7	29.2	62.5	25.0	22.3	19.9
CURRENT INVESTMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	441.0	0.0	0.0	0.0
CURRENT MAINT.&OPERAT.	315.7	315.7	315.7	315.7	315.7	315.7	315.7	315.7	315.7	315.7	338.2	338.2	338.2
	13	14	15	16	17	18	19	20	21	22	23	24	25
DISCOUNT RATIO	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)
B - C	850.8	815.3	782.9	747.6	711.5	674.0	636.9	599.6	563.0	498.9	491.3	457.3	426.5

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 9 ---

	2013	2014	2015	2016
TRAFFIC DEMAND				
WITH PROJECT				
VEH .KM (MIL.V.KMS)	12017.7	12407.4	12797.1	13186.7
VEH .H (MIL.V.HOURS)	430.0	444.6	459.3	473.9
PASS.H (MIL.P.HOURS)	14.3	14.3	14.3	14.3
WITHOUT PROJECT				
VEH .KM (MIL.V.KMS)	12205.9	12601.1	12996.3	13391.5
VEH .H (MIL.V.HOURS)	456.6	472.2	487.8	503.4
BENEFIT				
TOTAL BENEFIT	414.8	384.8	355.3	328.8
TIME SAVING	201.8	188.0	174.1	161.7
V-TIME DIFF.	26.6	27.6	28.5	29.5
V-TIME SAVE BEF. DISC.	4442.2	4609.2	4759.5	4926.5
MRT PASS. TIME SPENT	600.6	600.6	600.6	600.6
COST SAVING	213.0	196.8	181.2	167.1
V-TIME DIFF.	26.6	27.6	28.5	29.5
V-DIST DIFF.	186.2	193.7	199.2	204.8
V-COST SAVE BEF. DISC.	4055.3	4190.5	4327.4	4469.2
COST				
MRT PROJECT COST	17.8	15.9	14.2	12.6
CURRENT INVESTMENT	0.0	0.0	0.0	0.0
CURRENT MAINT.&OPERAT.	338.2	338.2	338.2	338.2
	26	27	28	29
DISCOUNT RATIO	(1.12)	(1.12)	(1.12)	(1.12)
B - C	397.0	368.9	341.1	316.2

CASE F

--- CASE 10 ---

NET PRESENT VALUE = 12752.5 (MIL. SUCRES)

B / C = 1.759

IRR = 18.4 (%)

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 10 ---

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
TRAFFIC DEMAND													
WITH PROJECT													
VEH .KM (MIL.V.KMS)	0.0	0.0	0.0	3017.9	3404.5	3791.2	4177.8	4564.2	4950.6	5337.0	5723.5	6109.9	6496.3
VEH .H (MIL.V.HOURS)	0.0	0.0	0.0	91.4	105.5	119.5	133.6	147.7	161.7	175.8	189.8	203.9	217.9
PASS.H (MIL.P.HOURS)	0.0	0.0	0.0	14.4	15.2	16.0	16.8	17.2	17.6	18.0	18.4	18.8	19.3
WITHOUT PROJECT													
VEH .KM (MIL.V.KMS)	0.0	0.0	0.0	3099.4	3496.2	3893.0	4289.7	4685.6	5081.5	5477.4	5873.3	6269.2	6665.1
VEH .H (MIL.V.HOURS)	0.0	0.0	0.0	96.2	112.0	127.7	143.4	159.1	174.7	190.4	206.1	221.7	237.4
BENEFIT													
TOTAL BENEFIT	0.0	0.0	0.0	904.8	1123.2	1284.1	1384.0	1453.4	1492.0	1505.7	1507.7	1476.8	1447.9
TIME SAVING	0.0	0.0	0.0	140.1	284.1	395.7	471.7	534.4	578.3	606.6	627.6	627.6	627.8
V-TIME DIFF.	0.0	0.0	0.0	4.8	6.5	8.2	9.8	11.4	13.0	14.6	16.3	17.8	19.5
V-TIME SAVE BEF. DISC.	0.0	0.0	0.0	801.6	1085.5	1369.4	1636.6	1903.8	2171.0	2438.2	2722.1	2972.6	3256.5
MRT PASS. TIME SPENT	0.0	0.0	0.0	604.8	638.4	672.0	705.6	722.4	739.2	756.0	772.8	789.6	810.6
COST SAVING	0.0	0.0	0.0	764.7	839.1	888.4	912.3	919.0	913.7	899.1	880.1	849.2	820.1
V-TIME DIFF.	0.0	0.0	0.0	4.8	6.5	8.2	9.8	11.4	13.0	14.6	16.3	17.8	19.5
V-DIST DIFF.	0.0	0.0	0.0	81.5	91.7	101.8	111.9	121.4	130.9	140.4	149.8	159.3	168.8
V-COST SAVE BEF. DISC.	0.0	0.0	0.0	1074.3	1320.3	1565.6	1800.0	2031.5	2262.4	2493.2	2733.4	2954.1	3195.1
COST													
MRT PROJECT COST	152.0	6852.7	6118.5	260.2	501.1	767.4	200.0	178.6	314.1	146.1	130.5	116.5	104.0
CURRENT INVESTMENT	162.0	7675.0	7675.0	0.0	423.0	987.0	0.0	0.0	383.0	0.0	0.0	0.0	0.0
CURRENT MAINT.&OPERAT.	0.0	0.0	0.0	365.5	365.5	365.5	394.8	394.8	394.8	405.2	405.2	405.2	405.2
DISCOUNT RATIO	(1.12)^0	(1.12)^1	(1.12)^2	(1.12)^3	(1.12)^4	(1.12)^5	(1.12)^6	(1.12)^7	(1.12)^8	(1.12)^9	(1.12)^10	(1.12)^11	(1.12)^12
B - C	-152.0	-6852.7	-6118.5	644.6	622.1	516.7	1184.0	1274.8	1177.9	1359.6	1377.2	1360.3	1343.9

CASE F

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 10 ---

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
TRAFFIC DEMAND													
WITH PROJECT													
VEH.KM (MIL.V.KMS)	6882.7	7269.1	7655.5	8041.9	8428.3	8814.7	9201.2	9587.6	9974.0	10360.4	10746.9	11133.1	11519.4
VEH.H (MIL.V.HOURS)	232.0	246.0	260.1	274.1	288.2	302.3	316.3	330.4	344.4	358.5	372.5	386.6	400.6
PASS.H (MIL.P.HOURS)	19.7	20.1	20.5	21.0	21.4	21.8	22.3	22.7	23.1	23.6	24.0	24.0	24.0
WITHOUT PROJECT													
VEH.KM (MIL.V.KMS)	7061.0	7456.9	7852.7	8248.6	8644.5	9040.4	9436.4	9832.3	10228.3	10624.2	11020.2	11415.4	11610.7
VEH.H (MIL.V.HOURS)	253.1	268.7	284.4	300.0	315.7	331.4	347.0	362.7	378.4	394.0	409.7	425.3	440.9
BENEFIT													
TOTAL BENEFIT	1403.0	1351.2	1294.2	1233.4	1171.3	1108.4	1045.0	983.0	924.8	862.8	807.9	752.1	700.6
TIME SAVING	617.9	603.0	584.1	561.7	538.0	512.9	486.5	460.4	435.0	408.0	384.0	359.4	336.6
V-TIME DIFF.	21.1	22.7	24.3	25.9	27.5	29.1	30.7	32.3	34.0	35.5	37.2	38.7	40.3
V-TIME SAVE BEF. DISC.	3523.7	3790.9	4058.1	4325.3	4592.5	4859.7	5126.9	5394.1	5679.0	5923.5	6212.4	6462.9	6730.1
MRT PASS. TIME SPENT	827.4	844.2	861.0	882.0	898.8	915.6	936.6	953.4	970.2	991.2	1008.0	1008.0	1008.0
COST SAVING	705.1	748.2	710.1	671.7	633.3	595.5	558.5	522.6	489.0	454.8	423.9	392.7	364.0
V-TIME DIFF.	21.1	22.7	24.3	25.9	27.5	29.1	30.7	32.3	34.0	35.5	37.2	38.7	40.3
V-DIST DIFF.	178.3	187.8	197.2	206.7	216.2	225.7	235.2	244.7	254.3	263.8	273.3	282.3	291.3
V-COST SAVE BEF. DISC.	3425.9	3656.7	3886.8	4117.6	4348.4	4579.2	4810.1	5040.9	5282.5	5501.2	5744.2	5961.2	6188.5
COST													
MRT PROJECT COST	95.0	84.9	75.8	67.6	60.4	53.9	48.1	43.0	38.4	199.0	35.7	31.8	28.4
CURRENT INVESTMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1993.0	0.0	0.0	0.0
CURRENT MAINT.&OPERAT.	414.7	414.7	414.7	414.7	414.7	414.7	414.7	414.7	414.7	414.7	483.4	483.4	483.4
	13	14	15	16	17	18	19	20	21	22	23	24	25
DISCOUNT RATIO	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)
B - C	1308.0	1266.3	1218.4	1165.8	1110.9	1054.5	996.9	940.0	886.4	663.8	772.2	720.3	672.2

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 10 ---

	2013	2014	2015	2016
TRAFFIC DEMAND				
WITH PROJECT				
VEH.KM (MIL.V.KMS)	11905.6	12291.9	12678.1	13064.4
VEH.H (MIL.V.HOURS)	414.7	428.7	442.7	456.8
PASS.H (MIL.P.HOURS)	24.0	24.0	24.0	24.0
WITHOUT PROJECT				
VEH.KM (MIL.V.KMS)	12205.9	12601.1	12996.3	13391.5
VEH.H (MIL.V.HOURS)	456.6	472.2	487.8	503.4
BENEFIT				
TOTAL BENEFIT	651.6	604.9	560.7	518.1
TIME SAVING	314.6	293.4	273.1	253.2
V-TIME DIFF.	41.9	43.5	45.1	46.6
V-TIME SAVE BEF. DISC.	6997.3	7264.5	7531.7	7782.2
MRT PASS. TIME SPENT	1008.0	1008.0	1008.0	1008.0
COST SAVING	337.0	311.5	287.6	264.9
V-TIME DIFF.	41.9	43.5	45.1	46.6
V-DIST DIFF.	300.3	309.2	318.2	327.1
V-COST SAVE BEF. DISC.	6415.7	6642.2	6869.4	7085.7
COST				
MRT PROJECT COST	25.4	22.7	20.2	18.1
CURRENT INVESTMENT	0.0	0.0	0.0	0.0
CURRENT MAINT.&OPERAT.	483.4	483.4	483.4	483.4
	26	27	28	29
DISCOUNT RATIO	(1.12)	(1.12)	(1.12)	(1.12)
B - C	626.2	582.2	540.5	500.0

CASE G

--- CASE 11 ---

NET PRESENT VALUE = 8540.4 (MIL. SUCRES)

B / C = 1.500

IRR = 16.5 (%)

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE 11 ---

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
TRAFFIC DEMAND													
WITH PROJECT													
VEH.KM (MIL.V.KMS)	0.0	0.0	0.0	3014.1	3403.6	3793.1	4182.6	4571.2	4959.8	5348.4	5737.0	6125.7	6514.3
VEH.H (MIL.V.HOURS)	0.0	0.0	0.0	91.9	106.4	120.8	135.2	149.6	164.0	178.4	192.8	207.2	221.6
PASS.H (MIL.P.HOURS)	0.0	0.0	0.0	10.5	10.8	11.1	11.4	11.6	11.8	11.9	12.1	12.3	12.5
WITHOUT PROJECT													
VEH.KM (MIL.V.KMS)	0.0	0.0	0.0	3099.4	3496.2	3893.0	4289.7	4685.6	5081.5	5477.4	5873.3	6269.2	6665.1
VEH.H (MIL.V.HOURS)	0.0	0.0	0.0	96.2	112.0	127.7	143.4	159.1	174.7	190.4	206.1	221.7	237.4
BENEFIT													
TOTAL BENEFIT	0.0	0.0	0.0	945.3	1091.3	1195.0	1263.7	1306.2	1314.2	1316.7	1302.2	1267.8	1232.9
TIME SAVING	0.0	0.0	0.0	197.2	306.1	389.3	451.2	497.3	521.5	542.4	551.5	547.6	542.5
V-TIME DIFF.	0.0	0.0	0.0	4.3	5.6	6.9	8.2	9.5	10.7	12.0	13.3	14.5	15.8
V-TIME SAVE BEF. DISC.	0.0	0.0	0.0	718.1	935.2	1152.3	1369.4	1586.5	1786.9	2004.0	2221.1	2421.5	2638.6
MRT PASS. TIME SPENT	0.0	0.0	0.0	441.0	453.6	466.2	478.8	487.2	495.6	499.8	508.2	516.6	525.0
COST SAVING	0.0	0.0	0.0	746.1	785.2	805.7	812.5	808.9	792.7	774.3	750.7	720.2	690.4
V-TIME DIFF.	0.0	0.0	0.0	4.3	5.6	6.9	8.2	9.5	10.7	12.0	13.3	14.5	15.8
V-DIST DIFF.	0.0	0.0	0.0	85.3	92.6	99.9	107.1	114.4	121.7	129.0	136.3	143.5	150.8
V-COST SAVE BEF. DISC.	0.0	0.0	0.0	1051.0	1235.5	1420.0	1603.4	1788.3	1962.7	2147.2	2331.7	2505.4	2689.9
COST													
MRT PROJECT COST	141.0	7374.1	6594.0	257.5	420.5	604.1	137.1	167.1	149.2	133.2	118.9	106.2	94.8
CURRENT INVESTMENT	141.0	8259.0	8259.0	0.0	300.0	703.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CURRENT MAINT.&OPERAT.	0.0	0.0	0.0	361.7	361.7	361.7	369.4	369.4	369.4	369.4	369.4	369.4	369.4
	0	1	2	3	4	5	6	7	8	9	10	11	12
DISCOUNT RATIO	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)	(1.12)
B - C	-141.0	-7374.1	-6594.0	687.8	670.8	590.9	1076.6	1139.1	1165.0	1153.5	1153.3	1161.6	1138.1

CASE G

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE II ---

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
TRAFFIC DEMAND													
WITH PROJECT													
VEH .KM (MIL.V.KMS)	6902.9	7291.5	7680.0	8068.7	8457.3	8845.9	9234.6	9623.2	10011.9	10400.6	10789.3	11177.2	11565.2
VEH .H (MIL.V.HOURS)	235.9	250.3	264.7	279.1	293.5	307.9	322.2	336.6	351.0	365.4	379.8	394.1	408.5
PASS.H (MIL.P.HOURS)	12.7	12.9	13.1	13.3	13.5	13.6	13.8	14.0	14.2	14.4	14.5	14.5	14.5
WITHOUT PROJECT													
VEH .KM (MIL.V.KMS)	7061.0	7456.9	7852.7	8248.6	8644.5	9040.4	9436.4	9832.3	10228.3	10624.2	11020.2	11415.4	11810.7
VEH .H (MIL.V.HOURS)	253.1	268.7	284.4	300.0	315.7	331.4	347.0	352.7	378.4	394.0	409.7	425.3	440.7
BENEFIT													
TOTAL BENEFIT	1197.1	1143.8	1093.1	1035.6	992.0	928.5	874.6	821.7	770.0	717.7	670.2	624.9	580.0
TIME SAVING	536.0	517.9	500.5	478.2	457.4	436.1	413.6	390.9	368.3	344.7	323.5	303.2	282.5
V-TIME DIFF.	17.2	18.4	19.7	20.9	22.2	23.5	24.8	26.1	27.4	28.6	29.9	31.2	32.4
V-TIME SAVE BEF. DISC.	2872.4	3072.8	3289.9	3490.3	3707.4	3924.5	4141.6	4358.7	4575.8	4776.2	4993.3	5210.4	5410.8
MRT PASS. TIME SPENT	533.4	541.8	550.2	558.6	567.0	571.2	579.6	588.0	596.4	604.8	609.0	609.0	609.0
COST SAVING	661.1	625.9	592.6	557.4	524.6	492.4	461.0	430.8	401.7	373.0	346.7	321.7	297.5
V-TIME DIFF.	17.2	18.4	19.7	20.9	22.2	23.5	24.8	26.1	27.4	28.6	29.9	31.2	32.4
V-DIST DIFF.	158.1	165.4	172.7	179.9	187.2	194.5	201.8	209.1	216.4	223.6	230.9	238.2	245.5
V-COST SAVE BEF. DISC.	2884.6	3058.9	3243.4	3417.1	3601.6	3786.2	3970.7	4155.2	4339.1	4513.4	4691.9	4852.4	5056.8
COST													
MRT PROJECT COST	84.7	75.6	67.5	60.3	53.8	48.0	42.9	38.3	34.2	69.2	30.1	26.9	24.0
CURRENT INVESTMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	448.0	0.0	0.0	0.0
CURRENT MAINT.&OPERAT.	369.4	369.4	369.4	369.4	369.4	369.4	369.4	369.4	369.4	369.4	408.3	408.3	408.3
DISCOUNT RATIO	13 (1.12)	14 (1.12)	15 (1.12)	16 (1.12)	17 (1.12)	18 (1.12)	19 (1.12)	20 (1.12)	21 (1.12)	22 (1.12)	23 (1.12)	24 (1.12)	25 (1.12)
B - C	1112.4	1068.2	1025.6	975.3	928.2	890.5	831.7	793.4	735.8	648.5	640.1	598.0	556.0

** ECONOMIC ANALYSIS FOR GUAYAQUIL MRT PROJECT **

(MIL. SUCRES)

--- CASE II ---

	2013	2014	2015	2016
TRAFFIC DEMAND				
WITH PROJECT				
VEH .KM (MIL.V.KMS)	11953.1	12341.0	12729.0	13116.9
VEH .H (MIL.V.HOURS)	422.8	437.2	451.5	465.8
PASS.H (MIL.P.HOURS)	14.5	14.5	14.5	14.5
WITHOUT PROJECT				
VEH .KM (MIL.V.KMS)	12205.9	12601.1	12996.3	13391.5
VEH .H (MIL.V.HOURS)	456.6	472.2	487.8	503.4
BENEFIT				
TOTAL BENEFIT	540.3	499.9	463.2	428.6
TIME SAVING	264.5	245.5	228.3	212.0
V-TIME DIFF.	33.8	35.0	36.3	37.6
V-TIME SAVE BEF. DISC.	5644.6	5845.0	6062.1	6279.2
MRT PASS. TIME SPENT	609.0	609.0	609.0	609.0
COST SAVING	275.8	254.4	234.9	216.6
V-TIME DIFF.	33.8	35.0	36.3	37.6
V-DIST DIFF.	252.8	260.1	267.3	274.6
V-COST SAVE BEF. DISC.	5251.5	5425.8	5609.6	5794.2
COST				
MRT PROJECT COST	21.4	19.1	17.1	15.3
CURRENT INVESTMENT	0.0	0.0	0.0	0.0
CURRENT MAINT.&OPERAT.	408.3	406.3	408.3	408.3
DISCOUNT RATIO	26 (1.12)	27 (1.12)	28 (1.12)	29 (1.12)
B - C	516.9	480.8	446.1	413.3

Appendix 3-2 **CASH FLOW ANALYSIS FOR GUAYAQUIL MRT PROJECT**

BASIC CASE

** CASH FLOW ANALYSIS FOR GUAYAQUIL MRT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA(BASIC CASE-1)

UNIT : MIL. SUCRES

	-1987-	-1988-	-1989-	-1990-	-1991-	-1992-	-1993-	-1994-	-1995-	-1996-
CASH INFLOW	0.0	0.0	0.0	3323.1	3470.6	3618.0	3724.2	3836.5	3948.6	4017.9
REVENUE	0.0	0.0	0.0	3855.5	4003.0	4150.4	4297.7	4410.0	4522.1	4634.4
EXPENSE	0.0	0.0	0.0	532.4	532.4	532.4	573.5	573.5	573.5	616.5
DEPRECIATION	0.0	0.0	0.0	1135.2	1064.5	1001.5	1073.3	1013.3	957.9	912.2
RESIDUAL VALUE	202.5	12977.2	26765.5	25630.3	25157.4	25575.4	24502.1	23488.8	23841.9	23046.1
NET OPERATING SURPLUS	0.0	0.0	0.0	3323.1	3470.6	3618.0	3724.2	3836.5	3948.6	4017.9
INTEREST PAYMENT	0.0	0.0	0.0	1885.9	1866.8	1773.9	1791.6	1637.7	1473.5	1288.0
NET SURPLUS	0.0	0.0	0.0	1437.2	1603.8	1844.1	1932.6	2198.8	2475.1	2729.9
CASH OUTFLOW	202.5	12774.7	13788.3	0.0	591.6	1419.5	0.0	0.0	1313.0	116.4
DEBT REPAYMENT	0.0	0.0	0.0	12.1	774.3	1616.8	1516.5	1678.4	2059.5	2314.7
DISCOUNTED INFLOW	0.0	0.0	0.0	2365.3	2205.6	2052.9	1886.8	1735.4	1594.8	1448.9
DISCOUNTED OUTFLOW	202.5	11406.0	10991.9	0.0	376.0	805.5	0.0	0.0	530.3	42.0
NETCASH FLOW	-202.5	-11406.0	-10991.9	2365.3	1829.7	1247.4	1886.8	1735.4	1064.5	1406.9
INTEREST EARNED RATIO	0.0	0.0	0.0	0.8	0.9	1.0	1.1	1.3	1.7	2.1
DEBT COVERAGE SERVICE RATIO	0.0	0.0	0.0	1.8	1.3	1.1	1.1	1.2	1.1	1.1

** CASH FLOW ANALYSIS FOR GUAYAQUIL MRT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA(BASIC CASE-1)

UNIT : MIL. SUCRES

	-1997-	-1998-	-1999-	-2000-	-2001-	-2002-	-2003-	-2004-	-2005-	-2006-
CASH INFLOW	4133.2	4248.6	4364.0	4439.5	4551.0	4662.5	4774.0	4885.6	4997.1	5108.6
REVENUE	4749.7	4865.1	4980.5	5095.9	5207.4	5318.9	5430.4	5542.0	5653.5	5765.0
EXPENSE	616.5	616.5	616.5	656.4	656.4	656.4	656.4	656.4	656.4	656.4
DEPRECIATION	567.8	831.9	798.2	1031.0	949.5	903.5	862.5	926.0	793.5	764.5
RESIDUAL VALUE	22304.2	21609.8	21324.2	20323.2	19373.7	18470.2	17607.7	16781.7	15988.2	15223.7
NET OPERATING SURPLUS	4133.2	4248.6	4364.0	4439.5	4551.0	4662.5	4774.0	4885.6	4997.1	5108.6
INTEREST PAYMENT	1093.4	898.8	704.4	688.6	555.2	468.1	382.1	316.0	269.7	223.5
NET SURPLUS	3039.9	3349.8	3659.6	3750.9	3935.8	4194.4	4391.9	4569.6	4727.4	4885.1
CASH OUTFLOW	127.9	137.5	512.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT REPAYMENT	2314.7	2442.9	2445.0	1805.8	1102.0	1151.6	989.5	738.6	738.6	733.6
DISCOUNTED INFLOW	1330.8	1221.4	1120.1	1017.4	931.2	851.8	778.7	711.6	649.8	593.1
DISCOUNTED OUTFLOW	41.2	39.5	131.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NETCASH FLOW	1289.6	1181.8	988.6	1017.4	931.2	851.8	778.7	711.6	649.8	593.1
INTEREST EARNED RATIO	2.8	3.7	5.2	5.4	7.2	9.0	11.5	14.5	17.5	21.9
DEBT COVERAGE SERVICE RATIO	1.2	1.3	1.4	1.8	2.7	2.9	3.5	4.6	5.0	5.3

BASIC CASE

** CASH FLOW ANALYSIS FOR GUAYAQUIL MRT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA:BASIC CASE-II

UNIT : MIL. SUCRES

	-2007-	-2008-	-2009-	-2010-	-2011-	-2012-	-2013-	-2014-	-2015-	-2016-
CASH INFLOW	5220.1	5331.7	5443.2	5448.2	5559.7	5671.3	5782.8	5894.3	6005.8	16502.8
REVENUE	5876.5	5988.1	6099.6	6211.1	6322.6	6434.2	6545.7	6657.2	6768.7	6980.4
EXPENSE	656.4	656.4	656.4	762.9	762.9	762.9	762.9	762.9	762.9	762.9
DEPRECIATION	738.7	715.6	695.1	924.8	882.5	844.7	801.9	772.9	747.1	726.1
RESIDUAL VALUE	14485.0	13769.4	16081.3	15158.5	14276.0	13431.3	12629.4	11856.5	11109.4	10385.3
NET OPERATING SURPLUS	5220.1	5331.7	5443.2	5448.2	5559.7	5671.3	5782.8	5894.3	6005.8	6117.5
INTEREST PAYMENT	180.8	147.3	114.9	337.9	309.9	278.3	229.6	192.9	165.6	138.4
NET SURPLUS	5039.3	5184.4	5328.3	5110.3	5249.8	5393.0	5553.2	5701.4	5840.2	5979.1
CASH OUTFLOW	0.0	0.0	3009.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT REPAYMENT	604.3	593.2	581.2	557.1	509.5	797.8	554.1	293.5	293.8	293.8
DISCOUNTED INFLOW	541.1	493.5	449.8	402.0	366.3	333.6	303.7	276.4	251.5	616.9
DISCOUNTED OUTFLOW	0.0	0.0	248.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NETCASH FLOW	541.1	493.5	201.2	402.0	366.3	333.6	303.7	276.4	251.5	616.9
INTEREST EARNED RATIO	27.9	35.2	46.4	15.1	16.9	19.4	24.2	29.6	35.3	43.2
DEBT COVERAGE SERVICE RATIO	6.6	7.2	7.5	6.1	6.8	5.3	7.4	12.1	13.1	14.2

** FINANCIAL I.R.R = 12.79 (%)

CASE A-1

** CASH FLOW ANALYSIS FOR GUAYAQUIL MRT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATACASE A-11

UNIT : MIL. SUCRES

	-1987-	-1988-	-1989-	-1990-	-1991-	-1992-	-1993-	-1994-	-1995-	-1996-
CASH INFLOW	0.0	0.0	0.0	935.6	1010.3	1084.9	3724.2	3936.5	3948.6	4017.9
REVENUE	0.0	0.0	0.0	1207.7	1282.4	1357.0	4297.7	4410.0	4522.1	4634.4
EXPENSE	0.0	0.0	0.0	272.1	272.1	272.1	573.5	573.5	573.5	616.5
DEPRECIATION	0.0	0.0	0.3	527.3	497.5	470.9	1199.1	1126.8	1062.4	1005.0
RESIDUAL VALUE	99.7	6123.1	12596.2	12306.2	19659.0	27674.1	26475.0	25348.2	24320.8	23318.9
NET OPERATING SURPLUS	0.0	0.0	0.0	935.6	1010.3	1084.9	3724.2	3936.5	3948.6	4017.9
INTEREST PAYMENT	0.0	0.0	0.0	722.5	718.4	698.4	2032.0	1980.3	1857.9	1670.4
NET SURPLUS	0.0	0.0	0.0	213.1	291.9	386.5	1692.2	1856.2	2090.7	2347.5
CASH OUTFLOW	98.7	6024.4	6473.1	237.3	7850.3	8506.0	0.0	0.0	35.0	3.1
DEBT REPAYMENT	0.0	0.0	0.0	2.5	156.7	329.5	351.1	1071.6	2071.1	2301.5
DISCOUNTED INFLOW	0.0	0.0	0.0	666.0	642.0	615.6	1886.8	1735.4	1594.8	1448.9
DISCOUNTED OUTFLOW	98.7	5370.9	5160.3	168.9	4989.0	4815.2	0.0	0.0	14.1	1.1
NETCASH FLOW	-98.7	-5370.9	-5160.3	497.1	-4347.0	-4199.6	1886.8	1735.4	1580.6	1447.8
INTEREST EARNED RATIO	0.0	0.0	0.0	0.3	0.4	0.6	0.8	0.9	1.1	1.4
DEBT COVERAGE SERVICE RATIO	0.0	0.0	0.0	1.3	1.2	1.1	1.6	1.3	1.0	1.0

** CASH FLOW ANALYSIS FOR GUAYAQUIL MRT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATACASE A-11

UNIT : MIL. SUCRES

	-1997-	-1998-	-1999-	-2000-	-2001-	-2002-	-2003-	-2004-	-2005-	-2006-
CASH INFLOW	4133.2	4248.6	4364.0	4439.5	4551.0	4662.5	4774.0	4885.6	4997.1	5108.6
REVENUE	4749.7	4865.1	4980.5	5095.9	5207.4	5318.9	5430.4	5542.0	5653.5	5765.0
EXPENSE	616.5	616.5	616.5	656.4	656.4	656.4	656.4	656.4	656.4	656.4
DEPRECIATION	953.8	908.2	867.5	1099.5	958.1	912.3	871.5	835.1	802.7	773.8
RESIDUAL VALUE	22368.5	21466.0	22252.4	21242.9	20284.8	19372.5	18501.0	17665.9	16861.2	16089.4
NET OPERATING SURPLUS	4133.2	4248.6	4364.0	4439.5	4551.0	4662.5	4774.0	4885.6	4997.1	5108.6
INTEREST PAYMENT	1474.7	1278.7	1081.6	1028.9	842.3	660.1	484.1	374.5	318.1	263.8
NET SURPLUS	2658.6	2969.9	3282.4	3410.6	3708.7	4002.4	4289.9	4511.1	4679.0	4844.8
CASH OUTFLOW	3.4	3.7	1655.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT REPAYMENT	2302.2	2330.4	2355.0	2253.2	2140.1	2281.4	1579.3	811.9	809.9	753.1
DISCOUNTED INFLOW	1330.8	1221.4	1120.1	1017.4	931.2	851.6	778.7	711.6	649.8	593.1
DISCOUNTED OUTFLOW	1.1	1.1	425.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NETCASH FLOW	1329.7	1220.3	695.1	1017.4	931.2	851.6	778.7	711.6	649.8	593.1
INTEREST EARNED RATIO	1.8	2.3	3.0	3.3	4.4	6.1	8.9	12.0	14.7	15.4
DEBT COVERAGE SERVICE RATIO	1.1	1.2	1.3	1.4	1.5	1.6	2.3	4.1	4.4	5.7

CASE A-1

** CASH FLOW ANALYSIS FOR GUAYAQUIL MRT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA(CASE A-1)

UNIT : MIL. SUCRES

	-2007-	-2008-	-2009-	-2010-	-2011-	-2012-	-2013-	-2014-	-2015-	-2016-
CASH INFLOW	5220.1	5331.7	5443.2	5448.2	5559.7	5671.3	5782.8	5894.3	6005.8	17209.8
REVENUE	5876.5	5985.1	6099.6	6211.1	6322.6	6434.2	6545.7	6657.2	6768.7	6880.4
EXPENSE	656.4	656.4	656.4	762.9	762.9	762.9	762.9	762.9	762.9	762.9
DEPRECIATION	748.0	725.1	704.6	971.9	925.6	884.2	800.3	772.6	747.9	725.9
RESIDUAL VALUE	15341.4	14616.3	16920.7	15948.8	15023.2	14139.0	13338.7	12566.1	11818.2	11092.3
NET OPERATING SURPLUS	5220.1	5331.7	5443.2	5448.2	5559.7	5671.1	5782.8	5894.3	6005.8	6117.5
INTEREST PAYMENT	217.9	179.0	140.1	355.3	319.7	287.5	237.5	198.3	168.7	139.4
NET SURPLUS	5002.2	5152.7	5303.1	5092.9	5240.0	5383.6	5545.3	5696.0	5837.1	5978.1
CASH OUTFLOW	0.0	0.0	3009.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT REPAYMENT	664.9	664.6	664.3	663.7	516.0	806.2	589.7	345.3	344.5	319.7
DISCOUNTED INFLOW	541.1	493.5	449.8	402.0	366.3	333.6	303.7	276.4	251.5	643.4
DISCOUNTED OUTFLOW	0.0	0.0	248.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NETCASH FLOW	541.1	493.5	201.2	402.0	366.3	333.6	303.7	276.4	251.5	643.4
INTEREST EARNED RATIO	23.0	28.8	37.9	14.3	16.6	18.7	23.3	28.7	34.6	42.9
DEBT COVERAGE SERVICE RATIO	5.9	6.3	6.8	5.3	6.7	5.2	7.0	10.8	11.7	13.3

** FINANCIAL I.R.R = 12.33 (%)

CASE A-2

** CASH FLOW ANALYSIS FOR GUAYAQUIL MRT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA(CASE A-2)

UNIT : MIL. SUCRES

	-1987-	-1988-	-1989-	-1990-	-1991-	-1992-	-1993-	-1994-	-1995-	-1996-
CASH INFLOW	0.0	0.0	0.0	935.6	1010.3	1084.9	1967.4	2054.6	2141.9	4017.9
REVENUE	0.0	0.0	0.0	1207.7	1282.4	1357.0	2306.9	2394.1	2481.4	4634.4
EXPENSE	0.0	0.0	0.0	272.1	272.1	272.1	339.5	339.5	339.5	616.5
DEPRECIATION	0.0	0.0	0.0	527.3	497.5	470.9	447.2	426.1	680.2	647.5
RESIDUAL VALUE	98.7	6123.1	12596.2	12114.7	12857.6	13224.4	13053.3	16480.9	22602.6	22557.9
NET OPERATING SURPLUS	0.0	0.0	0.0	935.6	1010.3	1084.9	1967.4	2054.6	2141.9	4017.9
INTEREST PAYMENT	0.0	0.0	0.0	722.5	718.4	698.4	665.4	632.3	1075.5	1012.7
NET SURPLUS	0.0	0.0	0.0	213.1	291.9	386.5	1302.0	1422.3	1066.4	3005.2
CASH OUTFLOW	98.7	6024.4	6473.1	45.8	1240.4	837.7	266.1	3563.7	6801.9	602.8
DEBT REPAYMENT	0.0	0.0	0.0	2.5	156.7	329.5	333.1	436.4	721.8	976.3
DISCOUNTED INFLOW	0.0	0.0	0.0	666.0	642.0	615.6	996.7	929.4	865.1	1448.9
DISCOUNTED OUTFLOW	98.7	5378.9	5160.3	32.6	788.3	475.3	134.8	1747.7	2747.2	217.4
NETCASH FLOW	-98.7	-5378.9	-5160.3	633.4	-146.2	140.3	861.9	-818.3	-1882.1	1231.5
INTEREST EARNED RATIO	0.0	0.0	0.0	0.3	0.4	0.6	2.0	2.2	1.0	3.0
DEBT COVERAGE SERVICE RATIO	0.0	0.0	0.0	1.3	1.2	1.1	2.0	1.9	1.2	2.0

** CASH FLOW ANALYSIS FOR GUAYAQUIL MRT PROJECT **

GUAYAQUIL FINANCIAL ANLLYSIS SOURCE DATA(CASE A-2)

UNIT : MIL. SUCRES

	-1997-	-1998-	-1999-	-2000-	-2001-	-2002-	-2003-	-2004-	-2005-	-2006-
CASH INFLOW	4133.2	4248.6	4364.0	4439.5	4551.0	4662.5	4774.0	4885.6	4997.1	5108.6
REVENUE	4749.7	4865.1	4980.5	5095.9	5207.4	5318.9	5430.4	5542.0	5653.5	5765.0
EXPENSE	616.5	616.5	616.5	656.4	656.4	656.4	656.4	656.4	656.4	656.4
DEPRECIATION	618.3	592.3	569.1	1357.7	1273.8	1199.0	1132.3	1072.9	1019.9	972.7
RESIDUAL VALUE	22602.1	22722.0	27936.0	26578.3	25304.5	24105.5	22973.2	21900.3	20880.4	19907.7
NET OPERATING SURPLUS	4133.2	4248.6	4364.0	4439.5	4551.0	4662.5	4774.0	4885.6	4997.1	5108.6
INTEREST PAYMENT	932.6	830.5	727.9	1737.0	1569.7	1390.4	1175.2	973.8	782.4	599.1
NET SURPLUS	3200.6	3418.1	3636.1	2702.5	2981.3	3272.1	3598.8	3911.8	4214.7	4509.5
CASH OUTFLOW	662.5	712.2	5783.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT REPAYMENT	1290.2	1965.1	2034.8	2005.1	2000.4	2567.3	2426.3	2305.4	2284.1	1994.0
DISCOUNTED INFLOW	1330.8	1221.4	1120.1	1017.4	931.2	851.8	778.7	711.6	649.8	593.1
DISCOUNTED OUTFLOW	213.3	204.7	1484.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NETCASH FLOW	1117.5	1016.6	-364.2	1017.4	931.2	851.8	778.7	711.6	649.8	593.1
INTEREST EARNED RATIO	3.4	4.1	5.0	1.6	1.9	2.4	3.1	4.0	5.4	7.5
DEBT COVERAGE SERVICE RATIO	1.9	1.5	1.6	1.2	1.3	1.2	1.3	1.5	1.6	2.0

CASE A-2

** CASH FLOW ANALYSIS FOR GUAYAQUIL M&T PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA(CASE A-2)

UNIT : MIL. SUCRES

	-2007-	-2008-	-2009-	-2010-	-2011-	-2012-	-2013-	-2014-	-2015-	-2016-
CASH INFLOW	5220.1	5331.7	5443.2	5448.2	5559.7	5671.3	5782.8	5894.3	6005.8	19566.6
REVENUE	5876.5	5988.1	6099.6	6211.1	6322.6	6434.2	6545.7	6657.2	6768.7	6880.4
EXPENSE	656.4	656.4	656.4	762.9	762.9	762.9	762.9	762.9	762.9	762.9
DEPRECIATION	930.6	893.1	859.7	1115.5	1058.8	1008.3	963.3	923.2	872.7	842.4
RESIDUAL VALUE	18977.1	18086.0	20233.3	19117.8	18059.0	17050.7	16087.4	15164.2	14291.5	13449.1
NET OPERATING SURPLUS	5220.1	5331.7	5443.2	5448.2	5559.7	5671.3	5782.8	5894.3	6005.8	6117.5
INTEREST PAYMENT	449.4	342.8	242.7	407.3	339.3	300.5	245.0	202.3	172.6	143.1
NET SURPLUS	4770.7	4988.9	5200.5	5040.9	5220.4	5370.8	5537.8	5692.0	5833.2	5974.4
CASH OUTFLOW	0.0	0.0	3009.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT REPAYMENT	1380.0	1319.7	1223.2	1099.6	573.0	854.9	629.2	346.1	345.7	335.0
DISCOUNTED INFLOW	541.1	493.5	449.8	402.0	365.3	333.6	303.7	276.4	251.5	731.5
DISCOUNTED OUTFLOW	0.0	0.0	248.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NETCASH FLOW	541.1	493.5	201.2	402.0	365.3	333.6	303.7	276.4	251.5	731.5
INTEREST EARNED RATIO	10.6	14.6	21.4	12.4	15.4	17.9	22.6	28.1	33.8	41.7
DEBT COVERAGE SERVICE RATIO	2.9	3.2	3.7	3.6	6.1	4.9	6.6	10.7	11.6	12.8

** FINANCIAL I.R.R = 12.41 (%)

CASE B-1

** CASH FLOW ANALYSIS FOR GUAYAQUIL MRT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA(CASE B-1)

UNIT : MIL. SUCRES

	-1987-	-1988-	-1989-	-1990-	-1991-	-1992-	-1993-	-1994-	-1995-	-1996-
CASH INFLOW	0.0	0.0	0.0	2303.2	2442.6	2582.0	3724.2	3836.5	3948.6	4017.9
REVENUE	0.0	0.0	0.0	2644.1	2783.5	2922.9	4297.7	4410.0	4522.1	4634.4
EXPENSE	0.0	0.0	0.0	340.9	340.9	340.9	573.5	573.5	573.5	616.5
DEPRECIATION	0.0	0.0	0.0	691.7	651.7	615.9	1166.4	1097.2	1035.5	980.5
RESIDUAL VALUE	132.2	8205.2	16911.6	16389.9	21533.2	27190.9	26024.5	24927.3	23926.8	22949.4
NET OPERATING SURPLUS	0.0	0.0	0.0	2303.2	2442.6	2582.0	3724.2	3836.5	3948.6	4017.9
INTEREST PAYMENT	0.0	0.0	0.0	1049.2	1041.3	1003.1	1978.6	1901.0	1766.8	1578.0
NET SURPLUS	0.0	0.0	0.0	1254.0	1401.3	1578.9	1745.6	1935.5	2181.8	2439.9
CASH OUTFLOW	132.2	8073.0	8706.4	170.0	5795.0	6273.6	0.0	0.0	35.0	3.1
DEBT REPAYMENT	0.0	0.0	0.0	5.0	309.4	649.2	665.8	1235.8	2094.6	2351.1
DISCOUNTED INFLOW	0.0	0.0	0.0	1639.4	1552.3	1465.1	1886.8	1735.4	1594.8	1448.9
DISCOUNTED OUTFLOW	132.2	7208.0	6940.7	121.0	3682.8	3559.8	0.0	0.0	14.1	1.1
NETCASH FLOW	-132.2	-7208.0	-6940.7	1518.4	-2130.5	-2094.7	1886.8	1735.4	1580.6	1447.8
INTEREST EARNED RATIO	0.0	0.0	0.0	1.2	1.3	1.6	0.9	1.0	1.2	1.5
DEBT COVERAGE SERVICE RATIO	0.0	0.0	0.0	2.2	1.8	1.6	1.4	1.2	1.0	1.0

** CASH FLOW ANALYSIS FOR GUAYAQUIL MRT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA(CASE B-1)

UNIT : MIL. SUCRES

	-1997-	-1998-	-1999-	-2000-	-2001-	-2002-	-2003-	-2004-	-2005-	-2006-
CASH INFLOW	4133.2	4248.6	4364.0	4439.5	4551.0	4662.5	4774.0	4885.6	4997.1	5108.6
REVENUE	4749.7	4865.1	4980.5	5095.9	5207.4	5318.9	5430.4	5542.0	5653.5	5765.0
EXPENSE	616.5	616.5	616.5	656.4	656.4	656.4	656.4	656.4	656.4	656.4
DEPRECIATION	931.5	887.8	848.9	992.4	942.4	897.8	858.1	822.7	791.2	763.0
RESIDUAL VALUE	22021.3	21137.2	21944.2	20951.8	20009.4	19111.6	18253.5	17430.8	16639.6	15876.6
NET OPERATING SURPLUS	4133.2	4248.6	4364.0	4439.5	4551.0	4662.5	4774.0	4865.6	4997.1	5108.6
INTEREST PAYMENT	1380.0	1182.1	984.2	934.9	763.9	607.1	453.9	356.9	305.0	254.7
NET SURPLUS	2753.2	3066.5	3379.8	3504.6	3787.1	4055.4	4320.1	4523.7	4692.1	4853.9
CASH OUTFLOW	3.4	3.7	1655.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT REPAYMENT	2351.1	2354.5	2351.0	2116.3	1856.2	2001.6	1415.5	773.9	772.5	723.2
DISCOUNTED INFLOW	1330.8	1221.4	1120.1	1017.4	931.2	851.8	778.7	711.6	649.8	593.1
DISCOUNTED OUTFLOW	1.1	1.1	425.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NETCASH FLOW	1329.7	1220.3	695.1	1017.4	931.2	851.8	778.7	711.6	649.8	593.1
INTEREST EARNED RATIO	2.0	2.6	3.4	3.7	5.0	6.7	9.5	12.7	15.4	19.1
DEBT COVERAGE SERVICE RATIO	1.1	1.2	1.3	1.5	1.7	1.8	2.6	4.3	4.6	5.2

CASE B-1

** CASH FLOW ANALYSIS FOR GUAYAQUIL MAT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA(CASE B-1)

UNIT : MIL. SUCRES

	-2007-	-2008-	-2009-	-2010-	-2011-	-2012-	-2013-	-2014-	-2015-	-2016-
CASH INFLOW	5220.1	5331.7	5443.2	5448.2	5559.7	5671.3	5782.8	5394.3	6005.8	17092.2
REVENUE	5876.5	5988.1	6099.6	6211.1	6322.6	6434.2	6545.7	6657.2	6768.7	6880.4
EXPENSE	656.4	656.4	656.4	762.9	762.9	762.9	762.9	762.9	762.9	762.9
DEPRECIATION	738.0	715.6	695.7	954.1	909.2	869.2	795.9	768.2	743.5	721.5
RESIDUAL VALUE	15138.6	14423.0	16736.3	15782.2	14873.0	14003.8	13207.9	12439.7	11696.2	10974.7
NET OPERATING SURPLUS	5220.1	5331.7	5443.2	5448.2	5559.7	5671.3	5782.8	5894.3	6005.8	6117.5
INTEREST PAYMENT	210.6	171.7	132.7	347.9	312.4	280.1	230.5	192.9	165.6	138.4
NET SURPLUS	5009.5	5160.0	5310.5	5100.3	5247.3	5391.2	5552.3	5701.4	5840.2	5979.1
CASH OUTFLOW	0.0	0.0	3009.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT REPAYMENT	664.8	664.5	664.2	663.6	515.9	805.7	564.4	293.8	293.8	293.8
DISCOUNTED INFLOW	541.1	493.5	449.8	402.0	366.3	333.6	303.7	276.4	251.5	639.0
DISCOUNTED OUTFLOW	0.0	0.0	248.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NETCASH FLOW	541.1	493.5	201.2	402.0	366.3	333.6	303.7	276.4	251.5	639.0
INTEREST EARNED RATIO	23.8	30.1	40.0	14.7	16.8	19.2	24.1	29.6	35.3	43.2
DEBT COVERAGE SERVICE RATIO	6.0	6.4	6.9	5.4	6.7	5.2	7.3	12.1	13.1	15.2

** FINANCIAL I.R.R = 13.26 (%)

CASE C-1

** CASH FLOW ANALYSIS FOR GUAYAQUIL MKT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA(CASE C-1)

UNIT : MIL. SUCRES

	-1987-	-1988-	-1989-	-1990-	-1991-	-1992-	-1993-	-1994-	-1995-	-1996-
CASH INFLOW	0.0	0.0	0.0	137.2	150.7	164.2	3724.2	3836.5	3948.6	4017.9
REVENUE	0.0	0.0	0.0	355.2	368.7	382.2	4297.7	4410.0	4522.1	4634.4
EXPENSE	0.0	0.0	0.0	218.0	218.0	218.0	573.5	573.5	573.5	616.5
DEPRECIATION	0.0	0.0	0.0	417.2	397.0	379.0	1233.7	1158.1	1090.8	1030.8
RESIDUAL VALUE	106.8	6199.2	12622.8	12454.7	20543.8	29447.7	28215.0	27055.9	26000.1	24972.4
NET OPERATING SURPLUS	0.0	0.0	0.0	137.2	150.7	164.2	3724.2	3836.5	3948.6	4017.9
INTEREST PAYMENT	0.0	0.0	0.0	724.1	719.9	699.8	2156.9	2103.5	1973.0	1772.0
NET SURPLUS	0.0	0.0	0.0	-586.9	-569.1	-535.6	1567.3	1733.0	1975.6	2245.9
CASH OUTFLOW	106.8	6091.4	6424.6	249.1	8491.1	9277.9	0.0	0.0	35.0	3.1
DEBT REPAYMENT	0.0	0.0	0.3	2.7	158.6	330.2	353.2	1138.0	2218.8	2447.4
DISCOUNTED INFLOW	0.0	0.0	0.0	97.7	95.8	93.2	1886.8	1735.4	1594.8	1448.9
DISCOUNTED OUTFLOW	106.8	5438.7	5121.7	177.3	5396.2	5264.5	0.0	0.0	14.1	1.1
NETCASH FLOW	-106.8	-5438.7	-5121.7	-79.6	-5300.4	-5171.3	1886.8	1735.4	1580.6	1447.8
INTEREST EARNED RATIO	0.0	0.0	0.0	-0.8	-0.8	-0.8	0.7	0.8	1.0	1.3
DEBT COVERAGE SERVICE RATIO	0.0	0.0	0.0	0.2	0.2	0.2	1.5	1.2	0.9	1.0

** CASH FLOW ANALYSIS FOR GUAYAQUIL MKT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA(CASE C-1)

UNIT : MIL. SUCRES

	-1997-	-1998-	-1999-	-2000-	-2001-	-2002-	-2003-	-2004-	-2005-	-2006-
CASH INFLOW	4133.2	4248.6	4364.0	4439.5	4551.0	4662.5	4774.0	4885.6	4997.1	5108.6
REVENUE	4749.7	4865.1	4980.5	5095.9	5207.4	5318.9	5430.4	5542.0	5653.5	5765.0
EXPENSE	616.5	616.5	616.5	656.4	656.4	656.4	656.4	656.4	656.4	656.4
DEPRECIATION	977.3	929.6	837.1	1027.4	974.6	927.5	885.5	848.1	814.9	785.0
RESIDUAL VALUE	23990.5	23072.6	23341.4	22614.0	21339.4	20911.9	20026.4	19178.3	18363.5	17578.5
NET OPERATING SURPLUS	4133.2	4248.6	4364.0	4439.5	4551.0	4662.5	4774.0	4885.6	4997.1	5108.6
INTEREST PAYMENT	1562.9	1353.4	1142.8	1076.8	876.8	681.2	493.4	377.5	319.6	264.0
NET SURPLUS	2570.4	2895.2	3221.2	3362.7	3674.2	3981.3	4280.6	4508.1	4677.5	4844.6
CASH OUTFLOW	3.4	3.7	1655.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT REPAYMENT	2448.1	2475.6	2499.5	2396.5	2264.3	2424.3	1663.0	824.0	821.9	749.6
DISCOUNTED INFLOW	1330.8	1221.4	1120.1	1017.4	931.2	851.8	778.7	711.6	649.8	593.1
DISCOUNTED OUTFLOW	1.1	1.1	425.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NETCASH FLOW	1329.7	1220.3	695.1	1017.4	931.2	851.8	778.7	711.6	649.8	593.1
INTEREST EARNED RATIO	1.6	2.1	2.8	3.1	4.2	5.8	8.7	11.9	14.6	18.4
DEBT COVERAGE SERVICE RATIO	1.0	1.1	1.2	1.3	1.4	1.5	2.2	4.1	4.4	5.0

CASE C-1

** CASH FLOW ANALYSIS FOR GUAYAQUIL MRT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA(CASE C-1)

UNIT : MIL. SUCRES

	-2007-	-2008-	-2009-	-2010-	-2011-	-2012-	-2013-	-2014-	-2015-	-2016-
CASH INFLOW	5220.1	5331.7	5443.2	5448.2	5559.7	5671.3	5782.8	5894.3	6005.8	18601.8
REVENUE	5876.5	5988.1	6099.6	6211.1	6322.6	6434.2	6545.7	6657.2	6768.7	6880.4
EXPENSE	656.4	656.4	656.4	762.9	762.9	762.9	752.9	762.9	762.9	762.9
DEPRECIATION	758.6	735.0	713.9	939.6	941.8	899.2	804.9	777.2	752.5	730.5
RESIDUAL VALUE	16819.9	16084.9	18380.0	17390.4	16448.6	15549.4	14744.5	13967.3	13214.8	12484.3
NET OPERATING SURPLUS	5220.1	5331.7	5443.2	5448.2	5559.7	5671.3	5782.8	5894.3	6005.8	6117.5
INTEREST PAYMENT	217.5	178.6	139.7	354.9	319.4	287.1	237.2	198.2	168.6	139.3
NET SURPLUS	5002.6	5153.1	5303.5	5093.3	5240.3	5384.2	5545.6	5696.1	5837.2	5978.2
CASH OUTFLOW	0.0	0.0	3009.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT REPAYMENT	664.5	664.2	663.9	663.3	515.6	505.5	586.6	344.0	343.3	319.2
DISCOUNTED INFLOW	541.1	493.5	449.8	402.0	366.3	333.6	303.7	276.4	251.5	695.4
DISCOUNTED OUTFLOW	0.0	0.0	248.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NETCASH FLOW	541.1	493.5	201.2	402.0	366.3	333.6	303.7	276.4	251.5	695.4
INTEREST EARNED RATIO	23.0	28.9	38.0	14.4	16.4	18.8	23.4	29.7	34.6	42.9
DEBT COVERAGE SERVICE RATIO	5.9	6.3	6.8	5.4	6.7	5.2	7.0	10.9	11.7	13.3

** FINANCIAL I.R.R = 11.05 (%)

CASE C-2

** CASH FLOW ANALYSIS FOR GUAYAQUIL MRT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA(CASE C-2)

UNIT : MIL. SUCRES

	-1987-	-1988-	-1989-	-1990-	-1991-	-1992-	-1993-	-1994-	-1995-	-1996-
CASH INFLOW	0.0	0.0	0.0	137.2	150.7	164.2	1287.0	1327.9	1368.9	4017.9
REVENUE	0.0	0.0	0.0	355.2	368.7	382.2	1631.6	1672.5	1713.5	4634.4
EXPENSE	0.0	0.0	0.0	218.0	218.0	218.0	344.6	344.6	344.6	616.5
DEPRECIATION	0.0	0.0	0.0	417.2	397.0	379.0	362.9	348.6	656.9	624.4
RESIDUAL VALUE	106.8	6198.2	12622.8	12253.3	13194.7	13597.1	13509.4	17576.6	24095.9	24107.5
NET OPERATING SURPLUS	0.0	0.0	0.0	137.2	150.7	164.2	1287.0	1327.9	1368.9	4017.9
INTEREST PAYMENT	0.0	0.0	0.0	724.1	719.9	699.8	666.7	633.5	1127.5	1063.8
NET SURPLUS	0.0	0.0	0.0	-586.9	-569.1	-535.6	620.3	694.4	241.4	2954.1
CASH OUTFLOW	106.8	6091.4	6424.6	47.7	1338.4	781.4	275.2	4415.8	7176.2	636.0
DEBT REPAYMENT	0.0	0.0	0.0	2.7	155.6	330.2	334.2	448.1	732.9	986.9
DISCOUNTED INFLOW	0.0	0.0	0.0	97.7	95.8	93.2	652.0	600.7	552.9	1448.9
DISCOUNTED OUTFLOW	106.8	5438.7	5121.7	34.0	850.6	443.4	139.4	1997.5	2898.3	229.3
NETCASH FLOW	-106.8	-5438.7	-5121.7	63.7	-754.8	-350.2	512.6	-1396.8	-2345.5	1219.5
INTEREST EARNED RATIO	0.0	0.0	0.0	-0.8	-0.8	-0.8	0.9	1.1	0.2	2.8
DEBT COVERAGE SERVICE RATIO	0.0	0.0	0.0	0.2	0.2	0.2	1.3	1.2	0.7	2.0

** CASH FLOW ANALYSIS FOR GUAYAQUIL MRT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA(CASE C-2)

UNIT : MIL. SUCRES

	-1997-	-1998-	-1999-	-2000-	-2001-	-2002-	-2003-	-2004-	-2005-	-2006-
CASH INFLOW	4133.2	4248.6	4364.0	4439.5	4551.0	4662.5	4774.0	4885.6	4997.1	5108.6
REVENUE	4749.7	4865.1	4980.5	5095.9	5207.4	5318.9	5430.4	5542.0	5653.5	5765.0
EXPENSE	616.5	616.5	616.5	656.4	656.4	656.4	656.4	656.4	656.4	656.4
DEPRECIATION	595.5	569.7	546.7	1401.6	1312.0	1232.1	1160.9	1097.5	1040.9	990.5
RESIDUAL VALUE	24211.0	24392.7	30104.4	28702.8	27390.8	26158.7	24997.8	23900.3	22857.4	21668.9
NET OPERATING SURPLUS	4133.2	4248.6	4364.0	4439.5	4551.0	4662.5	4774.0	4885.6	4997.1	5108.6
INTEREST PAYMENT	981.5	873.6	765.3	1843.0	1665.9	1475.3	1245.8	1030.8	825.6	629.7
NET SURPLUS	3151.7	3375.0	3598.7	2596.5	2885.1	3187.2	3528.2	3854.8	4171.5	4478.9
CASH OUTFLOW	699.0	751.4	6258.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT REPAYMENT	1353.3	2064.3	2136.2	2109.1	2110.1	2723.5	2572.3	2454.5	2431.9	2093.2
DISCOUNTED INFLOW	1330.8	1221.4	1120.1	1017.4	931.2	851.8	778.7	711.6	649.8	593.1
DISCOUNTED OUTFLOW	225.1	216.0	1606.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NETCASH FLOW	1105.7	1005.4	-486.2	1017.4	931.2	851.8	778.7	711.6	649.8	593.1
INTEREST EARNED RATIO	3.2	3.9	4.7	1.4	1.7	2.2	2.8	3.7	5.1	7.1
DEBT COVERAGE SERVICE RATIO	1.8	1.4	1.5	1.1	1.2	1.1	1.3	1.4	1.5	1.9

CASE C-2

** CASH FLOW ANALYSIS FOR GUAYAQUIL MRT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA(CASE C-2)

UNIT : MIL. SUCRES

	-2007-	-2008-	-2009-	-2010-	-2011-	-2012-	-2013-	-2014-	-2015-	-2016-
CASH INFLOW	5220.1	5331.7	5443.2	5448.2	5559.7	5671.3	5782.8	5894.3	6005.8	21428.4
REVENUE	5876.5	5988.1	6039.6	6211.1	6322.6	6434.2	6545.7	6657.2	6768.7	6880.4
EXPENSE	656.4	656.4	656.4	762.9	762.9	762.9	762.9	762.9	762.9	762.9
DEPRECIATION	945.6	905.6	869.9	1132.5	1073.1	1020.1	972.9	930.8	873.9	842.6
RESIDUAL VALUE	20923.3	20017.7	22156.8	21024.3	19951.2	18931.1	17958.2	17027.4	16153.5	15310.9
NET OPERATING SURPLUS	5220.1	5331.7	5443.2	5448.2	5559.7	5671.3	5782.8	5894.3	6005.8	6117.5
INTEREST PAYMENT	471.5	358.5	252.6	412.1	340.6	301.2	245.2	202.3	172.6	143.1
NET SURPLUS	4748.6	4973.2	5190.6	5036.1	5219.1	5370.1	5537.6	5692.0	5833.2	5974.4
CASH OUTFLOW	0.0	0.0	3009.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT REPAYMENT	1446.2	1382.7	1278.0	1146.6	578.0	859.2	630.6	345.0	344.7	334.3
DISCOUNTED INFLOW	541.1	493.5	449.8	402.0	366.3	333.6	303.7	276.4	251.5	801.1
DISCOUNTED OUTFLOW	0.0	0.0	248.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NETCASH FLOW	541.1	493.5	201.2	402.0	366.3	333.6	303.7	276.4	251.5	801.1
INTEREST EARNED RATIO	10.1	13.9	20.5	12.2	15.3	17.8	22.6	28.1	33.8	41.7
DEBT COVERAGE SERVICE RATIO	2.7	3.1	3.6	3.5	6.1	4.9	6.6	10.8	11.6	12.8

** FINANCIAL I.R.R = 10.53 (%)

CASE D-1

** CASH FLOW ANALYSIS FOR GUAYAQUIL MRT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA(CASE D-1)

UNIT : MIL. SUCRES

	-1987-	-1988-	-1989-	-1990-	-1991-	-1992-	-1993-	-1994-	-1995-	-1996-
CASH INFLOW	0.0	0.0	0.0	1184.4	1239.0	1293.6	3724.2	3836.5	3948.6	4017.9
REVENUE	0.0	0.0	0.0	1522.4	1577.0	1631.6	4297.7	4410.0	4522.1	4634.4
EXPENSE	0.0	0.0	0.0	338.0	338.0	338.0	573.5	573.5	573.5	616.5
DEPRECIATION	0.0	0.0	0.0	693.0	652.5	616.5	1178.9	1109.4	1047.4	992.1
RESIDUAL VALUE	142.6	8852.6	18011.9	17496.7	22815.1	28693.9	27515.0	26405.6	25393.2	24404.2
NET OPERATING SURPLUS	0.0	0.0	0.0	1184.4	1239.0	1293.6	3724.2	3836.5	3948.6	4017.9
INTEREST PAYMENT	0.0	0.0	0.0	1142.4	1133.2	1088.6	2088.5	2000.5	1854.1	1651.5
NET SURPLUS	0.0	0.0	0.0	42.0	105.8	205.0	1635.7	1536.0	2094.5	2366.4
CASH OUTFLOW	142.6	8710.0	9159.3	177.8	5970.9	6495.3	0.0	0.0	35.0	3.1
DEBT REPAYMENT	0.0	0.0	0.0	5.9	365.5	756.6	773.9	1361.1	2245.1	2498.4
DISCOUNTED INFLOW	0.0	0.0	0.0	843.0	787.4	734.0	1886.8	1735.4	1594.8	1448.9
DISCOUNTED OUTFLOW	142.6	7776.3	7301.7	126.6	3794.6	3685.6	0.0	0.0	14.1	1.1
NETCASH FLOW	-142.6	-7776.8	-7301.7	716.5	-3007.2	-2951.6	1886.8	1735.4	1580.6	1447.8
INTEREST EARNED RATIO	0.0	0.0	0.0	0.0	0.1	0.2	0.8	0.9	1.1	1.4
DEBT COVERAGE SERVICE RATIO	0.0	0.0	0.0	1.0	0.8	0.7	1.3	1.1	1.0	1.0

** CASH FLOW ANALYSIS FOR GUAYAQUIL MRT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA(CASE D-1)

UNIT : MIL. SUCRES

	-1997-	-1998-	-1999-	-2000-	-2001-	-2002-	-2003-	-2004-	-2005-	-2006-
CASH INFLOW	4133.2	4248.6	4364.0	4439.5	4551.0	4662.5	4774.0	4885.6	4997.1	5108.6
REVENUE	4749.7	4865.1	4980.5	5095.9	5207.4	5318.9	5430.4	5542.0	5653.5	5765.0
EXPENSE	616.5	616.5	616.5	656.4	656.4	656.4	656.4	656.4	656.4	656.4
DEPRECIATION	942.9	899.0	859.9	1003.2	953.0	908.3	868.5	833.0	801.3	773.1
RESIDUAL VALUE	23464.7	22569.4	23365.4	22362.2	21409.2	20500.9	19632.4	18799.4	17998.1	17225.0
NET OPERATING SURPLUS	4133.2	4248.6	4364.0	4439.5	4551.0	4662.5	4774.0	4885.6	4997.1	5108.6
INTEREST PAYMENT	1439.9	1228.3	1016.8	955.1	776.1	614.5	457.0	357.9	305.5	254.8
NET SURPLUS	2693.4	3020.3	3347.2	3484.4	3774.9	4048.0	4317.0	4527.7	4691.6	4853.8
CASH OUTFLOW	3.4	3.7	1655.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT REPAYMENT	2498.4	2501.8	2497.5	2213.1	1905.8	2050.5	1443.2	777.7	776.2	725.5
DISCOUNTED INFLOW	1330.8	1221.4	1120.1	1017.4	931.2	851.8	778.7	711.6	649.8	593.1
DISCOUNTED OUTFLOW	1.1	1.1	425.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NETCASH FLOW	1329.7	1220.3	695.1	1017.4	931.2	851.8	778.7	711.6	649.8	593.1
INTEREST EARNED RATIO	1.9	2.5	3.3	3.6	4.9	6.6	9.4	12.7	15.4	19.0
DEBT COVERAGE SERVICE RATIO	1.0	1.1	1.2	1.4	1.7	1.7	2.5	4.3	4.6	5.2

CASE D-1

** CASH FLOW ANALYSIS FOR GUAYAQUIL NRT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA(CASE D-1)

UNIT : MIL. SUCRES

	-2007-	-2008-	-2009-	-2010-	-2011-	-2012-	-2013-	-2014-	-2015-	-2016-
CASH INFLOW	5220.1	5331.7	5443.2	5448.2	5559.7	5671.3	5782.9	5894.3	6005.8	18344.8
REVENUE	5876.5	5988.1	6099.6	6211.1	6322.6	6434.2	6545.7	6657.2	6768.7	6880.4
EXPENSE	656.4	655.4	656.4	762.9	762.9	762.9	762.9	762.9	762.9	762.9
DEPRECIATION	748.0	725.6	705.6	963.6	918.6	878.6	805.3	777.6	752.9	730.9
RESIDUAL VALUE	16477.0	15751.4	18054.9	17091.2	16172.6	15294.0	14488.7	13711.1	12958.2	12227.3
NET OPERATING SURPLUS	5220.1	5331.7	5443.2	5448.2	5559.7	5671.3	5782.8	5894.3	6005.8	6117.5
INTEREST PAYMENT	210.5	171.6	132.6	347.8	312.3	280.0	230.4	192.9	165.6	138.4
NET SURPLUS	5009.6	5160.1	5310.6	5100.4	5247.4	5391.3	5552.4	5701.4	5840.2	5979.1
CASH OUTFLOW	0.0	0.0	3009.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT REPAYMENT	665.2	664.9	664.5	663.9	516.2	306.0	561.2	293.8	293.8	293.8
DISCOUNTED INFLOW	541.1	493.5	449.8	402.0	366.3	333.6	303.7	276.4	251.5	685.8
DISCOUNTED OUTFLOW	0.0	0.0	248.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NETCASH FLOW	541.1	493.5	201.2	402.0	366.3	333.6	303.7	276.4	251.5	685.8
INTEREST EARNED RATIO	23.8	30.1	40.0	14.7	16.8	19.3	24.1	29.6	35.3	43.2
DEBT COVERAGE SERVICE RATIO	6.0	6.4	6.8	5.4	6.7	5.2	7.3	12.1	13.1	14.2

** FINANCIAL I.R.R = 11.43 (%)

CASE E

** CASH FLOW ANALYSIS FOR GUAYAQUIL MRT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA(CASE E)

UNIT : MIL. SUCRES

	-1987-	-1988-	-1989-	-1990-	-1991-	-1992-	-1993-	-1994-	-1995-	-1996-
CASH INFLOW	0.0	0.0	0.0	935.5	985.3	1035.1	1069.5	1105.0	1140.5	1169.5
REVENUE	0.0	0.0	0.0	1207.7	1257.5	1307.2	1357.0	1392.5	1428.0	1463.5
EXPENSE	0.0	0.0	0.0	272.2	272.2	272.2	287.5	287.5	287.5	294.0
DEPRECIATION	0.0	0.0	0.0	527.1	497.9	471.3	525.8	499.8	476.6	455.9
RESIDUAL VALUE	98.8	6132.6	12612.2	12084.5	12034.4	12629.5	12103.7	11603.9	11127.3	10671.4
NET OPERATING SURPLUS	0.0	0.0	0.0	935.5	985.3	1035.1	1069.5	1105.0	1140.5	1169.5
INTEREST PAYMENT	0.0	0.0	0.0	723.5	719.3	699.3	755.9	722.5	684.5	633.6
NET SURPLUS	0.0	0.0	0.0	212.0	266.0	335.7	313.6	382.5	456.0	535.9
CASH OUTFLOW	98.8	6033.8	6579.6	0.0	457.8	1066.4	0.0	0.0	0.0	0.0
DEBT REPAYMENT	0.0	0.0	0.0	2.5	156.9	329.9	329.9	347.3	597.7	828.3
DISCOUNTED INFLOW	0.0	0.0	0.0	665.9	626.2	587.3	541.8	499.5	460.6	421.7
DISCOUNTED OUTFLOW	98.8	5387.3	5165.5	0.0	284.6	605.1	0.0	0.0	0.0	0.0
NETCASH FLOW	-98.8	-5387.3	-5165.5	665.9	341.6	-17.8	541.8	499.8	460.6	421.7
INTEREST EARNED RATIO	0.0	0.0	0.0	0.3	0.4	0.5	0.4	0.5	0.7	0.8
DEBT COVERAGE SERVICE RATIO	0.0	0.0	0.0	1.3	1.1	1.0	1.0	1.0	0.9	0.8

** CASH FLOW ANALYSIS FOR GUAYAQUIL MRT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA(CASE E)

UNIT : MIL. SUCRES

	-1997-	-1998-	-1999-	-2000-	-2001-	-2002-	-2003-	-2004-	-2005-	-2006-
CASH INFLOW	1208.6	1247.6	1286.7	1325.9	1361.4	1396.9	1432.4	1467.9	1503.5	1539.0
REVENUE	1502.6	1541.6	1590.7	1619.9	1655.4	1690.9	1726.4	1761.9	1797.5	1833.0
EXPENSE	294.0	294.0	294.0	294.0	294.0	294.0	294.0	294.0	294.0	294.0
DEPRECIATION	437.4	421.0	406.4	393.3	381.7	371.3	362.1	353.8	346.5	340.0
RESIDUAL VALUE	10234.0	9813.0	9406.6	9013.3	8631.6	8260.3	7898.2	7544.4	7197.9	6857.9
NET OPERATING SURPLUS	1208.6	1247.6	1286.7	1325.9	1361.4	1396.9	1432.4	1467.9	1503.5	1539.0
INTEREST PAYMENT	574.4	515.1	454.8	395.8	346.2	304.2	264.2	231.8	206.4	181.1
NET SURPLUS	634.2	732.5	831.9	930.1	1015.2	1092.7	1168.2	1236.1	1297.1	1357.9
CASH OUTFLOW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT REPAYMENT	828.3	843.2	876.6	774.4	660.9	660.0	598.0	514.4	514.4	510.5
DISCOUNTED INFLOW	389.1	358.7	330.3	303.9	278.6	255.2	233.7	213.8	195.5	178.7
DISCOUNTED OUTFLOW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NETCASH FLOW	389.1	358.7	330.3	303.9	278.6	255.2	233.7	213.8	195.5	178.7
INTEREST EARNED RATIO	1.1	1.4	1.8	2.3	2.9	3.6	4.4	5.3	6.3	7.5
DEBT COVERAGE SERVICE RATIO	0.9	0.9	1.0	1.1	1.4	1.4	1.7	2.0	2.1	2.2

CASE E

** CASH FLOW ANALYSIS FOR GUAYAQUIL MRT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA(CASE E)

UNIT : MIL. SUCRES

	-2007-	-2008-	-2009-	-2010-	-2011-	-2012-	-2013-	-2014-	-2015-	-2016-
CASH INFLOW	1574.5	1610.0	1645.5	1660.7	1696.3	1731.8	1767.3	1802.8	1838.3	5943.7
REVENUE	1868.5	1904.0	1939.5	1975.0	2010.6	2046.1	2081.6	2117.1	2152.6	2188.1
EXPENSE	294.0	294.0	294.0	314.3	314.3	314.3	314.3	314.3	314.3	314.3
DEPRECIATION	334.1	328.9	324.3	339.0	333.6	328.7	319.9	316.6	313.6	310.9
RESIDUAL VALUE	6523.8	6194.9	6332.1	5993.1	5659.5	5330.8	5010.9	4694.3	4380.7	4069.8
NET OPERATING SURPLUS	1574.5	1610.0	1645.5	1660.7	1696.3	1731.8	1767.3	1802.8	1838.3	1873.8
INTEREST PAYMENT	156.5	132.7	108.9	124.0	100.2	75.4	50.2	35.4	28.9	22.5
NET SURPLUS	1418.0	1477.3	1535.6	1536.7	1596.1	1656.4	1717.1	1767.4	1809.4	1851.3
CASH OUTFLOW	0.0	0.0	461.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT REPAYMENT	501.1	501.1	501.1	501.1	501.1	542.6	325.8	95.2	95.2	80.3
DISCOUNTED INFLOW	163.2	149.0	136.0	122.5	111.8	101.9	92.8	84.5	77.0	222.2
DISCOUNTED OUTFLOW	0.0	0.0	38.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NETCASH FLOW	163.2	149.0	97.8	122.5	111.8	101.9	92.8	84.5	77.0	222.2
INTEREST EARNED RATIO	9.1	11.1	14.1	12.4	15.9	22.0	34.2	49.9	62.6	82.3
DEBT COVERAGE SERVICE RATIO	2.4	2.5	2.7	2.7	2.8	2.8	4.7	13.8	14.9	18.2

** FINANCIAL I.R.R = 7.96 (%)

CASE F

** CASH FLOW ANALYSIS FOR GUAYAQUIL MRT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA(CASE F)

UNIT : MIL. SUCRES

	-1987-	-1988-	-1989-	-1990-	-1991-	-1992-	-1993-	-1994-	-1995-	-1996-
CASH INFLOW	0.0	0.0	0.0	1745.4	1818.8	1892.2	1939.5	1997.6	2055.9	2104.1
REVENUE	0.0	0.0	0.0	2086.7	2160.1	2233.5	2306.9	2365.0	2423.2	2481.4
EXPENSE	0.0	0.0	0.0	341.3	341.3	341.3	367.4	367.4	367.4	377.3
DEPRECIATION	0.0	0.0	0.0	692.1	652.0	616.3	664.2	630.5	601.0	618.0
RESIDUAL VALUE	132.3	8213.0	16925.1	16233.0	16033.5	16508.3	15844.1	15213.3	15012.2	14394.2
NET OPERATING SURPLUS	0.0	0.0	0.0	1745.4	1818.8	1892.2	1939.5	1997.6	2055.9	2104.1
INTEREST PAYMENT	0.0	0.0	0.0	1050.8	1042.9	1004.5	1072.1	1007.9	935.1	877.1
NET SURPLUS	0.0	0.0	0.0	694.6	775.9	887.7	867.4	989.7	1120.7	1227.0
CASH OUTFLOW	132.3	8080.7	8712.1	0.0	452.5	1091.1	0.0	0.0	399.9	0.0
DEBT REPAYMENT	0.0	0.0	0.0	5.0	310.6	651.7	651.7	699.8	1047.8	1304.0
DISCOUNTED INFLOW	0.0	0.0	0.0	1242.4	1155.9	1073.7	982.6	903.6	830.3	759.7
DISCOUNTED OUTFLOW	132.3	7214.9	6945.2	0.0	287.6	619.1	0.0	0.0	161.5	0.0
NETCASH FLOW	-132.3	-7214.9	-6945.2	1242.4	868.3	454.6	982.6	903.6	668.8	759.7
INTEREST EARNED RATIO	0.0	0.0	0.0	0.7	0.7	0.9	0.8	1.0	1.2	1.4
DEBT COVERAGE SERVICE RATIO	0.0	0.0	0.0	1.7	1.3	1.1	1.1	1.2	1.0	1.0

** CASH FLOW ANALYSIS FOR GUAYAQUIL MRT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA(CASE F)

UNIT : MIL. SUCRES

	-1997-	-1998-	-1999-	-2000-	-2001-	-2002-	-2003-	-2004-	-2005-	-2006-
CASH INFLOW	2162.9	2221.7	2280.5	2331.1	2390.4	2449.5	2508.7	2567.9	2627.1	2686.2
REVENUE	2540.2	2599.0	2657.9	2716.6	2775.9	2835.0	2894.2	2953.4	3012.6	3071.7
EXPENSE	377.3	377.3	377.3	385.5	385.5	385.5	385.5	385.5	385.5	385.5
DEPRECIATION	589.6	564.3	541.8	521.7	503.8	487.8	473.6	460.9	449.6	439.5
RESIDUAL VALUE	13804.6	13240.3	12698.5	12176.8	11673.0	11185.2	10711.6	10250.7	9801.1	9361.5
NET OPERATING SURPLUS	2162.9	2221.7	2280.6	2331.1	2390.4	2449.5	2508.7	2567.9	2627.1	2685.2
INTEREST PAYMENT	776.1	674.2	569.9	470.9	393.8	334.5	278.1	235.4	206.4	177.5
NET SURPLUS	1386.8	1547.5	1710.8	1860.2	1996.6	2115.1	2230.6	2332.5	2420.7	2508.7
CASH OUTFLOW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT REPAYMENT	1304.0	1343.0	1339.1	1103.0	841.3	840.2	730.3	553.5	553.5	549.6
DISCOUNTED INFLOW	696.4	638.7	585.4	534.2	489.1	447.5	409.2	374.0	341.6	311.9
DISCOUNTED OUTFLOW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NETCASH FLOW	696.4	638.7	585.4	534.2	489.1	447.5	409.2	374.0	341.6	311.9
INTEREST EARNED RATIO	1.8	2.3	3.0	4.0	5.1	6.3	8.0	9.9	11.7	14.1
DEBT COVERAGE SERVICE RATIO	1.0	1.1	1.2	1.5	1.9	2.1	2.5	3.3	3.5	3.7

CASE F

** CASH FLOW ANALYSIS FOR GUAYAQUIL MRT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA(CASE F)

UNIT : MIL. SUCRES

	-2007-	-2003-	-2009-	-2010-	-2011-	-2012-	-2013-	-2014-	-2015-	-2016-
CASH INFLOW	2745.5	2804.6	2863.9	2860.4	2919.6	2978.9	3038.0	3097.1	3156.4	9704.8
REVENUE	3131.0	3190.1	3249.4	3308.5	3367.7	3426.9	3486.1	3545.2	3604.5	3663.6
EXPENSE	385.5	385.5	385.5	448.1	448.1	448.1	448.1	448.1	448.1	448.1
DEPRECIATION	430.6	422.6	415.5	593.0	567.7	545.2	520.5	503.1	487.6	469.4
RESIDUAL VALUE	8930.9	8508.3	10175.7	9582.7	9015.0	8469.8	7949.3	7446.2	6958.6	6489.2
NET OPERATING SURPLUS	2745.5	2804.6	2863.9	2860.4	2919.6	2978.8	3038.0	3097.1	3156.4	3215.5
INTEREST PAYMENT	150.0	125.8	101.6	253.3	229.5	201.1	161.5	133.5	114.7	95.8
NET SURPLUS	2595.5	2678.8	2762.3	2607.1	2690.1	2777.7	2876.5	2963.6	3041.7	3119.7
CASH OUTFLOW	0.0	0.0	2082.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT REPAYMENT	504.6	504.6	504.6	501.2	501.2	700.6	459.6	203.4	203.4	203.4
DISCOUNTED INFLOW	284.6	259.6	236.7	211.1	192.4	175.2	159.6	145.2	132.2	362.8
DISCOUNTED OUTFLOW	0.0	0.0	172.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NETCASH FLOW	284.6	259.6	64.5	211.1	192.4	175.2	159.5	145.2	132.2	362.8
INTEREST EARNED RATIO	17.3	21.3	27.2	10.3	11.7	13.8	17.9	22.2	26.5	32.6
DEBT COVERAGE SERVICE RATIO	4.2	4.4	4.7	3.9	4.0	3.3	4.9	9.2	9.9	10.7

** FINANCIAL I.R.R = 10.75 (%)

CASE G

** CASH FLOW ANALYSIS FOR GUAYAQUIL MRT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA(CASE G)

UNIT : MIL. SUCRES

	-1987-	-1988-	-1989-	-1990-	-1991-	-1992-	-1993-	-1994-	-1995-	-1996-
CASH INFLOW	0.0	0.0	0.0	1184.4	1220.7	1257.1	1287.0	1314.3	1341.5	1368.9
REVENUE	0.0	0.0	0.0	1522.4	1558.7	1595.1	1631.6	1658.9	1686.1	1713.5
EXPENSE	0.0	0.0	0.0	338.0	338.0	338.0	344.6	344.6	344.6	344.6
DEPRECIATION	0.0	0.0	0.0	693.3	652.8	616.7	617.7	589.0	563.5	540.7
RESIDUAL VALUE	142.7	8859.2	18023.5	17330.2	17000.0	17164.7	16547.0	15759.0	15394.5	14853.8
NET OPERATING SURPLUS	0.0	0.0	0.0	1184.4	1220.7	1257.1	1287.0	1314.3	1341.5	1368.9
INTEREST PAYMENT	0.0	0.0	0.0	1143.9	1134.7	1089.9	1110.3	1036.4	955.5	857.6
NET SURPLUS	0.0	0.0	0.0	40.5	86.1	167.2	176.7	277.9	386.0	511.3
CASH OUTFLOW	142.7	8716.5	9165.3	0.0	322.6	701.4	0.0	0.0	0.0	0.0
DEBT REPAYMENT	0.0	0.0	0.0	5.9	366.8	759.1	759.1	794.6	1115.6	1368.5
DISCOUNTED INFLOW	0.0	0.0	0.0	843.0	775.8	713.3	652.0	594.5	541.3	493.6
DISCOUNTED OUTFLOW	142.7	7782.6	7305.7	0.0	205.0	443.4	0.0	0.0	0.0	0.0
NETCASH FLOW	-142.7	-7782.6	-7305.7	843.0	570.8	269.9	652.0	594.5	541.3	493.6
INTEREST EARNED RATIO	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.4	0.6
DEBT COVERAGE SERVICE RATIO	0.0	0.0	0.0	1.0	0.8	0.7	0.7	0.7	0.6	0.6

** CASH FLOW ANALYSIS FOR GUAYAQUIL MRT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA(CASE G)

UNIT : MIL. SUCRES

	-1997-	-1998-	-1999-	-2000-	-2001-	-2002-	-2003-	-2004-	-2005-	-2006-
CASH INFLOW	1397.9	1426.9	1455.9	1484.9	1510.9	1536.8	1562.8	1588.6	1614.6	1640.5
REVENUE	1742.5	1771.5	1800.5	1829.5	1855.5	1881.4	1907.4	1933.2	1959.2	1985.1
EXPENSE	344.6	344.6	344.6	344.6	344.6	344.6	344.6	344.6	344.6	344.6
DEPRECIATION	520.4	502.3	486.2	471.9	459.1	447.6	437.5	428.4	420.3	413.1
RESIDUAL VALUE	14333.4	13831.1	13344.9	12873.0	12413.9	11966.3	11528.8	11100.4	10680.1	10267.0
NET OPERATING SURPLUS	1397.9	1426.9	1455.9	1484.9	1510.9	1536.8	1562.8	1588.6	1614.6	1640.5
INTEREST PAYMENT	750.7	643.8	536.9	436.9	363.0	310.1	260.2	223.0	198.1	173.2
NET SURPLUS	647.2	783.1	919.0	1048.0	1147.9	1226.7	1302.6	1365.6	1416.5	1467.3
CASH OUTFLOW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT REPAYMENT	1368.5	1368.5	1363.4	1077.9	767.0	767.8	664.1	510.9	510.9	508.1
DISCOUNTED INFLOW	450.1	410.2	373.7	340.3	307.2	280.8	254.9	231.4	210.0	190.5
DISCOUNTED OUTFLOW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NETCASH FLOW	450.1	410.2	373.7	340.3	309.2	280.8	254.9	231.4	210.0	199.5
INTEREST EARNED RATIO	0.9	1.2	1.7	2.4	3.2	4.0	5.0	6.1	7.2	8.5
DEBT COVERAGE SERVICE RATIO	0.7	0.7	0.8	1.0	1.1	1.4	1.7	2.2	2.3	2.4

CASE G

** CASH FLOW ANALYSIS FOR GUAYAQUIL MRT PROJECT **

GUAYAQUIL FINANCIAL ANALYSIS SOURCE DATA(CASE G)

UNIT : MIL. SUCRES

	-2007-	-2008-	-2009-	-2010-	-2011-	-2012-	-2013-	-2014-	-2015-	-2016-
CASH INFLOW	1666.5	1692.5	1718.4	1710.0	1735.9	1761.9	1787.7	1813.7	1839.6	8692.7
REVENUE	2011.1	2037.1	2063.0	2089.0	2114.9	2140.9	2166.7	2192.7	2218.6	2244.6
EXPENSE	344.6	344.6	344.6	379.0	379.0	379.0	379.0	379.0	379.0	379.0
DEPRECIATION	406.7	401.0	395.9	401.3	395.6	392.4	388.6	385.3	382.3	379.6
RESIDUAL VALUE	9860.3	9459.3	9553.1	9151.8	8755.2	8362.8	7974.2	7588.9	7206.6	6827.0
NET OPERATING SURPLUS	1666.5	1692.5	1718.4	1710.0	1735.9	1761.9	1787.7	1813.7	1839.6	1865.6
INTEREST PAYMENT	148.9	124.9	101.1	118.7	94.8	70.0	44.9	31.4	27.0	22.5
NET SURPLUS	1517.7	1567.6	1617.3	1591.3	1641.1	1691.9	1742.9	1782.3	1812.6	1843.1
CASH OUTFLOW	0.0	0.0	489.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEBT REPAYMENT	501.4	501.4	501.4	501.4	501.4	545.2	300.7	47.8	47.8	47.8
DISCOUNTED INFLOW	172.8	156.7	142.0	126.2	114.4	103.6	93.9	85.1	77.0	325.0
DISCOUNTED OUTFLOW	0.0	0.0	40.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NETCASH FLOW	172.8	156.7	101.5	126.2	114.4	103.6	93.9	85.1	77.0	325.0
INTEREST EARNED RATIO	10.2	12.6	16.0	13.4	17.3	24.2	38.9	56.3	67.1	81.9
DEBT COVERAGE SERVICE RATIO	2.6	2.7	2.9	2.8	2.9	2.9	5.2	22.9	24.6	26.5

** FINANCIAL I.R.R = 6.41 (%)

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