

REVIEW OF THE 2010 MIAMI-DADE TRANSIT PRO FORMA



DRAFT REPORT
February 2011

Prepared for:
Miami-Dade County Citizens' Independent Transportation Trust



Table of Contents

I. Executive Summary	3
Background and Purpose	3
Methodology	3
Key Findings and Conclusions.....	3
II. Summary of the MDT Pro Forma and its Assumptions	5
III. The CITT Financial Model: Replication Case	6
IV. The CITT Financial Model: Sensitivity Analysis	8
V. Conclusions	11
VI. Appendix	12
A. Data Resources	12



I. Executive Summary

Background and Purpose

Miami-Dade Transit (MDT) faces significant financial challenges in the coming years to simultaneously operate its system, incorporate new rail service to the Miami Intermodal Center, and invest to maintain a state of good repair. The financial issues will become more acute with more of the half percent sales tax directed toward debt service, limiting the amount available for operating support. Understanding the financial needs and resources available is an essential step to balance these priorities with financial realities.

In previous assignments, IMG, with Planning and Economics Group (the “Research Team” or the “Team”), reviewed and analyzed the 30-year MDT Pro Forma (the “MDT Pro Forma” or the “Pro Forma”) assumptions. As part of its prior engagements, the Team also built the financial “Risk Assessment Model,” an Excel tool capable of running cash flow sensitivity analysis of the 30-year forecast.

The focus of the current effort is to conduct a detailed review of the 2010 MDT Pro Forma, including a base audit and analysis of the assumptions therein, in order to assess the financial strength of the forecast and to provide input regarding how enhance the Pro Forma. As part of this task, the Team has developed a spreadsheet model to check Pro Forma results and to conduct sensitivity and scenario analysis of the Pro Forma results under a variety of assumptions. This report details the findings of our analysis.

Methodology

The methodology for this assignment consisted of the following steps:

1. Conducted meetings and conference calls with Miami-Dade County’s Office of Strategic Business Management (OSBM) and MDT staff to understand the structure and assumptions of the Pro Forma.
2. Obtained budget and other financial information from CITT/OSBM/MDT to analyze Pro Forma assumptions.
3. Obtained National Transit Database (NTD) operating history for MDT and peer transit agencies.
4. Obtained history of electricity and gasoline price growth rates for purposes of sensitivity analysis.
5. Built the CITT Financial Model (the “CITT Model”) to validate Pro Forma calculations and perform scenario/sensitivity analysis.
6. Built an MDT “Replication Case” as the starting point for analysis.
7. Used the CITT Model to analyze sensitivities to assess the financial strength of the Pro Forma.

Key Findings and Conclusions

The analysis shows that MDT’s financial situation is precarious. In particular, we note the following observations:



REVIEW OF THE 2010 MIAMI-DADE TRANSIT PRO FORMA

- The Pro Forma itself shows that the senior debt minimum debt service coverage ratio (DSCR) of 1.50X may be violated as soon as 2017¹. The Pro Forma assumes bonds are issued every year to fund PTP capital expenditures. However, due to coverage ratio constraints, MDT may not be able to issue additional debt after year 2020 according to the Pro Forma itself (this is the year DSCR falls below 1.25X).
- In order to maintain a minimum DSCR of 1.25X, (the Master Bond Ordinance definition excludes operating cash flows), up to \$149 million of capital expenditures must be deferred. This calculation is based only on surtax receipts and debt service and excludes MDT operating cash flows.
- When operating cash flows are included, in order to meet debt service payments, capital expenditures of up to \$334 million must be deferred.
- The MDT Pro Forma appears to be optimistic with regard to key assumptions.
 - If surtax revenue grows at the 15-year historical average of 3.62 percent instead of 5.00 percent, as assumed in the Pro Forma, debt service payment default occurs.
 - The MDT Pro Forma assumes MDT operating expense (OPEX) growth rates that are lower than historical averages for MDT. In particular, fuel and electricity expenses grow at an annual rate of 1.00 percent each, compared to historical averages closer to 7.00 and 2.50 percent for fuel and electric, respectively.
- The sensitivity analysis also shows that cash flow forecast can be greatly improved if MDT OPEX growth can be controlled and growth rates are kept to reasonable levels.

We discuss our approach and findings in more detail in the sections that follow.

¹ The definition of DSCR according to the Master Bond Ordinance 05-48 takes surtax revenue, less distribution to the cities, and interest income and divides by debt service payments. The minimum required DSCR is 1.50X. However, the County can raise subordinated debt at a minimum DSCR of 1.25X.



II. Summary of the MDT Pro Forma and its Assumptions

The MDT Pro Forma is an Excel spreadsheet with eight worksheets. It contains a 30-year forecast of MDT operations and PTP public works expenditures. Based on assumptions summarized in a separate, accompanying 2-page Word document, the 30-year sources and uses of cash flow are summarized in the Pro Forma. However, the Team found that the Pro Forma had the following limitations:

- It provides limited capability to analyze the financial forecast under variable assumptions and scenarios:
 - Many assumptions are hard-coded throughout the spreadsheet (sometimes these hard-codes are embedded within formulaic rows);
 - Sometimes, there is a lack of formula consistency within rows.
- It does not split fare revenues or operating expenses by mode
- Certain forecast items lack detailed documentation

Some of the essential assumptions of the MDT Pro Forma are summarized in the table below:

Variable	Assumption
Fare Increases	<ul style="list-style-type: none"> • Fare increases in 2013 and 2017 and every 3 years thereafter; each fare increase is \$0.25
Surtax Revenue Growth	<ul style="list-style-type: none"> • Surtax revenue long-term growth rate of 5.00 percent (starting in year 3)
Proposed Revenue Sources	<ul style="list-style-type: none"> • Includes “proposed” revenue sources such as 2 cents of Local Option Gas Tax and additional mil revenue
Bus Operating Level	<ul style="list-style-type: none"> • Assumes constant levels of employment and bus service over 30-year forecast period (29.1 million revenue miles for bus)
OPEX Growth	<ul style="list-style-type: none"> • Average annual growth rate for MDT operating expenses of 3.6 percent
Fare Recovery Ratio	<ul style="list-style-type: none"> • System fare recovery ratio hovers around 21%, similar to historical trends
Debt to Finance CAPEX	<ul style="list-style-type: none"> • All PTP capital including bus, rail, and public works financed with 30-year debt at 6% interest rate

The following Pro Forma outputs can be observed:

- The Pro Forma does not track surtax cash balance
- Minimum debt service coverage ratio (DSCR) of 1.22X for PTP bonds violates bond covenant thresholds of 1.50X (sr. debt) and 1.25X (sub debt), with assumed bond issues
- Annual cash flows are negative for nine years; however the accumulated difference (cumulative net cash flow) never goes negative during the forecast period.



III. The CITT Financial Model: Replication Case

The Team built a new spreadsheet model to validate Pro Forma results and perform sensitivity analysis: the CITT Financial Model. This is similar to the approach the Team has taken in the past when it was engaged to build and operate the CITT Risk Assessment Model.

Key capabilities of the new CITT Model are:

- Assumptions are separated from calculations. Further, assumptions are separated by time-based and non-time-based assumptions for clarity. For example, debt structuring details are clearly delineated and can be easily altered. Such a modeling practice not only helps to prevent error but makes it easier for a user to identify what the underlying assumptions are and change them as necessary.
- The CITT Model calculates fare revenue by accepting inputs for average fare, ridership, and assumed fare elasticity.
- The model is structured so that two types of debt issuances can be assumed—long-term debt for rail and public works and medium-term debt for bus capital.
- The model is designed to calculate a PTP bus capital forecast based on the existing bus fleet assumptions. This is contrast to the Pro Forma, which accepts a hard-coded bus acquisition forecast. The CITT Model allows the user to alter this forecast by assuming a different useful life for the buses.
- The CITT Model contains a worksheet that allows the user to analyze how much capital the system can actually afford based on assumed cash flow coverage constraints.



The CITT Model: Model Structure

The CITT Model comprises 11 worksheets. The worksheets in the order that they currently appear are as follows:

Name of Worksheet	Type of Worksheet
NTAssump	Input
TimeAssump	Input
SourcesAndUses	Calculation & Output
CapitalAffordability	Calculation & Output
Debt Coverage	Calculation & Output
Medium-Term Debt	Calculation
Long-Term Debt	Calculation
Reserves	Calculation
Existing Bus Fleet	Input
ComparisonTable	Output
Graphs	Output

Input Worksheets

All non-time based assumptions are entered in the “NTAssump” worksheet. These include assumptions related to initial year expenses, revenues, and PTP bus capital in addition to debt structuring assumptions. “TimeAssump” allows the user to enter time-based forecasting assumptions. Finally, “Existing Bus Fleet” contains the number of buses in the existing fleet by type as well as the year in which they were acquired.

Calculation Worksheets

The “Medium-Term Debt” and “Long-Term Debt” worksheets calculate the debt service payment schedules for newly issued surtax revenue bonds. “Reserves” tracks the debt service reserve fund for the newly issued surtax revenue bonds. The CITT Model assumes that each type of bond issue (medium-term or long-term) has a separate reserve fund. “Sources and Uses” calculates and displays a comprehensive picture of MDT operations and the PTP cash flows together. It also tracks the surtax cash balance during the forecast period. The “Capital Affordability” worksheet allows the user to analyze how much capital the system could afford if debt service coverage ratio constraints were strictly enforced (see the Sensitivity Analysis section below for these sensitivities). Finally, the “Debt Coverage” worksheet tracks an alternative debt service coverage ratio that includes operating cash flows in its definition (this differs from the legal definition of DSCR as mentioned above).

Output Worksheets

The “ComparisonTable” worksheet compares the 30-year cash flows of the MDT Pro Forma with those of the CITT Model Replication Case. The “Graphs” worksheet contains various graphs that allow the user to analyze the active scenario—these include Net Cash Flows, Fare Recovery, Cash Balance, DSCR, and others.



The “Replication Case”

As a starting point for the analysis, the CITT Model was used to analyze an initial case, the “MDT Pro Forma Replication Case” or simply the “Replication Case” (referred to as Case 1 to distinguish it from other sensitivity cases). This case used most of the basic assumptions of the Pro Forma, but with a few methodological differences discussed below:

1. Surtax Interest Earnings Methodology

The Pro Forma calculates interest on surtax earnings by taking annual surtax revenue and multiplying it by the earnings interest rate. In reality, the interest will only be earned on that part of the surtax revenue that stays in the balance. Therefore, the Pro Forma overstates the amount of interest that will be earned in two ways. First, surtax funds are earned over the course of the year; therefore, the funds are, on average, available to earn interest for six months, not a full year. Second, the Pro Forma ignores the outflows from the Surtax balance during the year for MDT and Public Works expenses. The CITT Model assumes that monthly surtax receipts, net of the municipal contribution, will earn interest during the quarter before payments are made. This is in addition to interest earned on the beginning cash balance for the period.

2. Long-Term Debt Service Payment Calculation Methodology

In years 2011-2015, the Pro Forma apparently does not capture the full amount of capitalized interest when calculating debt service payments, effectively understating obligations. Even though, interest appears to be capitalized for two years for these bond issues (debt service payments don’t start until the third year after issuance), the capitalized interest amount assumed is equal to one year of principal and interest only, rather than two years of interest. The CITT Model adjusts for this difference in capitalized interest. Additionally, the debt service payments for these bond issues are calculated based on a 32-year term (two years of capitalized interest and 30 years of amortization). It is unclear whether the Pro Forma is estimating an aggregate debt service payment “wrapping structure” with an ending balloon payment (which would take place beyond the 30-year forecast period of the Pro Forma). The Replication Case preserved this assumption of a 32-year debt term. However, it should be noted that actual surtax-backed bond issues have been structured based on a 30-year debt term, and it is not clear a market for 32-year debt exists.

Further, from year 2016 onward, the Pro Forma appears to exclude the initial debt service payment. This also understates total debt service payment obligations. The CITT Model adjusts for this difference. The CITT model assumes 30-year level debt service issuances.

Table: Key Methodological Differences Between Pro Forma and Replication Case

The table below quantifies the differences between the Pro Forma and the CITT Model over the 30-year forecast period in nominal dollars. As shown, the key differences are that interest earnings in the CITT



model are about \$120 million less than the Pro Forma, and debt service payments are about \$220 million higher. Therefore, the CITT model projects total net cash flow \$341 million less than the Pro Forma.

Table: Pro Forma vs. CITT Model Replication Case

	A	B	
	CITT MODEL	MDT PRO FORMA	
	TOTAL (2011-2040)	TOTAL (2011-2040)	DIFFERENCE B - A
Cash Flow Sources			
Bu s, ra il, and ST S fare re venue	5,046,670,539	5,046,670,539	-
Syst em non-o perating re venue	434,567,650	434,567,650	-
Federa l re imb urse me nt (pre ventive ma intenance)	3,241,167,932	3,241,167,932	-
State block grant	729,819,745	729,819,745	-
Urban Corridor, JARC, New	179,670,000	179,670,000	-
ARRA & Catch Up	9,015,000	9,015,000	-
TD Tokens	101,460,766	101,460,766	-
Gross PTP surtax revenue (@ 95%)	10,615,091,597	10,615,091,597	-
General fund Maintenance of Effort (MO E)	7,812,884,683	7,812,884,683	-
Additional general fund (additional mil)	1,552,665,422	1,552,665,422	-
CI-LOGT (3 cents)	583,178,276	583,178,276	-
CI-LOGT (2 Cents) (assume s all to MDT)	386,933,495	386,933,495	-
General fund SFRTA	55,290,000	55,290,000	-
SFRTA	19,980,000	19,980,000	-
Intere st on PTP surtax cash balance	38,832,469	159,226,374	120,393,905
PTP surtax bonds debt service reserve fund interest	-	-	-
Capital reimbursements	884,800,813	884,800,813	-
Canyo ver of PTP reserve	31,358,000	31,358,000	-
Canyo ver of PTP surtax revenue (5%) (co unty portion only)	422,999,012	422,999,012	-
Total cash flow sources	32,146,385,399	32,266,779,304	120,393,905
Cash Flow Uses			
Total MDT operating expenses	23,819,138,695	23,819,138,695	-
Mu nicipal contribution from PTP surtax revenue (@ 20%)	2,123,018,319	2,123,018,319	-
CITT staff expenses	106,978,348	106,978,348	-
SFRTA contribution	127,050,000	127,050,000	-
Deficit repayme nt	32,450,000	32,450,000	-
PWD project ma nagement (p ay-g o)	102,270,648	102,270,648	-
PTP surtax debt service	5,687,647,262	5,466,690,446	(220,956,816)
Pre-e xisting other debt service	34,338,000	34,338,000	-
PTP reserve deposit	20,722,000	20,722,000	-
Total cash flow uses	32,053,613,272	31,832,656,457	(220,956,816)
Net cash flow during period	92,772,127	434,122,848	341,350,721
Total PTP capital expenditures (MD T & public works)	2,384,491,004	2,384,491,004	-
Minimum Debt Service Coverage Ratio (DSCR)	1.12	1.22	
Ye ar of minimum DSCR	2022	2023	
Number of years of violation of minimum DSCR of 1.50X	14	13	
If minimum DSCR violated, first year of violation	2016	2016	



The table below summarizes the differences between the Pro Forma and CITT Model during the first five years. Because of the capitalized interest period, debt service is not paid from 2011-2014. Therefore, the major difference between the CITT Model and the Pro Forma is the adjusted interest rate revenue. Over the five year time period, the IMG/PEG Team projects \$13.6 million in reduced cash flow compared to the Pro Forma.

Table: Pro Forma vs. CITT Model Year by Year Difference²

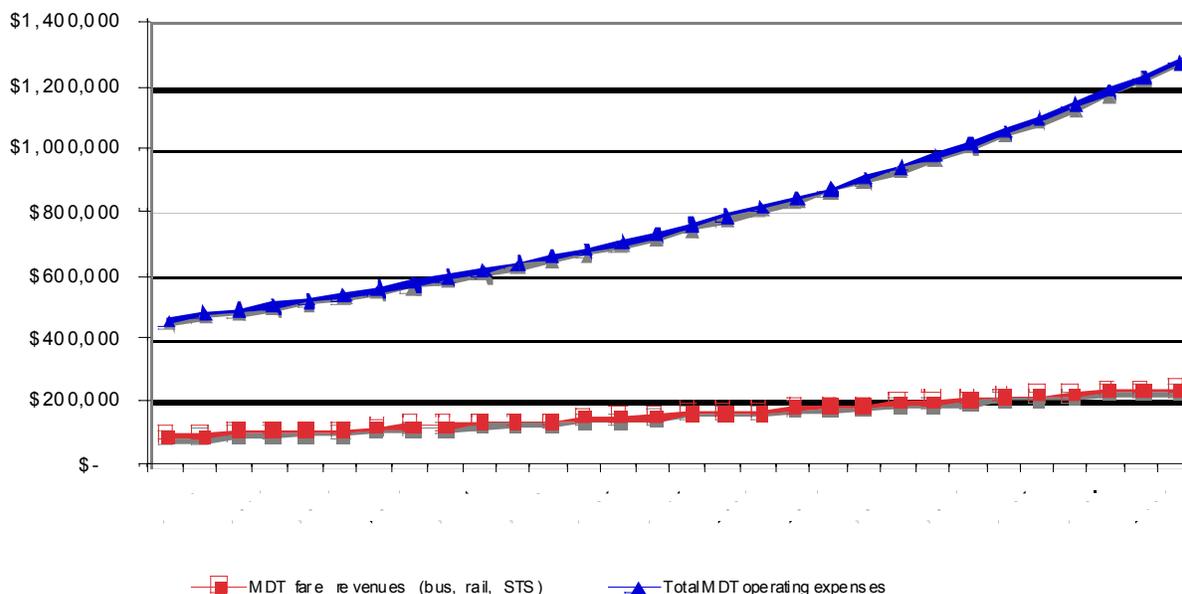
	2011	2012	2013	2014	2015	5-YR TOTAL	
Pro Forma fare revenue minus CITT Model fare revenue	-	-	1,038,306	1,048,689	1,059,176	3,146,170	A
Pro Forma PTP interest minus CITT Model PTP interest	1,736,408	1,814,276	1,901,411	2,094,554	1,912,964	9,459,614	B
Pro Forma PTP debt service minus CITT Model PTP debt service	-	-	-	-	(961,601)	(961,601)	C
Pro Forma net cash flow minus CITT Model net cash flow	1,736,408	1,814,276	2,939,717	3,143,243	3,933,740	13,567,385	A+B-C

The graphs that follow show the various assumptions and outputs of the Replication Case:

Figure: MDT Operations

This figure shows that OPEX grows faster than fare revenue during the forecast period. While fares cover 21.3 percent of OPEX in 2011, this is expected to drop to 19.2 percent by 2040.

MDT Fare Revenues & OPEX (\$000s)



² The fare revenue calculation methodology in the CITT Model also differs from that of the Pro Forma. The Pro Forma calculates fare revenues in two ways: First, it grows revenue from existing fares (before any increase) at an annual rate of 1.00 percent; Second, it calculates the impact of fare increases separately with an assumption for overall fare elasticity embedded within a formula, making the precise methodology unclear to the Team. Additionally, the fare elasticity assumption is not made explicit. The CITT Model calculates fare revenue by accepting inputs for average fare, ridership, and assumed fare elasticity. While this results in no difference in net cash flow over the 30-year period, there are year-by-year differences as shown in the table.



Annual net cash flow is projected to be negative from 2018-2028, and positive only in the later years of the forecast.

Figure: Net Cash Flows

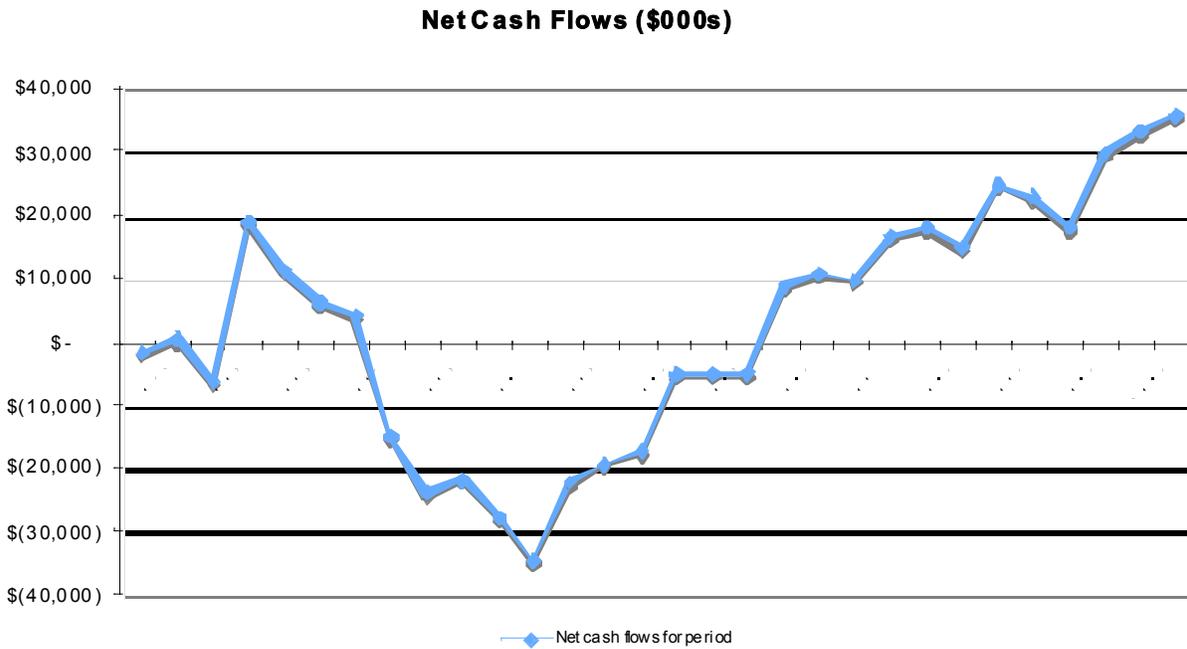


Figure: PTP Surtax Cash Balance

The surtax cash balance goes negative for many years from 2019-2036, reaching a minimum of negative \$144 million in 2028. Funds will need to be needed from other sources to cover these shortfalls.



PTP Surtax Cash Balance (\$000s)

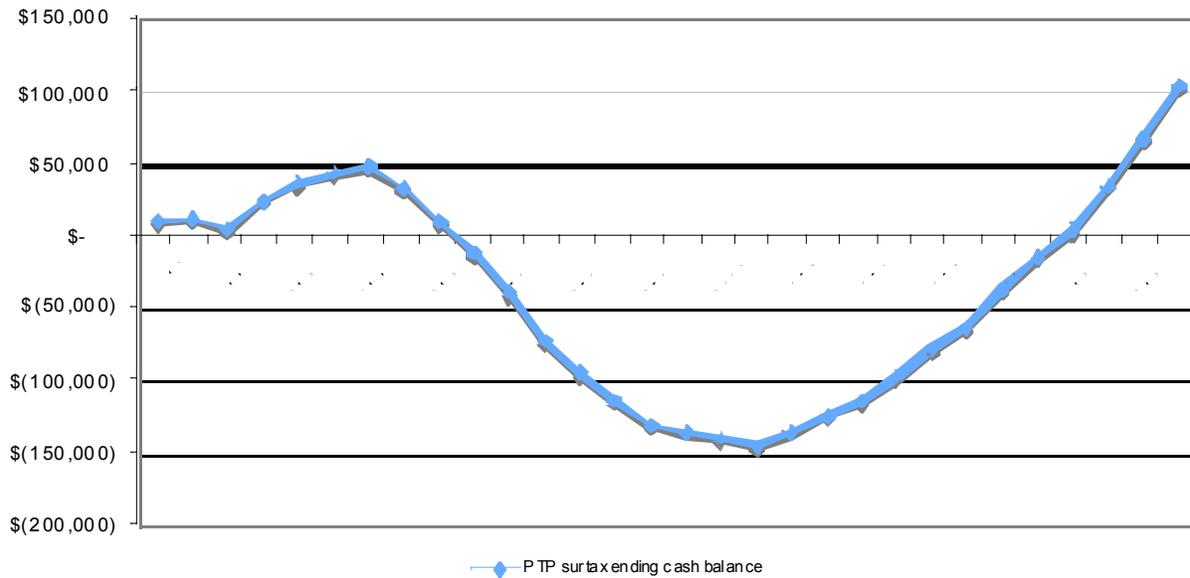
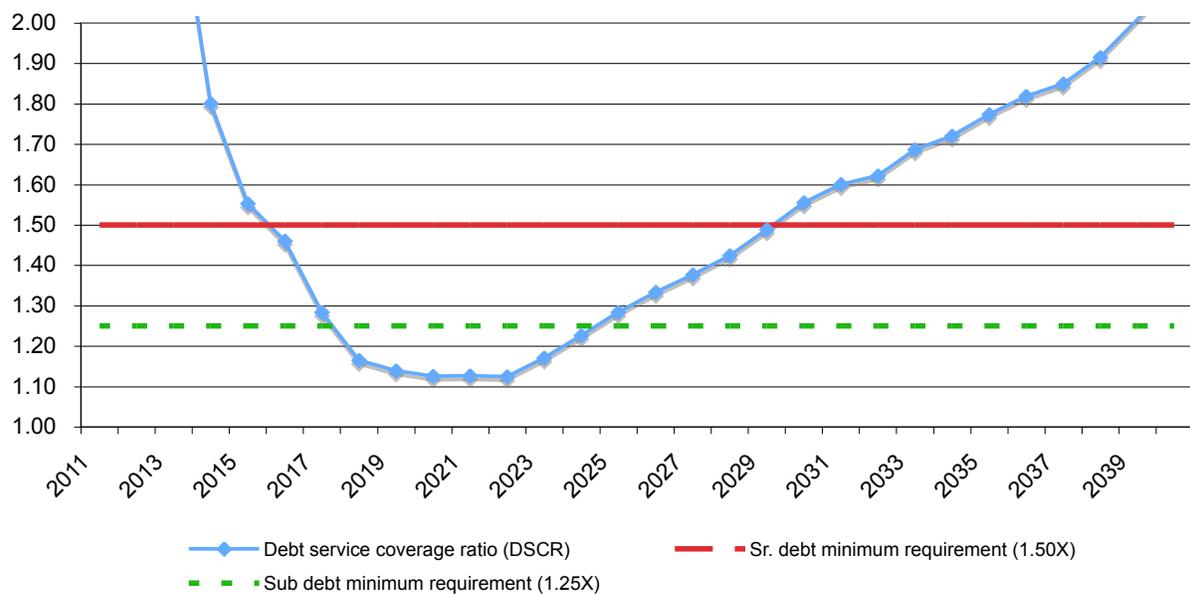


Figure: Debt Service Coverage Ratio (DSCR)

DSCR violates both minimum senior DSCR requirement of 1.50X and minimum sub debt requirement of 1.25X from 2018 through 2024.

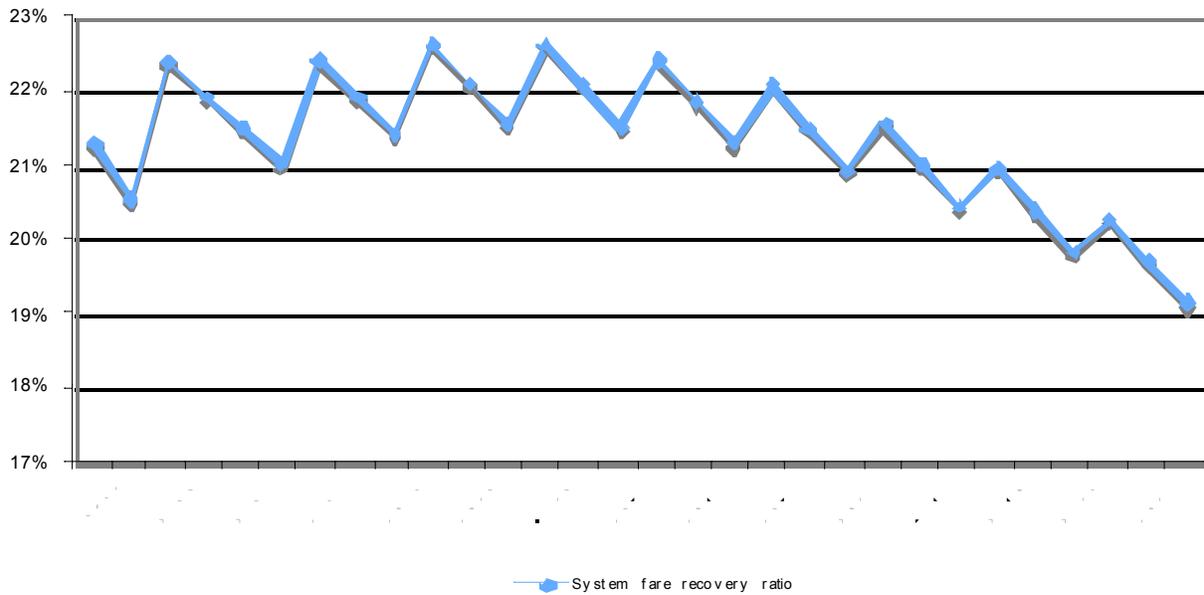
Debt Service Coverage Ratio (DSCR)





The system fare recovery ratio gradually decreases over time since operating expense growth is based on percentage increases while fare increases are always \$0.25 at a time.

MDT System Fare Recovery Ratio





IV. The CITT Financial Model: Sensitivity Analysis

In addition to the Replication Case, the Team analyzed the following sensitivity cases:

- Case 2. Capital affordability based on surtax revenue @ 1.25X coverage
- Case 3. Capital affordability based on all PTP cash flow³
- Case 4. Grow surtax revenue at 3.62% long-term rate instead of 5.00%
- Cases 5a and 5b. Total MDT operating expense growth sensitivities
- Cases 6a and 6b. Fuel and electric expense growth sensitivities
- Cases 7a and 7b. Salary, overtime, and fringe expense growth sensitivities
- Case 8. Bus acquisition forecast based on existing bus fleet (14-year life)
- Case 9. Medium-term debt to finance PTP bus capital (assumes 14-year term and 6% interest rate)

The results of each case analysis are provided below.

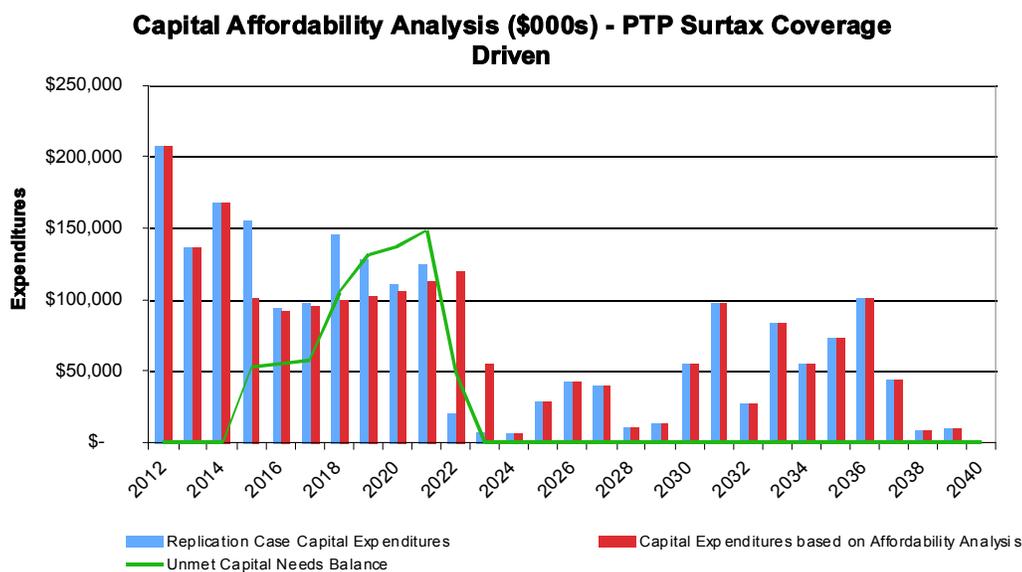
Case 2. Capital affordability based on surtax revenue @ 1.25X coverage

Case 2 attempts to answer the question “How much capital can the system afford if debt service coverage ratio (DSCR) minimum is 1.25X?” This case includes only surtax revenues in the DSCR calculation. Further, it follows the following methodology:

- Defer capital expenditures when DSCR falls to the minimum
- Track the balance of unmet capital needs and incur those expenditures only when debt capacity is finally available
- Does not include additional inflationary costs of deferring capital expenditures.

Case 2 shows that DSCR constraints may require up to \$149 million of capital expenditures to be deferred from 2014 to 2024. After 2024, further deferrals are not required.

Figure: Case 2



³ Includes all MDT operating revenues and expenses



Case 3. Capital affordability based on all PTP cash flow

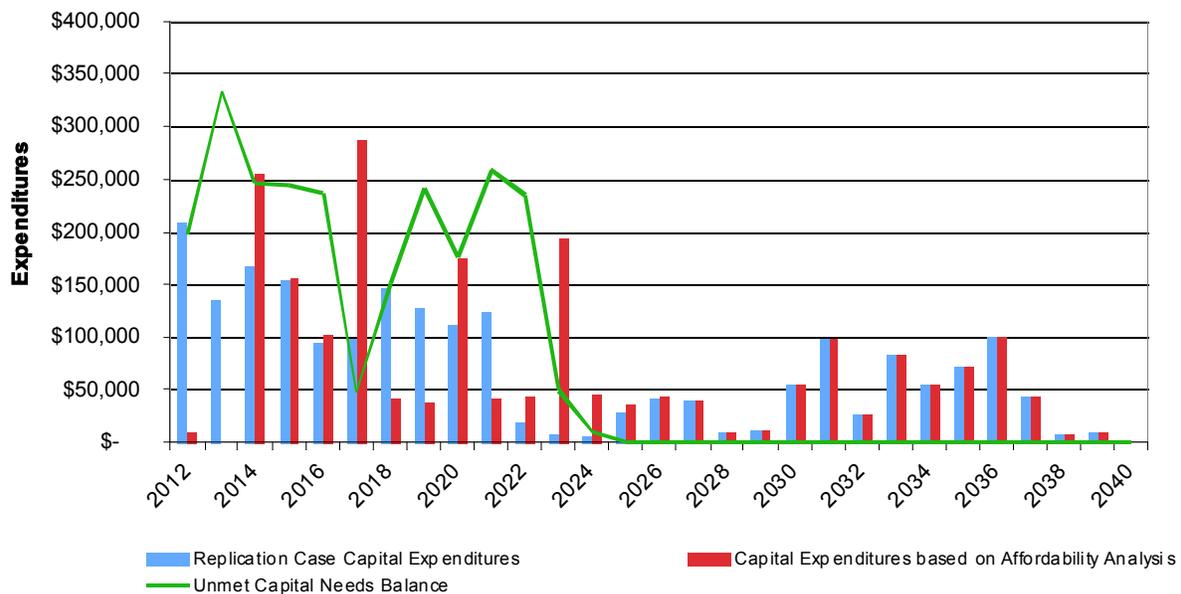
Case 3 attempts to answer the question “How much capital can the system afford assuming base case MDT operating costs and revenues and payment of all debt service?” Like Case 2, it follows the following methodology:

- Defer capital expenditures when DSCR falls to the minimum
- Track the balance of unmet capital needs and incur those expenditures only when debt capacity is finally available
- Does not include additional inflationary costs of deferring capital expenditures.

Case 3 shows that when all MDT operating cash flows are taken into account, up to \$334 million in PTP capital expenditures may have to be deferred, with CAPEX delays continuing until 2026.

Figure: Case 3

Capital Affordability Analysis (\$000s) - All PTP Cash Flow Driven



Case 4. Grow surtax revenue at 3.62% long-term rate instead of 5.00%

Case 4 shows that if surtax revenue grows at the 15-year historical average of 3.62% instead of 5.00% as in the Replication Case, then debt service payments cannot be met. Furthermore, the 1.50x DSCR will be violated nearly every year of the forecast.



Table: Case 4

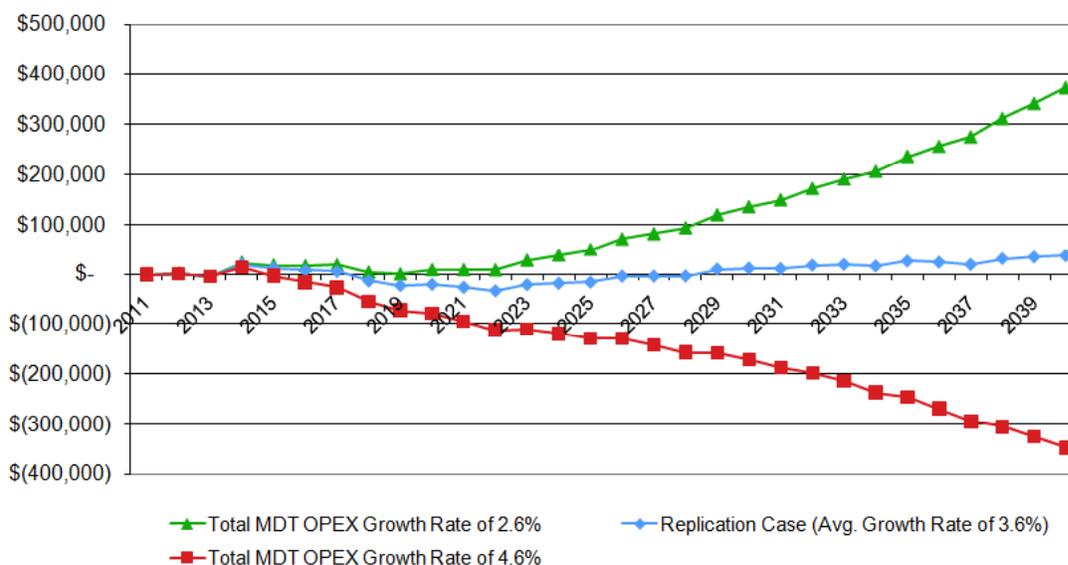
	Surtax Growth Rate of 3.62% (2011-2040)	Replication Case (2011-2040)
Minimum Debt Service Coverage Ratio (DSCR)	0.99	1.12
Year of minimum DSCR	2022	2022
Number of years of violation of minimum DSCR of 1.50X	26	14
If minimum DSCR violated, first year of violation	2015	2016
First year DSCR falls below 1.00X	2022	N/A
Number of years of violation of DSCR of 1.00X	1	0

Cases 5a and 5b. Total MDT operating expense growth sensitivities

Cases 5a & 5b assume OPEX growth of 2.6% & 4.6% respectively starting in year 3, as opposed to average growth of 3.6% in the Replication Case. These cases show that net cash flows are highly sensitive to OPEX growth rates. A one percent difference in annual OPEX growth results in over \$300 million in cash flow change by 2040.

Figure: Cases 5a and 5b Net Cash Flows

Comparison of Net Cash Flows (\$000s)



The table below shows that operating expenses at MDT and similar agencies have generally increased substantially over the past three years. In order to meet even the pessimistic OPEX growth rates in case 5b, MDT will have to have to improve on its history and the trends at peer agencies.



Table: Historical OPEX Growth for MDT and Peers

Historical Operating Cost Growth Rates: MDT and Peers

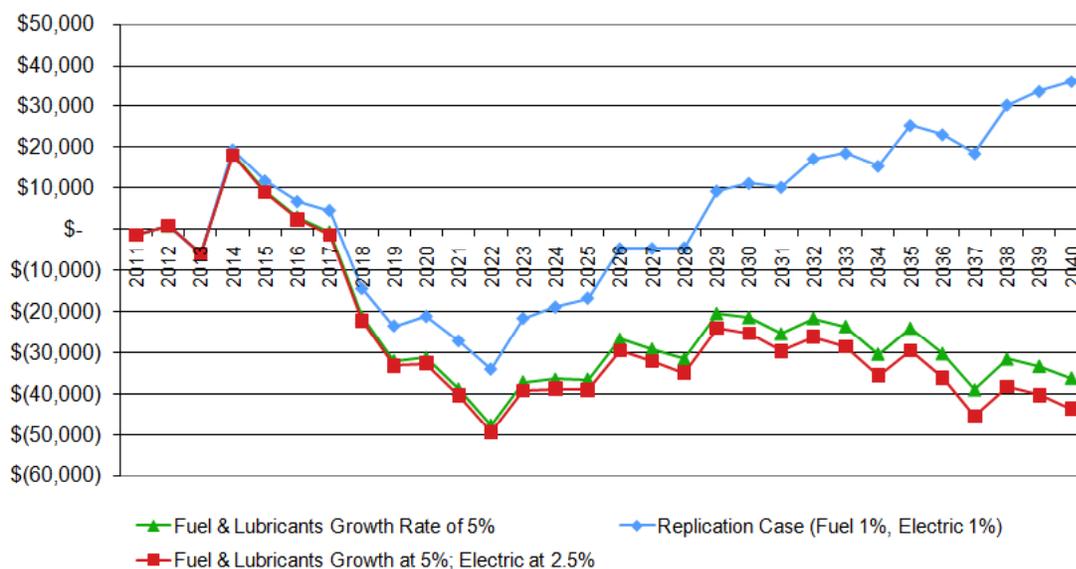
	Bus (3-year average)		Rail (3-year average)	
	OPEX/ Vehicle Revenue Mile	OPEX/ Unlinked Trip	OPEX/ Vehicle Revenue Mile	OPEX/ Unlinked Trip
Miami Dade Transit (MD T)	9.93%	5.15%	14.88%	1.84%
Los Angeles County MTA (LACMTA)	6.53%	4.96%	7.20%	2.15%
Metropolitan Atlanta RTA (MARTA)	-1.71%	7.42%	6.77%	1.35%
Washington Metropolitan Area Transp. Auth (WMATA)	8.01%	14.06%	3.11%	3.41%

Cases 6a and 6b. Fuel and electric expense growth sensitivities

Case 6a assumes fuel grows at 5.00% instead of 1.00%, whereas Case 6b assumes fuel and electric grow at 5.00% and 2.50% respectively. These cases show that if fuel or electric expenses grow at higher rates, than net cash flows are usually negative, even in the out years of the forecast.⁴ The analysis also demonstrates that fuel costs are much more impactful than electric costs. Unfortunately, both costs are largely outside of the control of MDT, so conservative forecasts are warranted.

Figure: Cases 6a and 6b Net Cash Flows

Comparison of Net Cash Flows (\$000s)



⁴ 15-year historical average growth has been around 7% for fuel and 2.5% for electricity (industrial sector).

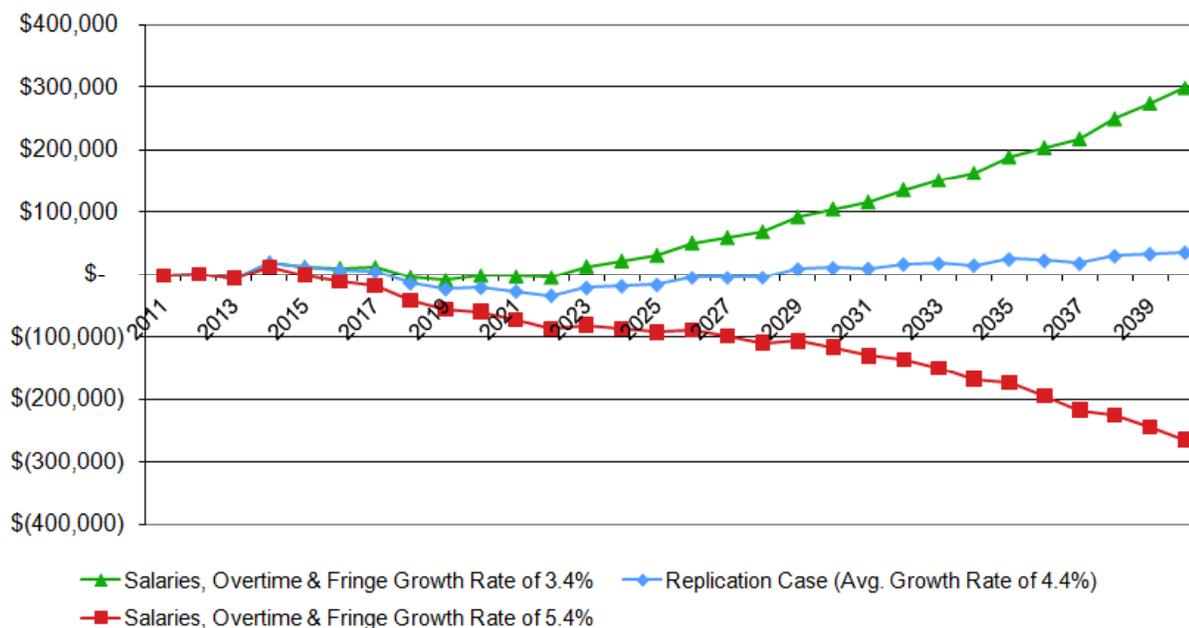


Cases 7a and 7b. Salary, overtime, and fringe expense growth sensitivities

Cases 7a and 7b grow labor costs at rates of 3.4% and 5.4% respectively as opposed to the 4.4% average rate in the Replication Case. Net cash flows are highly sensitive to labor expenses. Because labor is the largest component of operating cost, these results resemble the findings from Cases 5a and 5b.

Figure: Cases 7a and 7b Net Cash Flows

Comparison of Net Cash Flows (\$000s)



Case 8. Bus acquisition forecast based on existing bus fleet

If bus acquisition costs are projected based upon a 14-year replacement timeframe applied to the current bus fleet, the 30-year costs would rise to \$1.096 B compared to \$866 M in the Pro Forma. The impact is not severe, as the minimum DSCR is slightly lower than in the Replication Case.

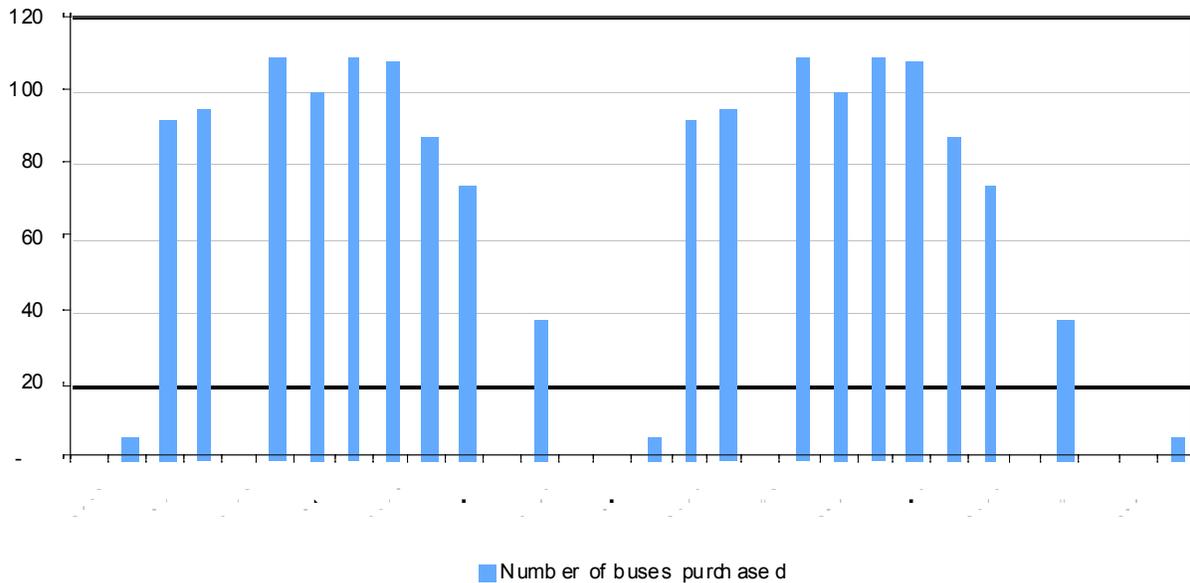
Table: Case 8

	Existing Bus Fleet Scenario (2011-2040)	Replication Case (2011-2040)
Minimum Debt Service Coverage Ratio (DSCR)	1.09	1.12
Year of minimum DSCR	2020	2022
Number of years of violation of minimum DSCR of 1.50X	15	14
If minimum DSCR violated, first year of violation	2016	2016
First year DSCR falls below 1.00X	N/A	N/A
Number of years of violation of DSCR of 1.00X	0	0



Figure: Bus Replacement Schedule for Case 8

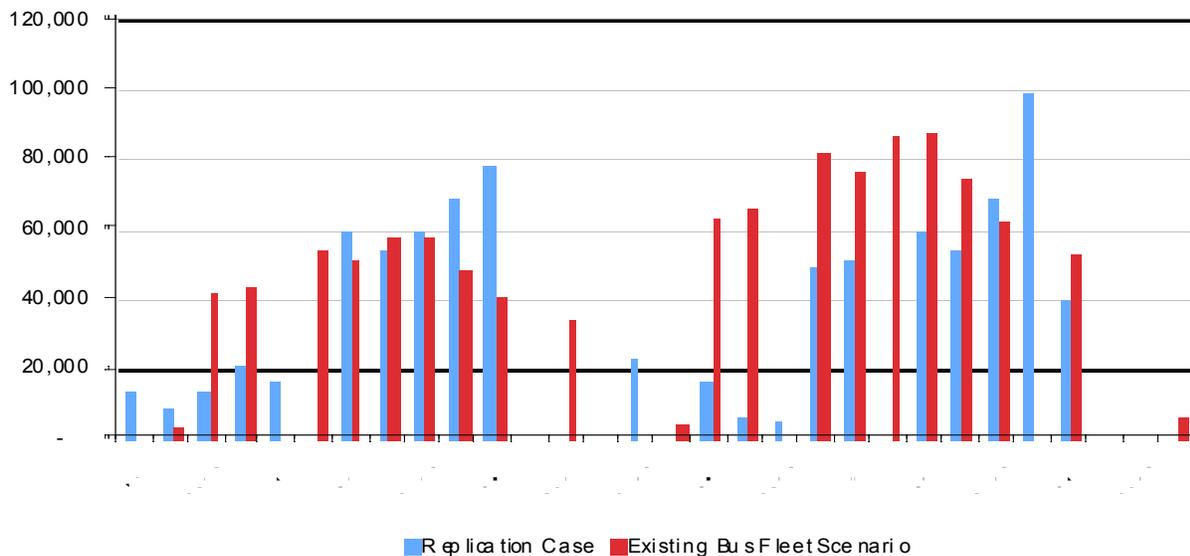
Bus Replacement Schedule Based on Existing Bus Fleet



The graph below compares the bus acquisition costs of this scenario to those of the Pro Forma.

Figure: Case 8 Bus Acquisition Costs vs. Pro Forma

Bus Acquisition Costs (\$000s)





Case 9. Medium-term debt to finance PTP bus capital

Case 9 shows that if medium-term debt is used to finance bus capital costs, minimum DSCR is lower than in the Replication Case. It is appropriate to match the length of the loan with the useful life of the asset acquired.

Table: Case 9

	Medium-Term Debt for Bus (2011-2040)	Replication Case (2011-2040)
Minimum Debt Service Coverage Ratio (DSCR)	1.05	1.12
Year of minimum DSCR	2022	2022
Number of years of violation of minimum DSCR of 1.50X	16	14
If minimum DSCR violated, first year of violation	2015	2016
First year DSCR falls below 1.00X	N/A	N/A
Number of years of violation of DSCR of 1.00X	0	0



V. Conclusions

The analysis shows that MDT's financial situation is precarious. In particular, we note the following observations:

- The Pro Forma shows that the senior debt minimum debt service coverage ratio (DSCR) of 1.50X may be violated as soon as 2017⁵. The Pro Forma assumes bonds are issued every year to fund PTP capital expenditures. However, due to coverage ratio constraints, MDT may not be able to issue additional debt after a certain year.
- In order to maintain a minimum DSCR of 1.25X, (the Master Bond Ordinance definition excludes operating cash flows), up to \$149 million of capital expenditures must be deferred
- When operating cash flows are included, in order to meet surtax debt service payments, capital expenditures of up to \$334 million must be deferred
- The MDT Pro Forma appears to be optimistic with regard to key assumptions.
 - For example, if surtax revenue grows at the 15-year historical average of 3.62 percent instead of 5.00 percent as assumed in the Pro Forma, debt service payment default occurs.
 - The MDT Pro Forma assumes MDT operating expense (OPEX) growth rates that are lower than historical averages for MDT (in particular, growth rate assumptions for fuel and electricity may be too low).
- The sensitivity analysis also shows that if MDT OPEX growth can be controlled and growth rates are kept to reasonable levels, then this will greatly improve the cash flow forecast.

⁵ The definition of DSCR according to the Master Bond Ordinance takes surtax revenue and interest income and divides by debt service payments. The minimum required DSCR is 1.50X. However, MDT can raise subordinated debt at a minimum DSCR of 1.25X.

VI. Appendix

A. Data Resources

1. *The 2010 MDT Pro Forma (Excel file) and accompanying Word document description of assumptions.*
2. *National Transit Database (NTD) website: transit profile summaries for Miami-Dade Transit, Los Angeles County MTA (LACMTA), Metropolitan Atlanta RTA (MARTA), and Washington Metropolitan Area Transportation Authority (WMATA).*
3. *Department of Energy: Electric Price 15-Year History (Industrial).*
4. *Energy Information Administration: U.S. Weekly Retail Gasoline Price (All Grades All Formulations) 15-Year History.*
5. *Other MDT Budget and Financial Information provided to us by OCITT, MDT, and OSBM, or obtained from Miami-Dade County website.*