

**Financial Contractors' Guide  
for Conducting Financial Capacity Assessments  
for the  
Capital Investment Grants Program**

**THE FEDERAL TRANSIT ADMINISTRATION  
OFFICE OF PLANNING AND ENVIRONMENT**

**OFFICE OF CAPITAL PROJECT DEVELOPMENT**

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# FINANCIAL CONTRACTORS' GUIDE FOR CONDUCTING FINANCIAL CAPACITY ASSESSMENTS

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## List of Acronyms

CAFR	Comprehensive Annual Financial Report
CAGR	Compound Annual Growth Rate
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CFR	Code of Federal Regulations
CGA	Construction Grant Agreement
CIG	Capital Investment Grant
CIP	Capital Improvement Program
COR	Contracting Officer's Representative
DSCR	Debt Service Coverage Ratio
FAST	Fixing America's Surface Transportation Act
FCA	Financial Capacity Assessment
FCCA	Financial Condition and Capability Assessment
FEIS	Final Environmental Impact Statement
FFGA	Full Funding Grant Agreement
FTA	Federal Transit Administration
FWHA	Federal Highway Administration
HQ	Headquarters (refers to FTA if not otherwise noted)
L RTP	Long-Range Transportation Plan
MAP-21	Moving Ahead for Progress in the 21st Century Act
MPO	Metropolitan Planning Organization
NEPA	National Environmental Policy Act
NTD	National Transit Database
OS	Official Statement (of a municipal bond issue)
P3	Public-Private Partnership
PMOC	Project Management Oversight Contractor
SGR	State of Good Repair
STIP	State Transportation Improvement Program
TAMP	Transit Asset Management Plan
TIFIA	Transportation Infrastructure Finance and Innovation Act
TIP	Transportation Improvement Program
TPE	FTA Office of Planning & Environment
USC	United States Code
USDOT	U.S. Department of Transportation

## **GUIDE PURPOSE**

The Financial Contractors' Guide for Conducting Financial Capacity Assessments (FCA) provides guidance on how to perform FCAs for the Federal Transit Administration's (FTA) Capital Investment Grants (CIG) Program. The guide assumes that the Financial Contractor and/or other users are professionals with financial analysis experience and knowledge of financing large transit capital infrastructure projects and the operation and maintenance of transit systems, as well as applicable Federal regulations, policy, and guidance.

The purposes of the guide are to:

- Explain FTA's expectations and best practices for Financial Contractors when performing their work;
- Ensure consistency in the scope and quality of assessments performed.

This document is a guide and is intended to enhance, not replace, the Financial Contractor's professional judgment and analytical skills in the performance of FCAs.

## **ABOUT THIS GUIDE**

This guide is divided into three parts. The main body of the guidance provides the legislative origins of the FCA, the various parties' roles and responsibilities, FTA's performance expectations, the process for completing an FCA, and how to use an FCA report to develop a Local Financial Commitment rating according to the criteria outlined in law under the CIG program. Appendix A provides web links to relevant sections of laws, regulations, and guidance documents that pertain to the FCA process. Appendix B provides an annotated outline for the FCA report, including information that should be described, the types of analyses that should be performed, and the questions that should be asked by the Financial Contractor.

# 1. The FCA Context

The Section 5309 CIG program is a competitive discretionary grant program that funds major transit capital projects including heavy rail, light rail, commuter rail, bus rapid transit projects, and streetcars. There are four categories of eligible projects:

- New Starts -- new fixed guideway projects or extensions to existing fixed guideway systems with a total estimated capital cost equal to or greater than \$300 million or that are seeking \$100 million or more in CIG program funds;
- Small Starts -- new fixed guideway projects, extensions to existing fixed guideway systems, or corridor-based bus rapid transit projects with a total estimated capital cost of less than \$300 million and that are seeking less than \$100 million in CIG program funds; and
- Core Capacity Improvement -- substantial, corridor-based capital projects that will expand capacity by at least 10 percent in an existing fixed guideway corridor that is at or over capacity today or will be in five years.
- Programs of Interrelated Projects -- any combination of two or more New Starts, Small Starts, or Core Capacity projects that have logical connectivity to one another and are all beginning construction within a reasonable timeframe.

Each type of CIG project has a unique set of requirements in law, although many similarities exist among them. All projects must be evaluated and rated by FTA in accordance with statutorily defined criteria at various points in the development process. In order to be eligible to receive a construction grant, all projects must go through a multi-step, multi-year process and receive at least a “Medium” overall rating, in addition to other requirements.

Funding is awarded to projects through a construction grant agreement, called either a Full Funding Grant Agreement (FFGA) for New Starts and Core Capacity projects or a Small Starts Grant Agreement (SSGA) or Single Year Grant Agreement for Small Starts projects. The construction grant agreement defines the project including its cost, scope, schedule, and level of service; commits to a maximum level of annual and total CIG Program financial assistance (subject to Congressional appropriation, if applicable); establishes the terms and conditions of Federal financial participation; defines the period of time for completion of the project, and helps FTA and the project sponsor manage the project in accordance with Federal law.

Upon completion of the payment schedule outlined in a construction grant agreement, the Section 5309 CIG Program funding commitment is fulfilled, and additional Section 5309 funding is not provided for the project. Any additional

costs beyond the scope of the commitment outlined in the construction grant agreement are the responsibility of the project sponsor.

Prior to awarding a construction grant agreement to a project, FTA conducts several types of reviews to determine project readiness and to ensure that the project meets all statutory and regulatory requirements. An FCA is one type of review that is conducted for New Starts and Core Capacity projects seeking FFGAs to determine if the project sponsor's financial capacity is sound. Thus, the Financial Contractor performing the FCA plays an important role in supporting FTA's decision to award an FFGA to a project. It is vital that the Financial Contractor understand the scope of this role relative to the other types of reviews FTA conducts. The Financial Contractor is expected to provide an objective and well-informed assessment of a project sponsor's financial capacity to build the project while operating and maintaining its existing public transportation system.

The Financial Contractor's work is performed in the context of Federal statute and related policies, the organization of the FTA team, and the expectations that FTA has of the Financial Contractor. This context is described further in the remainder of this section.

## **A. STATUTORY AND POLICY CONTEXT**

The context within which FCAs are conducted is defined by law as well as FTA's regulations, circulars, and guidance.

### **(1) Federal Law**

The CIG program is codified at 49 United State Code (USC) Section 5309, as amended by the Fixing America's Surface Transportation (FAST) Act.

The FAST Act describes the following local financial commitment determinations that FTA must make for all CIG projects:

- the proposed project financial plan provides for the availability of contingency amounts that the Secretary determines to be reasonable to cover unanticipated cost increases or funding shortfalls;
- each proposed local source of capital and operating financing is stable, reliable, and available within the proposed project timetable; and
- local resources are available to recapitalize, maintain, and operate the overall existing and proposed public transportation system, including essential feeder bus and other services necessary to achieve the projected ridership levels without requiring a reduction in existing public transportation services or level of service to operate the project.

## **(2) Federal Regulations, Policy & Guidance**

Current FTA regulations, policy and guidance concerning the CIG program, and in particular CIG projects that require an FCA, are as follows:

- 49 CFR Part 611, Final Rule for Major Capital Investment Projects (January 2013) – This regulation for the CIG program covers the evaluation and rating process for New and Small Starts projects.
- Final Interim Policy Guidance, Federal Transit Administration, Capital Investment Grants Program (June 2016) – This policy guidance describes project eligibility, the steps in the process, and the evaluation and rating process for New Starts, Small Starts, and Core Capacity projects.
- Guidance for Transit Financial Plans (June 2000) – This guidance outlines what a financial plan from a project sponsor should contain.
- Reporting Instructions for New Starts, Small Starts and Core Capacity projects: FTA publishes Reporting Instructions each year to inform sponsors of proposed CIG projects of the information they must provide to FTA for project evaluation and rating. The Reporting Instructions contain the Local Financial Commitment Checklist, which must be submitted every time a project sponsor submits a financial plan to FTA.
- Circular 7008.1A, Financial Capacity Policy (January 2002) – This circular defines the terms financial capacity, financial condition, and financial capability, as well as the basis upon which FTA will make the determination of financial capacity of grantees required by law. This circular is not specific to the CIG program, and instead more broadly applies to all FTA grantees.
- Circular 5200.1A, Full Funding Grant Agreements (FFGA) Guidance (December 2002) – This circular provides guidance and information on developing FFGAs.
- Circular 5010.1E, Award Management Requirements (January 2017) – This circular provides general requirements and procedures for post-award administration and management activities for all FTA programs.

Web links for each of the above documents are included in Appendix A to this report. These documents may be updated from time to time, and FTA's Financial Contractors should ensure that they are applying the most recent versions of FTA regulations and guidance by reviewing any updated documents posted to FTA's public website.

## **B. MANAGEMENT CONTEXT**

FTA's Office of Planning and Environment (TPE) conducts all FCAs for the CIG program. The Financial Contractor's primary point of contact with FTA is the Contracting Officer's Representative (COR) in TPE. The COR provides the work scope for the FCA and approves budgets, schedules, travel requests, and final products from the Financial Contractor. All requests from FTA for the Financial



Contractor to research particular concerns or participate in meetings or teleconferences must come through the COR. The Financial Contractor does not take direction from anyone in FTA but the COR. All reports, correspondence and e-mails are sent to the COR.

FTA uses a multi-disciplinary team of staff comprised from multiple FTA Headquarters (HQ) and regional offices to oversee CIG projects. TPE serves as the team lead in FTA for CIG projects prior to the award of a construction grant agreement. The Office of Program Management (TPM) serves as the team lead in FTA for CIG projects after award of a construction grant agreement. The FTA regional office staff serves as the day-to-day contact for the project sponsor. The regional office can provide useful insights on any broader financial concerns with a project sponsor.

### **C. CONTRACTOR ROLE**

The Financial Contractor assists FTA in reviewing the documentation submitted by the project sponsor and provides professional opinions to FTA regarding the adequacy of the proposed financial plan and any issues or concerns. While FTA seeks the Financial Contractor's professional opinion, it is important to remember the FCA is an FTA document that informs and documents FTA's decision to move forward with awarding funding to a proposed CIG project. FTA has final authority on the contents of the FCA report.

If the Financial Contractor identifies an issue or concern with a financial plan, it is important that the Financial Contractor communicate this concern directly to FTA first and not to the project sponsor. FTA will decide the appropriate way to communicate the matter to the project sponsor. It is critical that the financial contractor communicate these concerns in a clear and timely manner to FTA.

The project sponsor often replies with proposed solutions or additional materials to better explain the matter. The Financial Contractor must be prepared to assist FTA in determining if the new information effectively addresses its concern. The central role of the financial contractor is to evaluate information provided by the project sponsor, not to offer the project sponsor potential solutions or to aid the project sponsor in organizing information.

The Financial Contractor is not expected to be an expert in construction practices, fleet management, or collective bargaining. However, where key assumptions are found to hinge on these matters, the Financial Contractor is expected to raise questions that FTA may then address accordingly. The Financial Contractor is expected to be very familiar with the transit industry, in terms of financing the construction of infrastructure projects and the operation and maintenance of transit systems.

It is important that the Financial Contractor maintain objectivity while reviewing projects. It is not the Financial Contractor's role to offer technical assistance to the project sponsor unless specifically instructed to do so by FTA's COR. Also, it is important to not create even the appearance of a conflict of interest. FTA

expects and needs the Financial Contractor to be completely independent of the project sponsor and its principal advisors who may contribute, directly or indirectly, to the project sponsor's financial plan.

## **2. The FCA Report – Overview**

The FCA report is an important, time-sensitive document that supports FTA’s decision to provide a construction grant to a CIG project. This section provides an overview of the FCA report, addressing the timing and content of an FCA.

### **A. TIMING OF THE FCA**

There are three points in the CIG process at which an FCA may be performed:

- An FCA is prepared shortly after a project receives FTA approval to enter the Engineering phase of the CIG process.
- An update to the FCA may be performed before construction grant approval, depending on the extent of changes to the project cost estimate or other factors since the time of the previous FCA, as determined by FTA.
- After a construction grant is awarded, an FCA may be performed if material changes have occurred, such as a major cost increase, and FTA determines that a new financial plan is needed to demonstrate the project sponsor’s ability to satisfy the financial capacity requirements.

In any of these cases, FTA will inform the Financial Contractor as to when the preparation of the FCA may proceed, and the date by which it must be completed. The scope of work is generally the same no matter when the FCA is conducted.

In situations where an FCA is being prepared prior to FTA’s consideration of a project for a construction grant, it is not uncommon for the FCA to be on the critical path of all documentation needed to support FTA’s decision to move forward with the construction grant award. This occurs primarily because other FTA oversight reviews related to project cost, scope, schedule and risk performed by the Project Management Oversight Contractor (PMOC), must generally be completed before the FCA can be finalized. Accordingly, the Financial Contractor must be prepared to quickly and efficiently complete the FCA scope of work.

### **B. CONTENT OF THE FCA REPORT**

The structure of the FCA report consists of the following parts:

- An Executive Summary, no more than two or three pages
- A brief description of the scope of the FCA.
- A description of the project and its sources and uses of funds.
- An analysis of the project sponsor’s system-wide financial condition, typically using a five-year look-back period, though longer trends are advisable for some items (e.g., sales tax revenues).

- An analysis of the project sponsor's system-wide financial capability. This should be based on the Financial Contractor's evaluation of the project sponsor's financial plan and the trends revealed in the financial condition analysis. The Financial Contractor should identify those assumptions that deviate from historical trends or the current economic outlook. The project sponsor, however, should be given the opportunity to properly justify discrepancies between forecasts and historical trends.
- Stress tests, which explore the impact on the project sponsor's financial plan of changes in assumptions found to be of concern in the financial capability analysis. These stress tests may include increases in project cost, changes in projections of operating costs and operating revenues, changes in the ability to fund operating subsidy requirements, or lower growth rates in dedicated funding sources.
- An updated local financial commitment rating (for more details refer to Section 4).
- A summary of conclusions from the above analyses, typically one to two pages.
- The Financial Contractor's assessment of the project sponsor's ability to satisfy the financial capacity requirement for CIG funds.
- Appendices that support certain aspects of the analyses.

The process and methods the Financial Contractor should employ in developing the FCA are presented in section 3 of this report. An annotated outline of the FCA report is provided in Appendix B. Sample FCA reports are provided upon request from the COR.

### **3. The FCA Report – Process and Methods**

This section provides specific information on how to conduct an FCA. It addresses:

- Communicating with FTA and the project sponsor;
- Commencing work;
- Acquiring the initial data;
- Determining when and how to conduct field work;
- Performing the technical analyses; and
- Completing the FCA.

Additional information related to the above is presented in Appendix B to this report.

#### **A. COMMUNICATING WITH FTA AND THE PROJECT SPONSOR**

The Financial Contractor is retained by FTA to conduct an FCA and should work on behalf of, and not independent of, FTA. Accordingly, the Financial Contractor should keep FTA fully informed of his/her interactions with the project sponsor and other entities that are appropriate to contact as part of the FCA scope.

The COR is the Financial Contractor's primary point of contact, and provides all direction to the Financial Contractor. The COR should be copied on all written communications, within or outside FTA, relevant to the FCA. The financial contractor should invite the COR to participate in all verbal communications, informing them in advance of the topic of the discussion. At the COR's discretion, this rule may be waived for some types of communication. The COR will provide the Financial Contractor with the names and contact information for the FTA HQ Team Leader, the FTA Regional Office team members, other relevant FTA team members who may be consulted on project-specific questions, and the project sponsor's point of contact for the FCA.

The COR coordinates all initial communications between the Financial Contractor, the FTA Team Leader, other FTA HQ personnel, and FTA Regional Office personnel. The COR should be copied on all subsequent correspondence. The COR will inform the Financial Contractor of the types of communication that may occur with FTA personnel without the COR's involvement.

The COR coordinates initial communication between the Financial Contractor and the project sponsor, in cooperation with the FTA Regional Office. Once the initial contact has been made, the Financial Contractor may execute its scope of work and contact the project sponsor as needed for information needed to complete the FCA, always copying the COR unless directed otherwise.

Field work at the project sponsor's work site performed by the Financial Contractor must be cleared by the COR prior to being scheduled with the project sponsor.

The Financial Contractor should not, in any circumstance, voice concerns or share findings with the project sponsor before first communicating these to the COR, who will then determine how best to respond. Communications between the Financial Contractor and the project sponsor should be strictly informational and limited to the Financial Contractor gaining an understanding of the project sponsor's financial capacity.

The Financial Contractor should never communicate with non-FTA personnel about an FCA unless specifically directed to do so by the COR.

Any problems, issues, or concerns that arise with FTA or project sponsor personnel in the course of the Financial Contractor's scope of work should be communicated to the COR for resolution.

The COR will receive the Financial Contractor's deliverables, coordinate all editing and feedback, and will determine when the deliverables are considered final.

## **B. COMMENCING WORK**

The COR will issue a work order to the Financial Contractor. The work order is the official notice-to-proceed on the FCA. Typically, the work order will indicate a due date for the draft FCA report as well as the number of hours the Financial Contractor is authorized to complete the work. If the Financial Contractor subsequently determines that additional hours are required to complete the FCA, it is the responsibility of the Financial Contractor to obtain FTA approval in a timely manner. This approval can only be obtained as a result of FTA review of written justification for the additional hours.

It is advisable that the Financial Contractor participate in a conference call with the COR, the FTA Team Leader, and other FTA staff as appropriate at the earliest opportunity to discuss the FCA. During this call, the Financial Contractor will hear FTA's preliminary concerns and will also be apprised of the project sponsor's point of contact.

Subsequent to this initial conference call with FTA, the Financial Contractor should contact the project sponsor and generally discuss the process for conducting the FCA. If the project sponsor has not yet submitted a financial plan for the FCA, this would be a good time to ask when it will be available.

## **C. ACQUIRING THE INITIAL DATA**

The financial plan submitted by the project sponsor for the FCA should conform to FTA's Guidance for Transit Financial Plans. In addition, the financial plan

submittal should include all of the supporting documentation items as listed in the Local Financial Commitment Checklist from the current version of FTA's Reporting Instructions unless previously submitted by the project sponsor and still available to the Financial Contractor. The financial plan is often submitted by the project sponsor to the FTA Team Leader, and the COR facilitates its transfer to ensure that the Financial Contractor receives the files needed to begin work. In addition, the Financial Contractor should immediately acquire and compile in an Excel worksheet the National Transit Database (NTD) data that will be used to develop Appendix C to the FCA report (as presented in Appendix B to this report). This data can be downloaded from the NTD website (<https://www.transit.dot.gov/ntd>).

#### **D. DETERMINING IF, WHEN AND HOW TO CONDUCT FIELD WORK**

Field work refers to on-site meetings with the project sponsor to gather additional information on the project, the project sponsor's financial condition, and the financial plan. It is important that the Financial Contractor have access to key project sponsor personnel and information in a manner that allows him/her to most effectively perform the review. However, because time is of the essence and travel is an expense FTA prefers to minimize given that most documentation is available electronically, it is essential that the Financial Contractor be able to justify to FTA why field work may be needed. The Financial Contractor should be well prepared prior to conducting any FTA approved field work so that it can proceed as expeditiously as possible. It is advisable that field work occur after the Financial Contractor has conducted steps 1 through 5 in section E, below (Performing the Technical Analyses), and has at least partially performed step 6. This will allow the Financial Contractor to focus on confirming or refining his/her understanding of the project sponsor's institutional context, financial plan, and financial condition. By completing this work before conducting the field work, the Financial Contractor can sharpen the focus of time spent on site.

When proposing field work for consideration to the COR, the Financial Contractor should propose a list of interviewees, along with general interview topics. At least one week prior to conducting field work, the Financial Contractor should forward interview questions to the project sponsor's POC.

Field work should begin with an entrance conference. Typically this would be attended by the project sponsor's Chief Financial Officer (CFO), project manager, and, to the extent practical, other interviewees identified by the Financial Contractor based on the structure of the agency and the issues that need to be discussed during the site visit. The purposes of the entrance conference are to introduce the Financial Contractor, discuss the interview schedule, and address any other topics relevant to the field work.

Field work should accomplish the following purposes:

- Resolve any questions the Financial Contractor may have regarding the project sponsor's ability to implement its plan of financing for the project.

- Confirm all aspects of the project financing plan, including the commitment of non-CIG funds to the project, and resolve any questions the Financial Contractor may have regarding third-party agreements affecting the availability or timing of funds to be applied to the project.
- Address any questions the Financial Contractor has regarding operating, capital, and financial trends affecting the project sponsor's current financial condition. If the Financial Contractor's preliminary analyses (prior to the field work) produced negative findings, the basis for these should be carefully explored with the project sponsor, after having discussed the issue with FTA.
- Address any questions or concerns the Financial Contractor has about the completeness or reliability of data provided by the project sponsor.
- Review the financial plan in detail, with particular attention to the organization of the modeling effort (i.e., who was responsible for its various parts), the forecast methods, and the sources of data for tables and charts presented in the project sponsor's financial plan document. The Financial Contractor should determine whether the financial plan is truly integrated and internally consistent.
- Review the project sponsor's assumptions used in the financial plan. Seek an explanation for any assumptions that present a departure from historical trends, or from the current macro-economic outlook.
- Review the method used by the project sponsor for any stress tests it performed.

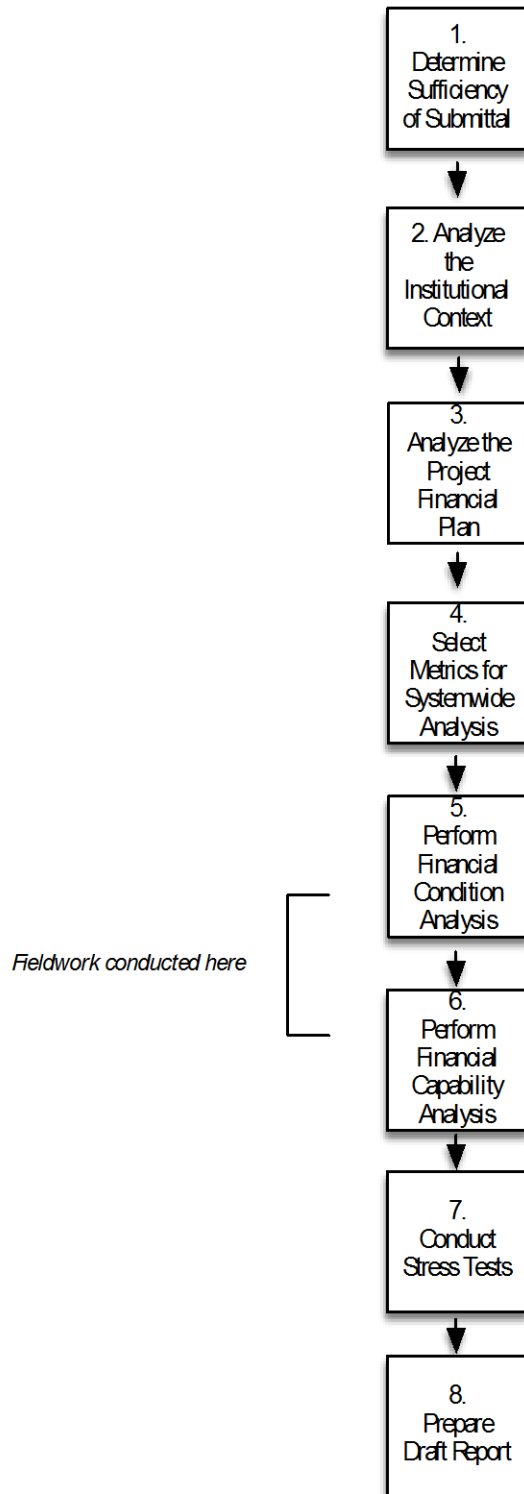
The field work should conclude with an exit conference where the information gained is summarized for the project sponsor to ensure the Financial Contractor has come away with an accurate understanding. Any missing information is restated and a timeline established for the project sponsor to provide the information. The Financial Contractor should not discuss findings with the project sponsor before FTA has had a chance to ensure that FTA agrees. Therefore, there should be no discussion during the exit conference of key concerns or problems.

## **E. PERFORMING THE TECHNICAL ANALYSES**

This section describes the specific steps required to conduct an FCA (see Exhibit 3-1). These are listed chronologically, and assume that the Financial Contractor has commenced work and has acquired the initial financial plan submittal and supporting documentation, as described above in section 3.C.



Exhibit 3-1: FCA Technical Work Flow



It should be noted that each FCA is unique, as every project sponsor and project is unique. The technical work flow described below is a general guide. Ultimately, it is the Financial Contractor's responsibility to determine how best to satisfy the requirements of the FCA in a timely manner.

**(1) Determining the Sufficiency of a Financial Plan Submittal**

The first step is for the Financial Contractor to review the project sponsor's initial financial plan submittal for completeness. This is referred to as the sufficiency review. The Financial Contractor should inform the COR at the soonest possible date, but no later than one week after receipt of the submission, of any omissions or other concerns regarding the submittal.

The sufficiency review is simple, in that the Financial Contractor needs only to ensure that the project sponsor has submitted all the documents in the Local Financial Commitment Checklist. It is a good idea at this point to create a folder for all the documents, and populate it with the files submitted by the project sponsor. It is also advisable to save all these files *in their original form*. For analysis purposes, the Financial Contractor should make copies of the files as needed, and modify only the copied files, leaving intact the files originally submitted by the project sponsor.

Also at this time, the Financial Contractor should review the project sponsor's cash flow supporting the financial plan (Excel workbook) for conformance to FTA's Guidance for Transit Financial Plans. It is especially important that the project sponsor has included tabs describing its level of service assumptions (e.g., annual vehicle revenue miles), and the debt service schedule (i.e., annual principal and interest payments for each series of debt), including both existing and planned debt. These are often omitted, but are essential to the FCA. In general, the Financial Contractor should be as specific as possible as to what information is lacking from the project sponsor submission.

The Financial Contractor may later determine that additional information is required to complete the FCA. The above data, however, will provide a sufficient point of departure for the technical analyses.

**(2) Understanding the Project Sponsor's Institutional Context**

Before starting the quantitative analysis, the Financial Contractor should develop an understanding of the project sponsor's institutional context. If the project sponsor has issued bonds, the official statement (OS) is often a good source of this information because a bond issuer is obligated to disclose everything that affects its ability to raise and use money. If the project sponsor has not issued bonds, the project sponsor's annual report or comprehensive annual financial report (CAFR) may provide this information.

The key features of the institutional analysis include:

- Define the project sponsor as a legal or organizational entity – for example, is the project sponsor an independent authority, joint powers authority (JPA), state department or sub-department, municipal department or sub-department, or something else?
- Research the general powers of the project sponsor (or its parent organization) as set forth in law (usually state law) or its creation documents, especially with regard to fees, taxes, and debt.
- Research the structure of the project sponsor’s governing board, and the approval process affecting service and capital plans, budgets, capital programs, debt financing, fares, and any other matters having a material impact on transit financial condition and capability. If the project sponsor is a JPA, pay particular attention to decisions requiring the approval of the governing boards of the parent entities, and how costs and revenues are shared among those entities.
- Create a boundary for the financial scope of the FCA. If the project sponsor is an independent authority, that alone could define the boundary because the project sponsor would have its own set of financial statements. But if the project sponsor is any other type of entity, the boundary may have to be defined by the Financial Contractor in consultation with the COR. There are many varieties of organizational structures and operating environments. In some cases the project sponsor may be responsible for operating and maintaining multiple types of infrastructure and services in addition to public transportation. In such cases, the Financial Contractor will need to determine if it is possible to isolate the transit system costs and revenues from these other services, since the scope of an FCA should focus on the project sponsor’s ability to operate and maintain the existing public transportation system.
- If the project sponsor has issued bonds or intends to issue bonds, research the statutory limits of its bonded indebtedness and research the additional bonds test included in the OS.
- Develop an understanding of the project sponsor’s overall financial structure, including its use of funds from other entities.
- Develop an understanding of practices, policy, or law affecting the allocation or use of funds the project sponsor controls.
- If an intergovernmental agreement exists that specifically affects the project, even if it does not otherwise affect the project sponsor, read the agreement and understand its financial implications. In general, FTA does not expect Financial Contractors to be experts on the details of complex intergovernmental agreements and arrangements, but rather to be able to understand and summarize the terms and conditions at a high level.

The findings from the above research should substantially inform the Financial Contractor of the financial constraints that the project sponsor must work within.

The findings will also provide a basis for writing the section of the FCA report that describes the project sponsor.

### (3) Analyzing the Project Financial Plan

The purpose of the project financial plan analysis is to understand the project's cash flow needs and how those needs will be met. Of particular interest are the amount and timing of funds from other entities, and the extent to which these funds have been committed. The Financial Contractor is also responsible for reviewing the reasonableness of the project sponsor's estimate of financing costs included in the project cost estimate.

It is essential that the Financial Contractor look beyond the overall picture presented by the sources and uses of funds for the project, and fully understand how the money flows to the project sponsor in delivering the project, including the mechanisms (e.g., short term borrowing) put in place so that the funds are available when needed.

#### *CASH FLOW*

The sources and uses of project capital funds rarely equal one another on an annual basis. Whenever uses exceed sources, some plan must exist to cover the difference. For the project to proceed unimpeded by cash flow imbalances, the project sponsor would need to rely either on cash reserves, draw on other internally-controlled resources (e.g., transfers from a general fund), or borrow funds.

It is essential that the Financial Contractor understand not only the planned project cash flow, and planned means to mitigate temporary cash flow shortfalls, but also the possibility that variances to the planned cash flow could occur that could necessitate more extensive mitigation measures. Part of this uncertainty is related to the degree to which funds have been committed to the project, discussed below.

#### *COMMITMENT OF FUNDS*

Each source of non-CIG funds should be classified as one of the following:

- Committed – Committed funds are those having all the necessary approvals (legislative or referendum) to be used to fund the proposed project without any additional action. These capital funds have been formally programmed in the MPO's TIP and/or any related local, regional, or state CIP or appropriation. Examples include dedicated or approved tax revenues, state capital grants that have been approved by all required legislative bodies, cash reserves that have been dedicated to the proposed project, and additional debt capacity that requires no further approvals and has been dedicated by the project sponsor to the proposed project.
- Budgeted – Budgeted funds are those that have been budgeted and/or programmed for use on the proposed project but remain uncommitted, i.e., the

funds have not yet received statutory approval. Examples include debt financing in an agency-adopted CIP that has yet to receive final legislative approval, or state capital grants that have been included in the state budget, but are still awaiting legislative approval. These funds are almost certain to be committed in the near future. Funds will be classified as budgeted where available funding cannot be committed until the FFGA is executed, or due to local practices outside of the project sponsor's control (e.g., the project development schedule extends beyond the TIP or CIP period).

- **Planned** – Planned funds are those that are identified and have a reasonable chance of being committed, but are neither committed nor budgeted. Examples include proposed sources that require a scheduled referendum, reasonable requests for state/local capital grants, and proposed debt financing not yet included in the agency's adopted CIP.
- **Uncertain**: This category is applied when it is unclear from the project sponsor's submission whether or not a funding source is committed, budgeted, or planned. Instances where the plan to secure funds is deemed to be unreasonable may be classified as uncertain. This category applies to funding sources for which no supporting documentation is provided. Also, funding proposals that have repeatedly failed (more than once), such as failed local referenda or repeated denial of state grants, should be classified as uncertain.
- **Unspecified**: This category is applied when the proposed non-CIG funding sources are not sufficient to cover the proposed share or have not been clearly identified. The FCA should describe each proposed source of capital funding for the project. For each source, the FCA should state whether the funds are committed, budgeted, planned, uncertain, or unspecified and state the reasons why the source is classified as such. The FCA should also describe the documents submitted by the project sponsor as evidence.

If possible, the Financial Contractor should determine if project funds that are planned have a reasonable chance of being committed. This is a factor to consider in the financial commitment rating (see section 4.C in this report), and is important to highlight in the conclusions section of the FCA report.

For funds that are considered planned, the FCA should describe in detail all of the additional steps needed to classify the funds as committed, including projected timing for each step based on information from the project sponsor. In addition, the Financial Contractor should document the timing of, and conditions under which the funds are to be made available, if sourced from an external party or parties. Some grant funds, for example, are provided on an expense reimbursement basis. It is important to ensure that the project sponsor has adequately addressed its ability to finance the project from external sources of funds.

FTA does not require that project sponsors have all sources of funds immediately available to them at the time of FFGA approval. However, the Financial Contractor should verify that the funds will be available to the project sponsor in accordance with the planned cash flow needed to construct the project. In conducting this assessment, the Financial Contractor must consider any

limitations or conditions that could affect the timing of funding availability for each proposed source.

#### *FINANCING COSTS*

Every FCA should include a section that describes the project sponsor's assumptions regarding finance charges associated with the proposed project and the Financial Contractor's opinion as to the reasonability of those finance charges. Finance charges must be included in the capital cost estimate of all CIG projects. Specifically, only finance charges that are expected to occur prior to either the revenue service date or the fulfillment of the CIG funding commitment in the construction grant, whichever occurs later in time, should be included. For any finance charges that the project sponsor includes in the project cost, it is the Financial Contractor's responsibility to provide an opinion regarding the reasonableness of the assumptions behind their estimates.

Financing costs include interest on borrowed principal, fees charged by a lender to keep a credit line active, and issuance or other handling fees associated with debt transactions such as a bond sale.

The Financial Contractor should understand how the project sponsor has projected the borrowing requirements of the project, and the assumptions the project sponsor has made regarding interest rates, fees and issuance costs. The Financial Contractor may rely on the project sponsor's historical cost experience, or published or fee-based sources to confirm the reasonableness of the assumptions regarding these items.

The Financial Contractor should also understand the borrowing limits the project sponsor is subject to, and the conditions (if any) that must be met to obtain additional funds. These latter items may be documented in an agreement between the project sponsor and the lender. The Financial Contractor is also responsible for identifying any other funding limits, requirements, or other conditions that could constrain the availability of funds from the project sponsor (e.g., Board-approved debt service coverage policy, reserve fund contributions) or its partners that could have an effect on cash flow and borrowing requirements.

#### **(4) Selecting Metrics for System-wide Analyses**

Metrics are useful in measuring and evaluating trends to determine the general direction in which a transit system is developing or changing, which is one of the primary tasks of the Financial Contractor in conducting an FCA.

The project sponsor's financial plan presents the Financial Contractor with a potentially voluminous, complex, and interrelated set of data, generally organized as annual time series values. In addition to macro-level economic considerations that affect the values of most if not all times series, the transit system under review typically has experienced, or may be projected to experience, changes in scale as, for example, new projects or services are introduced to the overall transit system. Thus, the Financial Contractor has the task of interpreting trends in the time series data, usually accompanied by changes in scale. Interpreting these

trends is critical to answering the question of whether projected outcomes are reasonable. The choice of appropriate metrics can help simplify this task.

In the FCA, metrics are relied on to measure and explain historical trends, as in the assessment of financial condition, and to evaluate the reasonableness of projected outcomes, as in the assessment of financial capability. This general evaluative framework relies primarily on metrics that can be measured in a consistent fashion for both historical (actual) and future projected values. Generally, projected values are viewed as reasonable if they represent a continuation of a trend that has been experienced historically, or are consistent with the current economic outlook.

The metrics employed for a given FCA should be selected by the Financial Contractor based on the project sponsor's financial context and the professional judgment of the Financial Contractor. Some suggestions are provided below with respect to general trend analysis, transit operations, capital programs, and financial management.

#### *General Trend Analysis Metrics*

Trend analysis in the FCA focuses on the change in some attribute of the financial plan between two points in time. In the financial condition analysis, historical trends are typically evaluated for a five-year period ending with the most recent fiscal year for which audited financial data are available. In the financial capability analysis, implicit assumptions about the continuation of or change in trends are inferred from projected values for the variable or variables under review, usually as measured between the most recently completed fiscal year and the horizon year of the forecast. However, changes in trends are sometimes evaluated for some breakdown of the 20-year forecast period (e.g., between the first full year of operation of the project and the horizon year of the forecast).

The most generally applicable trend analysis metric is the compound annual growth rate (CAGR), calculated as follows:

$$CAGR = \left( \sqrt[N]{L/F} \right) - 1$$

where: N is the number of periods (e.g., years) being analyzed  
F is the value for the first time period  
L is the value for the last time period

or, in Excel notation:

$$CAGR = ((L / F) ^ (1 / (N - 1)) - 1)$$

Note that in a time series with N periods, there are N-1 compounding periods. For example, for a five year period, you must calculate CAGR as the 4<sup>th</sup> root of the ratio of L to F, minus 1.

The CAGR is a rate of change that, if applied to the beginning value for N-1 periods, will yield a result exactly equal to the ending value. The CAGR is a proportion, normally expressed as a percentage (e.g., 0.025 is 2.5%). The CAGR

is useful for evaluating a variety of trends (including trends in operating and other metrics described below), but has some limitations:

- The CAGR is based on historical data, and thus the Financial Contractor should not depend on the CAGR historical values as the sole method of assessing the reasonability of future assumptions. In this respect, FTA expects Financial Contractors to use their professional judgment to determine the appropriate methods to employ to evaluate and assess future assumptions included in a project sponsor's financial plan submittal.
- A potential problem is introduced by the selection of the beginning year and the ending year of the trend analysis, since either of the two may be an anomaly. This limitation may be dealt with by extending the historical trend analysis to a more distant past, or, in the case of evaluating a trend implicit to a financial forecast, by breaking the analysis down into time periods that filter out known sources of variation (e.g., evaluating projected passenger revenue growth before and after project implementation). However, presenting an analysis of multiple time periods can be difficult for readers to follow. If this method is employed, great care should be taken to describe the analysis in a clear, straightforward manner.
- The item being analyzed may need to be normalized to account for certain changes that affect its value (e.g., farebox revenue affected by a change in price). This limitation may be addressed by selecting a specific operating, capital, or financial management metric, discussed below, that adjusts for known sources of variation or can be used as a proxy for the item of interest. For example, a trend analysis of operating costs will not yield useful information if there have been changes to the amount or type of service provided. In that case, a metric such as operating cost per vehicle revenue mile would yield a more specific measure of the trend in operating cost.
- There may be no discernible trend due to extreme variability in the data (e.g., annual capital expenditures). This limitation may be addressed by calculating an average annual value for the period of interest. If the item is measured in dollars, however, it is necessary to convert the time series into constant dollars, using an inflation rate or price deflator.

The general-purpose metrics described above should be used for interpreting trends in the more focused metrics described below, as well as revenues or costs that need no normalizing for changes in scale or changes in underlying rates. These include revenue streams other than those produced from operations (e.g., tax revenues), operating and capital grants, and non-fleet capital expenditures.

The Financial Contractor may elect to use other metrics to measure and evaluate general trends, but if so should be prepared to present its rationale to FTA.

### *Operating metrics*

Operating metrics should be used by the Financial Contractor to evaluate trends in the efficiency and effectiveness of the project sponsor's transit operations, and in



particular, whether the financial plan envisions a change in efficiency or effectiveness compared to the historical trends.

For the top 50 agencies reported by NTD in a recent reporting year, operations accounted for 69 percent of total expenditures, and operating revenues (principally passenger revenues) accounted for 28 percent of total income (i.e., operating and capital). It is clear from these figures that transit operations have a significant effect on the project sponsor's cash flow, and thus its overall financial performance.

The interpretation and evaluation of operating trends is made complex by changes occurring in levels of service operated over time, and by the different economic characteristics of the multiple modes of service usually operated by a single transit agency. Thus, it is important to understand how to develop and apply operating metrics when conducting an FCA.

Operating metrics can generally be divided into two categories:

- *Efficiency* – Efficiency refers to the relationship between inputs and outputs (e.g., how many inputs required per unit of output). Typically, inputs are measured collectively as dollars, although they may be measured as non-dollar resources such as pay hours. Outputs are typically expressed as units of service provided, using some measure that has very small increments and a direct effect on cost, such as vehicle revenue miles. This yields a more consistent description of the cost function than would a more aggregate measure of output (e.g., peak vehicles, route miles), because the more aggregate measures of output mask the effect of changes in component cost drivers (e.g., peak vehicles may remain constant while vehicle miles increase or decrease).
- *Effectiveness* – Effectiveness refers to the relationship between consumption and output (e.g., how many units consumed per unit of output). Consumption is measured in terms of passengers or something related to passengers, such as passenger revenue, parking revenue, advertising revenue, or passenger miles. Output is typically expressed as units of service provided, using some measure that has very small increments such as vehicle revenue miles (output is output, and is measured the same way whether one is evaluating efficiency or effectiveness).

When conducting an FCA, the main focus is on financial sustainability, which is more heavily influenced by efficiency. Operating effectiveness is of secondary importance, due in part to its comparatively lesser influence on overall financial performance. Nonetheless, trends in operating effectiveness are of interest, and serve as a good check on the project sponsor's assumptions regarding the operating revenue forecast.

Exhibit 3-2 presents suggested operating metrics. The trends in these metrics should be evaluated based on their CAGR. The metrics should be calculated on a modal basis (e.g., bus, light rail, demand response), especially in the financial condition analysis. Higher-level trends can be abstracted from the historical

modal data if the project sponsor's projections of operating costs and operating revenues are for the system as a whole, or include aggregations of certain modes.

## Exhibit 3-2: Suggested Metrics for Evaluating Trends in Transit Operations

<b>Metric</b>	<b>What it measures</b>	<b>Why it is included</b>
<b>Vehicle revenue miles (VRM)</b>	Output – the amount of revenue service available to carry passengers over some distance [see Note 1]	VRM is one of the bases on which formula funds are allocated and should be reliably reported; accurately reflects extent of service provided
<b>Operating Cost per VRM</b>	Trend in general operating efficiency (unit cost of operations)	Varies significantly by mode and reveals cost implications of changes to service strategy [see Note 2]
<b>Operating Subsidy per VRM</b>	Trend in efficiency of subsidy dollars applied to operations [see Note 3]	Varies significantly by mode and reveals subsidy implications of changes to service strategy
<b>Unlinked Passenger Trips per VRM</b>	Trend in general effectiveness of transit service	Useful primarily for evaluating system-wide financial condition, since ridership forecast is evaluated separately by FTA
<b>Passenger Revenue per VRM</b>	Trend in income-generating ability of transit service	Scales passenger revenue history trend to level of service operated; serves as a benchmark rate for evaluating passenger revenue forecast
<b>Passenger Revenue per Unlinked Passenger Trip</b>	Trend in average fare paid	Useful for comparing forecast average fare to past practice, as well as cross-check to average fare used in the ridership model
<b>Operating Revenue per VRM</b>	Trend in income-generating ability of all operating resources relative to service provided	Scales operating revenue history trend to level of service operated; serves as a benchmark rate for evaluating operating revenue forecast
<b>Farebox Recovery Ratio</b>	Trend in effectiveness of transit pricing and ridership relative to cost	Useful in interpreting financial condition, and interpreting the reasonableness of the passenger revenue forecast

**notes:**

1. VRM is preferred over a related measure, vehicle revenue hours (VRH), since VRH is measured without regard to distance actually traveled. A revenue vehicle that stands still for one hour would represent one VRH of service, but would provide no travel benefit since no distance would have been traversed.

2. Care is required in interpreting this measure since increases in VRM typically result in lower unit costs while decreases in VRM result in higher unit costs, all other factors held constant, due to fixed costs being spread over more or fewer VRM. This is particularly true for rail systems, which have relatively high fixed costs.

3. As used here, "subsidy" refers the difference between operating cost and operating revenues. It is a measure of the trend in financial support that is required of externally-derived funds, be they in the form of dedicated revenue sources (e.g., a sales tax), or an operating grant or budget allocation from a parent agency or institutionally-separate entity.

### *Capital metrics*

One of the tasks of the Financial Contractor in performing an FCA is to determine whether the project sponsor is managing its capital program on a sustainable basis. Capital program metrics should be used by the Financial Contractor to evaluate the pace of rehabilitation and replacement of capital plant and equipment (i.e. ongoing state of good repair), and trends in the sources of funds to support the capital program.

The pace and adequacy of the rehabilitation and replacement of plant and equipment is difficult to quantify, due to the sheer volume and diversity of depreciable capital assets owned by the typical project sponsor, as well as year-to-year variability in capital expenditures that makes trend analysis difficult.

In order to more consistently measure the condition of capital assets, as well as the effectiveness of a project sponsor's plan to maintain a State of Good Repair (SGR), FTA has collaborated with the nation's transit systems to define a transit asset management program, as required by law under 49 U.S.C. Section 5326. Every FTA grantee will be required to implement a transit asset management plan. The capital projects included in the transit asset management plan and related SGR projects will be included in the regional TIP, and should provide a reasonable basis for the Financial Contractor to determine whether the project sponsor is sustainably managing its capital program.

Until such time that the transit asset management plan is fully implemented by FTA and the transit industry, the following metrics may be considered when evaluating a project sponsor's capital program:

- *Average age of the revenue vehicle fleet* – On a steady-state basis (i.e., excluding major fixed guideway extensions or capacity enhancements), revenue fleet replacement is the largest element of a transit agency's capital program. NTD reports this metric every year, by mode, for every transit system. Projected average fleet age can be derived from fleet management plans, which are part of the supporting documentation submitted by the project sponsor for the FCA. For all non-rail fleets, average fleet age is an excellent indicator of whether vehicles are being replaced as needed.<sup>1</sup> In a broader sense, average fleet age is a good barometer of capital condition – fleet replacement is usually the top priority of a capital program due to its visibility to the customer and its effect on schedule reliability. If a project sponsor is having difficulty keeping up with fleet replacement needs (evidenced by steadily increasing fleet age), it is probable that other asset replacement needs are going unmet as well.

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<sup>1</sup> The trend in the average age of rail fleets is worth noting in the FCA report, but because rail cars are replaced on such a long cycle, often have mid-life overhauls perform to extend their useful life, and tend to be bought in large groups, the trend in fleet average age may not be meaningful. The condition of the rail fleet and plans for its rehabilitation or replacement may be addressed in the project sponsor's Rail Fleet Management Plan.

- *Percent of useful life remaining in depreciable assets* – The age and replacement needs of the project sponsor’s transit assets can be established generally by the cost basis, accumulated depreciation, and net book value of its depreciable assets, all of which are reported in a note to the project sponsor’s CAFR. When a depreciable asset is purchased, the purchase cost (or cost basis) is amortized (i.e., depreciated) over subsequent years, according to its estimated useful life. Buses, for example, are usually depreciated over 12 years, with one-twelfth of the cost recorded as depreciation expense each year. This expense is accumulated in the fixed asset ledger for as long as the asset is owned by the project sponsor. An asset’s net book value is the cost basis less accumulated depreciation. Summed over all assets of a like class (e.g., buses, fare collection equipment), the ratio of net book value to cost basis provides an estimate of the percentage of the average remaining useful life for a class of assets. This technique is useful for assets replaced on a relatively frequent cycle, but provides a less definitive estimate for long-lived assets, such as structures. The average annual replacement cost can also be estimated from this data, based on the ratio of cost basis to depreciable life, where the cost basis is escalated from the midpoint of the depreciable life to denominate the cost in constant dollars.

In addition to the metrics discussed above, trends in average annual constant-dollar capital expenditures and average annual constant-dollar capital program funds will give an indication of whether projected capital expenditures and funding are commensurate with the recent past.

#### *Financial management metrics*

Financial management metrics should be used by the Financial Contractor to measure and evaluate liquidity, financial strength, and debt management. Although only the latter item may be determinable in the future, the first two items, which are measured from information reported in the annual CAFR, are essential in evaluating the current financial condition of the project sponsor.

The following financial management metrics should be considered by the Financial Contactor:

- *Current ratio* – The current ratio is a measure of liquidity; that is, the ease with which a project sponsor can meet its short-term financial obligations with the liquid assets available. It is calculated as current assets divided by current liabilities, as presented in the Statement of Net Assets in the project sponsor’s CAFR. A ratio of 1.0 indicates that the project sponsor has the cash, or items convertible to cash within one year, to meet liabilities coming due within one year. Ratios greater than or less than 1.0 indicate greater or lesser degrees of liquidity, respectively.
- *Weeks of working capital* – This metric is related to the current ratio, but expresses liquidity relative to expenditures. Working capital is calculated as the difference between current assets and current liabilities. Weeks of working capital is calculated as working capital divided by the sum of annual operating (net of depreciation) and capital expenditures, times 52. Operating

expenses can be found in the CAFR Statement of Revenues, Expenses, and Changes in Net Position. Capital expenditures can be found in the CAFR Statement of Cash Flows.

- *Unrestricted net assets* – Unrestricted net assets comprise cash or other assets that are not needed to pay liabilities and are not earmarked for a specific purpose. It is a measure of financial strength, and communicates the latitude a project sponsor may have in responding to unforeseen financial needs. It is reported in the CAFR Statement of Net Assets.
- *Gross debt service coverage ratio (Gross DSCR)* – This ratio measures the ease with which the project sponsor can make its debt service payments (i.e., principal and interest) from revenues that are pledged for repayment of debt. It is calculated as annual pledged revenues divided by annual debt service payments. This information is usually presented in notes to the CAFR, or may be directly reported by the project sponsor. The gross DSCR is usually referenced in the official statement (OS) for a bond issue, under the heading “Additional Bonds Test.” It is the minimum level of debt service coverage the pledged revenues must provide in order for the project sponsor to issue additional bonds that use the pledged revenues as the credit. If the project sponsor has multiple credits, a gross DSCR should be calculated for each.
- *Net debt service coverage ratio (Net DSCR)* – This ratio is similar to the gross DSCR, but the numerator is adjusted to reflect the amount of pledged revenues used to subsidize transit operations. It is a measure of the ease with which the project sponsor can make its debt service payments without putting current service levels of transit service at risk. A ratio of less than 1.0 indicates the project sponsor may not be able to sustain current operations.

In addition to these metrics, the Financial Contractor should also review trends in unfunded pension liabilities and unfunded other post-employment benefits (OPEB) to understand how the project sponsor plans to address these unfunded liabilities in the future, and how these planned actions are incorporated in the financial plan.

#### **(5) Performing the System-wide Financial Condition Analysis**

The financial condition analysis focuses on the project sponsor’s historical ability to operate and maintain consistent (or greater) levels of service, and its ability to pay current costs from existing revenues. Secondly, the financial condition analysis establishes benchmarks against which to evaluate the project sponsor’s financial plan.

The financial condition analysis is performed on a system-wide basis, using the metrics described in the prior section. The metrics are developed from annual data for the five-year period ending with the most recent fiscal year for which audited financial data are available. The analysis should consider the trend for each metric, noting especially if the trend is stable, improving, or declining.

For some items, a longer look-back period is advisable. Sales tax revenues, for example, can be volatile over a five-year period, and the calculation of a trend may be difficult to generalize. Revenues from property taxes and payroll taxes also exhibit volatility on a short-term basis. For these types of revenue sources, the Financial Contractor should analyze at least a 10-year trend, and consider not just the CAGR between two end points, but also a rolling CAGR (e.g., 5-year rolling trend) to justify a reasonable trend metric to be later used as a benchmark in the financial capability analysis.

Exhibit 3-3 provides a summary of the questions that should be addressed in the financial condition analysis, and identifies a metric or metrics that can be used to support the Financial Contractor’s findings.

**Exhibit 3-3:  
Use of Metrics in Determining Financial Condition**

<b>Financial Condition Questions</b>	<b>Metric(s)</b>	<b>Interpretation</b>
Has the project sponsor maintained service levels?	Vehicle Revenue Miles (VRM) CAGR	Yes, if CAGR stable or increasing
Have trends in transit cost been comparable to trends in transit revenues?	<ul style="list-style-type: none"> <li>• Operating cost per VRM CAGR</li> <li>• Operating subsidy per VRM CAGR</li> <li>• Total operating subsidy CAGR</li> <li>• Operating subsidy sources CAGR</li> </ul>	Yes, if sources of operating subsidy are growing at a rate comparable (or exceeding) growth in operating subsidy per VRM
Has the project sponsor met its capital replacement needs?	<ul style="list-style-type: none"> <li>• Average fleet age CAGR</li> <li>• Percent of useful life remaining CAGR</li> </ul>	Yes, if trend in average fleet age and percent of useful life remaining are stable or improving (i.e., fleet age decreasing; percent of useful life increasing)
Is the project sponsor’s debt level affordable?	<ul style="list-style-type: none"> <li>• Gross DSCR</li> <li>• Net DSCR</li> <li>• Current ratio</li> </ul>	Yes, if gross DSCR satisfies additional bonds test, net DSCR exceeds 1.0, and current ratio exceeds 1.0
Does the project sponsor have adequate working capital?	Weeks of working capital (current and CAGR)	Yes, if weeks of working capital exceed weeks of weighted average accounts receivable, and CAGR is positive
Can the project sponsor pay its current costs from existing revenues?	<ul style="list-style-type: none"> <li>• Current ratio</li> <li>• Unrestricted net assets</li> </ul>	Yes, if current ratio exceeds 1.0 and trend has been stable or improving, and if unrestricted net assets are positive and trend has been stable or improving

**(6) Performing the System-wide Financial Capability Analysis**

The financial capability analysis considers the stability and reliability of revenue sources needed to meet future annual capital and operating and maintenance costs. It also seeks to determine whether based on projected revenues the project sponsor can meet its expansion costs, in addition to its existing operations, while maintaining the existing transit system in a state of good repair.

The financial capability analysis consists of two steps:

- Interpret and synthesize the project sponsor’s financial plan, employing the use of metrics like those included in the financial condition analysis to the extent practical <sup>2</sup>, and address the following aspects of the plan:
  - Describe the impact of the project on system-wide operations and identify any future project-related costs that are not included in the project cost estimate (e.g., additional rail cars acquired for service on the project alignment after the project is complete);
  - Discuss the project sponsor’s projected sources and uses of funds for the entire system, and the methods used to make the projections, with particular emphasis on the maintenance of existing service levels and meeting capital replacement needs;
  - Describe the project sponsor’s projected cash flow, cash reserves, and net debt capacity (i.e., the additional debt the project sponsor could incur without impinging on cash flow or debt limits); and
  - State whether the financial plan, as presented by the project sponsor, indicates that the project sponsor has the financial capability to construct and implement the project while operating and maintaining the existing transit system throughout the 20-year period covered in the financial plan, including any other expansion projects planned during that time.
- Critique the project sponsor’s financial forecast assumptions by comparing projected trends to historical trends, or in some cases to the current economic outlook if historical trends are not valid, and indicate which forecast metrics are conservative, reasonable, or optimistic. The Financial Contractor should invite the project sponsor to explain or justify any deviation from historical trends, except those resulting from a change in economic conditions. The Financial Contractor should apply professional judgment as to whether this information is reasonable. This section should address each proposed funding source individually. For each proposed capital and operating funding source, the Financial Contractor should indicate whether the assumptions for future revenues are optimistic, reasonable or conservative relative to historical trends and/or other metrics based on the Financial Contractor’s professional

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<sup>2</sup> Metrics derived from the CAFR’s Statement of Net Assets are unlikely to be included in the financial plan forecast.



judgment. In addition, the Financial Contractor should address whether each proposed funding source is committed, budgeted, planned, uncertain or unspecified in the first full year of revenue operations of the proposed project. The Financial Contractor should include a description of why he/she classified the funds as such and of the documentation received from the project sponsor, or lack thereof, justifying such classification.

Based on the critique of the project sponsor's financial forecast assumptions, the Financial Contractor should identify assumptions or financial plan variables for which a less favorable or less optimistic outcome may be reasonably expected. These are referred to as at-risk assumptions, and will be evaluated in the stress tests.

#### **(7) Conducting the Stress Tests**

A stress test is intended to estimate the impact on the project sponsor's financial capability of less favorable outcomes for at-risk assumptions defined in the financial capability analysis. A stress test is conducted for each at-risk assumption identified by the Financial Contractor, and for all of the at-risk assumptions collectively. The Financial Contractor should apply professional judgment in deciding whether an at-risk assumption is of material importance or not. The Financial Contractor should identify in the FCA report any at-risk assumptions that are not carried forward into the stress tests, and the reason therefore.

The stress tests are not performed to find the breaking point in the financial plan. Rather, they are performed to analyze the impact on the project sponsor's financial capability of revenue and cost outcomes that are adverse, may be reasonably likely to occur, and have a material impact. FTA relies on the Financial Contractor's judgement to determine the appropriate assumptions to test. The Financial Contractor must fully document in the FCA his/her reasons for choosing the stress tests undertaken. The stress tests should always include the project sponsor's capacity to accommodate a 10 percent increase in project cost, or 10 percent project funding shortfall, in addition to other at-risk assumptions identified by the Financial Contractor.

A stress test typically estimates the impact of a change in an assumption on:

- end-of-year cash balances, including a comparison to any policies regarding reserve funds that the project sponsor may have adopted;
- limits on borrowed funds, either statutory or set by policy; and
- gross DSCR and net DSCR, including a comparison to any policies regarding debt service coverage that the project sponsor may have adopted, or that are stated in a bond indenture.

In addition to a stress test for each at-risk assumption, the Financial Contractor must also include a "super stress test," evaluating the combined effect of the individual stress tests.

In most cases, the stress tests can be performed by calculating the net annual impact on cash flow (i.e., incremental costs or revenues) of a change in the relevant assumption that is being tested. This net annual impact can then be used to adjust the annual cash flow and year-end cash balances that the project sponsor has projected in its financial model, as well as other metrics (e.g., the DSCR) that are affected by the stress test. This can be done through a series of simple calculations, and need not require the Financial Contractor to manipulate the project sponsor's financial model or to build a parallel financial model. An example is provided in Appendix C.

If, as part of the stress tests, the Financial Contractor finds it necessary to evaluate the project sponsor's net debt capacity (i.e., the capacity to assume additional debt beyond that included in the current financial plan), it may be possible to estimate via a simple series of calculations, presented in Appendix C. The analysis of net debt capacity, however, can be complicated, particularly if the project sponsor has multiple credits or if the project sponsor uses a combination of internal cash and debt to fund its capital program. In these circumstances, it may be necessary to request the project sponsor to conduct a stress test, per the specifications of the Financial Contractor. The Financial Contractor would still be responsible for exercising due diligence and validating the accuracy of the stress test provided by the project sponsor.

Note that the direct use of the project sponsor's financial model by the Financial Contractor can be trouble-prone, and introduces the possibility of making unintentional errors. The models are often quite complex and include macros or third-party software that may not be present or may not execute properly on the Financial Contractor's computer. Also, please be aware that the creation of a parallel financial model is time-consuming, and may be difficult to validate against the project sponsor's financial plan. The examples of simple calculations illustrated in Appendix C will, in most cases, provide accurate results for the stress tests. The Financial Contractor may, however, propose alternative methods to FTA if they can be shown to be necessary, and an effective use of resources.

If the project sponsor's financial plan can weather the stress tests, one-by-one and in combination, its financial capability is proved. The project sponsor's failure to survive one or more stress tests should be discussed in a conference call between the Financial Contractor and the FTA COR. FTA will then coordinate with the Financial Contractor to determine the appropriate steps for follow-up action.

#### **(8) Preparing the Draft Report**

The FCA report is essentially a story told from numbers. If the Financial Contractor assembles the data and performs the analyses described above, and addresses the content described in the annotated outline presented in Appendix B, preparation of the FCA report should proceed in a straightforward manner. As a way of keeping an organized flow of the elements of the story being told in the FCA report, the Financial Contractor should provide clearly stated conclusions at the end of each section, and often at the end of each paragraph. A direct link must

be given between each such conclusion and the reasons supporting that conclusion.

In preparing the report, the Financial Contractor should be aware that the report is reviewed by a multitude of people at FTA HQ and the FTA Regional Office. The importance of a timely, complete submittal cannot be over-emphasized.

The text of the draft report should be submitted in Word, dated, and marked “draft.” Any exhibits, to the extent they are necessary, should be submitted at the same time as the report, in the word document or in a separate PDF. This is advisable because the FCA report is often long, and the initial comments are often quite voluminous. FTA prefers that Financial Contractors limit the use of tables and graphs to those that are absolutely necessary to visually display an aspect of the Financial Contractor’s analysis, findings and conclusions. Financial Contractors should not prepare tables and graphs that replicate data and information included in the project sponsor’s financial plan submittal unless absolutely necessary to convey a vital piece of information about the Financial Contractor’s analysis.

Similarly, the text of the FCA should present findings in an orderly and succinct fashion, avoiding excessive amounts of information, extraneous discussions, and duplicative information. In each round of revisions, it is useful to submit a marked-up version of the text, so that all edits and comments incorporated in the current version can be traced, as well as a new clean version incorporating all previously-agreed edits. All comments made by FTA must be addressed in some manner, even if stating disagreement or proposing an alternative thought.

When the draft text and exhibits have been edited to FTA’s satisfaction, the Financial Contractor should integrate the text and exhibits into a single, properly formatted report in a PDF format.

## **F. COMPLETING THE FCA**

Once FTA’s comments have been addressed to FTA’s satisfaction, the Financial Contractor will prepare a final version of the report, and submit it to FTA electronically as a PDF. This step completes the FCA.

At its discretion, the COR may transmit the FCA to the project sponsor. Generally FCAs are shared with the project sponsor so that the project sponsor is aware of financial issues that need to be addressed prior to the project’s consideration for a construction grant agreement. Thus, it is important that FCAs contain clear and concise recommendations for improvement. FCAs conducted just prior to construction grant approval generally are not shared with the project sponsor until after the construction grant is awarded.

## **4. Preparing a Financial Rating from the FCA**

FTA is required by law to prepare a local financial commitment rating at specific points in time and prior to awarding a construction grant agreement. Local financial commitment is assessed according to three ratings factors:

- Current capital and operating condition, weighted at 25 percent;
- Commitment of capital and operating funds, weighted at 25 percent; and
- Financial capacity and reasonableness of estimates and assumptions, weighted at 50 percent.

The evaluation and rating process for local financial commitment is described in FTA's *Final Interim Policy Guidance for the Capital Investment Grants Program*.

Updated ratings for local financial commitment should always be provided as part of an FCA.

The FCA addresses each of the criteria for local financial commitment at specific places in the FCA report. Therefore, the project sponsor's rating for local financial commitment can be determined directly from the FCA report. This section explains how to develop a local financial commitment rating from information contained in the FCA report.

### **A. LOCAL FINANCIAL COMMITMENT RATING PROCESS – OVERVIEW**

The evaluation and rating process for local financial commitment is described in FTA's *Final Interim Policy Guidance for the Capital Investment Grants Program*. Rather than repeating the information found in that document, the purpose of this section is to provide guidance to Financial Contractors on how to derive the rating for local financial commitment from the FCA report.

### **B. CURRENT CAPITAL AND OPERATING CONDITION**

#### **1. Summary of FTA rating guidance**

The rating for the current capital and operating condition is based upon the average bus fleet age, the current ratio as calculated from the project sponsor's most recent audited statement, bond ratings if given within the last two years, and recent service history including whether there have been significant cuts in service.

#### **2. Sources of information in the FCA report**

Information in the FCA report to support the rating for this subfactor should be located in the FCA section on system-wide financial condition.

## **C. COMMITMENT OF CAPITAL AND OPERATING FUNDS**

### **1. Summary of FTA rating guidance**

The rating for commitment of funds is based on the percentage of funds (both capital and operating) that are committed or budgeted versus those considered only planned or unspecified.

### **2. Sources of information in the FCA report**

Capital funding commitments for the project should be addressed in the FCA in the section on the project financial plan. Operating funding commitment for system-wide operating funds in the opening year of the project should be described in the section of the FCA report that discusses system-wide financial capability for the project sponsor's operating plan.

## **D. FINANCIAL CAPACITY AND REASONABLENESS OF ESTIMATES AND ASSUMPTIONS**

### **1. Summary of FTA rating guidance**

The rating for the reasonableness of the financial plan is based upon whether capital and operating planning assumptions are comparable to historical experience, the reasonableness of the capital cost estimate of the project, adequacy of meeting state of good repair needs, and the project sponsor's financial capacity to withstand unexpected cost increases or funding shortfalls.

### **2. Sources of information in the FCA report**

Capital planning assumptions and the project sponsor's adequacy of meeting state of good repair needs should be described in the section of the FCA report in which the Financial Contractor provides an assessment of the project sponsor's system-wide financial capability for its capital plan. Operating planning assumptions should be described in the section of the FCA report in which the Financial Contractor provides an assessment of the project sponsor's system-wide financial capability for its operating plan.

The reasonableness of the capital cost estimate of the project should be described in the section of the FCA report that discusses the project budget, and specifically references the PMOC report.

The project sponsor's financial capacity to withstand unexpected cost increases or funding shortfalls should draw from the section of the FCA report in which the Financial Contractor provides an assessment of the project sponsor's system-wide financial capability for its capital plan. The basis for this subfactor may also draw from the sections of the FCA report that discuss the project financial plan,

specifically the project sponsor's capacity to accommodate higher project costs or funding shortfalls, and the section on stress tests.

The portion of the rating addressing the project sponsor's projected cash balances should draw from the section of the FCA report in which the Financial Contractor provides an assessment of the project sponsor's system-wide financial capability for its operating plan. The basis for this subfactor may also draw from the section of the FCA report addressing stress tests.

## Appendix A: Web Links for FCA-Related Statute and Policies

- 49 CFR Part 611, Final Rule for Major Capital Investment Projects (January 2013):  
<https://www.gpo.gov/fdsys/pkg/FR-2013-01-09/pdf/2012-31540.pdf>
- Final Interim Policy Guidance, Federal Transit Administration Capital Investment Grant Program (June 2016):  
<https://www.transit.dot.gov/funding/grant-programs/capital-investments/final-capital-investment-grant-program-interim-policy>
- Reporting Instructions for New Starts, Small Starts, and Core Capacity:  
<https://www.transit.dot.gov/funding/grant-programs/capital-investments/how-apply>
- Guidance for Transit Financial Plans (June 2000):  
<https://www.transit.dot.gov/funding/funding-finance-resources/guidance-transit-financial-plans>
- Circular 7008.1A, Financial Capacity Policy (January 2002):  
<https://www.transit.dot.gov/regulations-and-guidance/fta-circulars/financial-capacity-policy>
- Circular 5200.1A, Full Funding Grant Agreements (FFGA) Guidance (December 2002):  
<https://www.transit.dot.gov/regulations-and-guidance/fta-circulars/full-funding-grant-agreements-guidance>
- Circular 5010.1E Award Management Requirements (January 2017):  
<https://www.transit.dot.gov/regulations-and-guidance/fta-circulars/award-management-requirements-circular-50101e>

## **Appendix B: Annotated FCA Report Outline**

This appendix presents the outline (i.e., headings) for the FCA report, with bullets indicating the minimum content.

### **REPORT COVER**

- Financial Capacity Assessment of the (Sponsor Name) for the (Project name)
- prepared for the Federal Transit Administration
- by (Financial Contractor name)
- contract number
- date
- version (e.g., draft, final draft, final)
- for the financial plan dated (date)

### **TABLE OF CONTENTS**

- include first (e.g., 1.) and second (e.g., 1.1) headings only
- separately identify appendices
- include list of exhibits (i.e., tables and charts)

### **GLOSSARY OF ABBREVIATIONS, ACRONYMS AND TERMS**

- see standard list following the Table of Contents for these Guidelines
- include other entries as needed

## **1. EXECUTIVE SUMMARY**

- Identify project sponsor and project name, and provide a brief description of the project. Provide a forward reference to section 2 for additional details.
- Identify sources of project capital funds, indicate the portion of non-CIG funds that are committed or budgeted, and summarize the process required to commit any remaining funds. Provide a forward reference to section 3 of the report for additional details.
- Summarize at a high-level the financial condition of the project sponsor, interpret trends (stable, increasing, decreasing) in operations, ability to meet state of good repair needs, other major capital project commitments if relevant, and cash flow. Indicate whether the project sponsor is able to meet



current financial obligations from current resources. Provide a forward reference to section 4 of the report for additional details.

- Summarize the financial capability of the project sponsor as presented in the project sponsor's financial plan. Indicate whether the financial plan meets the requirements of FTA's *Guidelines for Transit Financial Plans*. Critique the financial plan and summarize any critical issues raised by the analysis. Provide a forward reference to section 5 of the report for additional details.
- Summarize the results of the stress tests, and provide a forward reference to section 6 of the report for additional details.
- Indicate whether the project sponsor can sustain current operations, including state of good repair, in addition to constructing and operating the project, in light of the stress tests.
- Note that concluding statements in the above bullets should be consistent with the report's conclusions.
- Identify recommendations for improvement. Provide a forward reference to the section on recommendations for additional details.

## **2. SCOPE OF THE FCA**

- Provide a brief introduction to this section

### **2.1 Project Description**

- Describe the key features of the project, including alignment, technology, high-level operating features (e.g., peak headways), opening date and projected ridership. Provide a forward reference to section 3 for details on cost and funding.

### **2.2 Project Sponsor**

- Describe the project sponsor, including its corporate characteristics (e.g., independent authority, joint powers authority, component of government, etc.) and governing board.
- If the project sponsor is not an independent authority, describe its relationship to the parent organization (or organizations, if a joint powers authority) with regard to legislative, executive, operational, and financial decision-making.
- If the project sponsor is not the sole owner-constructor-operator, describe the other entities involved in the project, their respective roles, and the type and nature of agreements among the parties regarding their roles, in particular funding and cost sharing for any increases to project cost.

- Describe any special features of the institutional arrangements that may affect the financial plan (e.g., authority to issue debt, debt limits, taxation, etc.).

### **2.3 Limitations of Data and the Report**

- Identify the major source or sources of documents used to perform the FCA, including the date of the financial plan, and provide a forward reference to Appendix A (List of Documents Reviewed). Identify any concerns about the completeness or reliability of data provided by the project sponsor.
- Indicate whether the financial plan complies with FTA’s *Guidelines for Transit Financial Plans*, and if not, why not.
- Indicate that financial forecasts assume the occurrence of future events that are unlikely to occur exactly as planned; variances between projected and actual outcomes may occur and could be material.
- Summarize the scope of work performed by the Financial Contractor, typically: reviewed the reasonableness of the forecast assumptions used in the financial plan, focusing on the contrast between these assumptions and historical trends, in the context of current economic conditions; carefully examined but did not attempt to fully proof the forecast methodology; and where appropriate, evaluated the risks posed by potential variation in material assumptions. Provide a forward reference to section 6, Stress Tests.
- Describe any conditions of the project sponsor’s submittal or the scope of the Financial Contractor’s review that vary from the typical FCA. Not all FCAs fit the model in which a transit agency is the project sponsor. FTA encounters an array of management structures, agency responsibilities, sponsorship arrangements, and funding mechanisms. Sometimes these unique circumstances require that the methodology of the FCA be altered to conduct an FCA that meets the requirements in law. If a different approach or method was used, describe how the method was applied and the implications on the analysis.

## **3. PROJECT FINANCIAL PLAN**

- The introduction to this section should summarize key findings regarding the project budget, cash flow, and the project sponsor’s capacity to accommodate higher project costs or funding shortfalls or delays. The latter item regarding the capacity to accommodate higher costs or funding shortfalls or delays will in most cases simply reference section 5 (Financial Capability) or section 6 (Stress Tests), but in some cases project financing is isolated from the project sponsor’s broader financial responsibilities, and should be evaluated in section 3.3.

### 3.1 Project Budget

- Provide a summary of this section.
- Provide a complete breakdown of the project's sources of funds, identifying for each individual source:
  - The source of funds, the authority by which the funds are being applied to the project, and note if any of the funds have already been obligated in an existing grant.
  - The amount of funds, in total and the amount already expended on the project.
  - The amount of funds committed to the project, the action taken to commit the funds, and the documentation submitted as evidence by the project sponsor to demonstrate that the funds are committed.
  - A description of all additional action(s) needed to commit the funds to the project.
  - All the above should be organized by funding entity in the following order: Federal, State, local, and private sector. Any bond or loan sources should describe the source(s) of repayment.
  - Provide a forward reference to Appendix B, which provides a summary of the funds applied to the project, by fiscal year of the project sponsor.
- Describe the uses of project funds:
  - Summarize the project's baseline cost estimate at a high level. Indicate the date of the PMOC report and results of the PMOC cost review in a very brief summary (2-3 sentences).
  - Describe and assess the reasonableness of the estimate of financing costs, including the assumptions regarding the interest rates and fees.
  - State whether the cost of the project includes all finance charges incurred by the project sponsor that are expected to occur prior to either the revenue operations date or the fulfillment of the Section 5309 CIG funding commitment in the FFGA, whichever occurs later in time.

### 3.2 Project Cash Flow

- Describe the annual cash flow sources and uses of funds, including project-specific cash balances that may accrue in some years and be drawn from in others.
- If debt is being incurred specifically for the project, and payable from project funds, confirm that the projected cash flow is consistent with the terms of the indenture or loan agreement with respect to debt service coverage or other factors governing funding draws and

repayment. Describe the degree of excess debt service coverage that exists.

### **3.3 Capacity to Accommodate An Unexpected Project Cost Increase or Funding Shortfall**

- Summarize any analysis performed by the project sponsor of its capacity to accommodate an unexpected cost increase or funding shortfall for the project.
- If the project is funded in a matter distinct from the project sponsor's other financial obligations, present an analysis of the capacity of that funding structure to accommodate an unexpected cost increase or funding shortfall for the project.
- If the funding structure includes a multi-party or third party cost agreement, evaluate the agreement's provisions to address unexpected cost increases or funding shortfalls. If the funding partners are sharing this responsibility with the project sponsor, or if the funding partners are taking responsibility independent of the project sponsor, it may be necessary to evaluate the relevant partner(s)' funding source(s) that would be provided in the event of an unexpected cost increase or funding shortfall. The Financial Contractor should discuss this situation with FTA and obtain FTA approval before taking any steps to evaluate the project sponsor's financial partners.
- If the project sponsor is solely responsible for addressing unexpected project cost increases or funding shortfalls from the funds over which it has complete control, summarize the results of the Stress Tests (section 6) and provide a forward reference to that section.

## **4. SYSTEM-WIDE FINANCIAL CONDITION**

- The introduction to this section should summarize the project sponsor's current financial condition with respect to its operating and capital programs, and highlight trends over the past five years that have contributed to the current financial condition.
- Note that a key product of this section is a set of metrics that will be used to evaluate the project sponsor's assumptions, explicit or indirect, used in developing its financial plan.

### **4.1 Transit Operations**

- Reference Appendix C, Operating Trends, which will support the analysis of service, ridership, operating revenue, operating cost, and operating subsidy trends summarized in this section of the FCA report.
- Discuss trends in the annual amounts of service provided by mode of service (e.g., bus, demand response, light rail).

- Discuss trends in ridership, passenger revenue, and other sources of system-generated operating revenue, if applicable, and evaluate the trends using appropriate metrics. Provide a breakdown by mode of service if practical.
- Discuss trends in operating costs, and evaluate the trends using appropriate metrics. Provide a breakdown by mode of service if practical.
- Discuss trends in operating subsidies (i.e., all forms of revenue applied to operations other than revenue generated directly from operations), and evaluate the trends using appropriate metrics. Provide a breakdown by mode of service if practical. This section may require an exhibit presenting the trend data.
- Summarize the project sponsor's operating condition. Has the project sponsor maintained or expanded service in the past five years, or has the project sponsor reduced service? Is the project sponsor able to finance current operating costs from current sources of revenue?

#### **4.2 Transit Capital**

- Discuss the age and condition of transit capital assets
  - Discuss and evaluate the trend in average revenue fleet age. Discuss the current fleet age profile by mode. Discuss fleet reliability, if supporting data is available and measured in an internally consistent manner over the historical look-back period.
  - Discuss and evaluate the age and condition of non-fleet capital assets that are depreciable.
- Discuss trends in the sources and uses of capital funds.

#### **4.3 Financial Management**

- Discuss trends in key indicators of financial management, such as:
  - the current ratio (i.e., current assets ÷ current liabilities);
  - weeks of working capital;
  - cash flow;
  - unrestricted net assets (i.e., assets minus liabilities minus restricted net assets);
  - bond ratings; and
  - debt service coverage ratio.
- Concluding statement for section 4 – Summarize the project sponsor's capital condition. Has the project sponsor maintained the age and condition of capital assets during the historical look-back period, or have replacement needs been deferred? Is the project sponsor able to finance current capital replacement costs from current sources of revenue?

## 5. SYSTEM-WIDE FINANCIAL CAPABILITY

- The introduction to this section should summarize the financial impact of the project, the project sponsor's prospective financial capability to financially sustain current services while undertaking the project, and the Financial Contractor's critique of the financial plan, drawing heavily on the metrics developed from the trend analysis in section 4.
- Reference the 20-Year financial plan included as Appendix E to the FCA report.

### 5.1 Operating Financial Plan

- Discuss and evaluate the operating impact of the project:
  - describe the project sponsor's estimates of the incremental effect of the project on service levels, ridership, operating revenues, operating costs, and subsidy requirements for the opening year and for the horizon year of the financial plan;
  - discuss and evaluate the methods used by the project sponsor to develop these estimates; and
  - evaluate the estimates based on appropriate metrics or comparisons.
- Discuss and evaluate the project sponsor's operating financial plan:
  - describe the projected sources and uses of operating funds, cash flow, and operating program year-end cash balances;
  - identify operating fund sources in the opening year of the project as being committed, budgeted, planned, uncertain, or unspecified;
  - discuss and evaluate the methods used by the project sponsor to develop these projections; and
  - summarize the project sponsor's presentation of operating financial capability, as presented in its operating financial plan.
- Critique each of the above elements of the operating financial plan:
  - using the financial metrics developed in section 4, calculate comparable values for the 20-year financial plan;
  - evaluate the reasonableness of the financial plan assumptions by contrasting the historical versus projected financial metrics, and/or to any other relevant and reasonable macro-level forecasts (e.g., US gross domestic product); and
  - based on the evaluation, identify the key risks posed to the project sponsor's financial capability for inclusion in the stress tests described in section 6.

## 5.2 Capital Financial Plan

- Discuss and evaluate the capital impact of the project on the on-going capital program.
  - Note that the project’s direct impact on the capital program was described in section 3;
  - Describe the impact on the on-going capital program of project-related costs that are not included in the project cost estimate, for example:
    - any concurrent non-project activities associated with the project that are being funded by local sources but are not included in the project’s baseline cost;
    - for New Starts projects only, any future project-related costs needed to achieve the horizon year service plan for the project. The Financial Contractor can identify if such costs are needed by consulting the “Build Annualized – Horizon” worksheet of the SCC workbook provided by the project sponsor. Any additional capital costs, such as additional vehicles or parking facilities, would be identified as the difference in quantities and cost between the “Build Annualized – Horizon” worksheet and the “Build Annualized – Current” worksheet; and
    - changes to other revenue fleets such as feeder bus service needed to accommodate changes to the system operating plan as a result of or associated with the project.
  - Identify the percentage of on-going capital program costs that is represented by the project-related costs identified above. If possible, verify that these costs are included in the project sponsor’s financial plan.
- Discuss and evaluate the capital financial plan:
  - describe the projected sources and uses of capital funds, cash flow, and capital program year-end cash balances, with particular emphasis on the costs necessary to attain and sustain a state of good repair;
  - discuss and evaluate the methods used to develop these projections; and
  - summarize the project sponsor’s presentation of capital financial capability.
- Critique each of the above elements of the capital financial plan:
  - using the financial metrics developed in section 4, calculate comparable values for the 20-year financial plan;

- identify any new financial metrics that are appropriate (e.g., if project financing introduces new forms of financial obligation not present in the section 4 trend analysis);
- evaluate the reasonableness of the project sponsor’s financial plan assumptions by contrasting the historical versus projected financial metrics, and/or to any other relevant and reasonable standard or macro-level forecasts (e.g., US gross domestic product); and
- based on the evaluation, identify the key risks posed to the project sponsor’s financial capability for inclusion in the stress tests described in section 6.

## **6. STRESS TESTS**

- The introduction to this section should introduce and summarize the stress tests and how and why they were performed.
- The stress tests should be related to the critique of the operating financial plan and capital financial plan presented in the prior section. Although the project sponsor may have included sensitivity tests in its financial plan, these are not to be used as substitute for stress tests performed by the Financial Contractor.
- For each stress test (which should be formatted as a separate heading), describe:
  - why the at-risk assumption was chosen to be tested;
  - how the stress test was conducted (method and scope); and
  - the effect of the stress test on measures of financial feasibility, such as annual cash flow, ending cash balances, debt service coverage ratios, debt ceilings, or other appropriate measures.
- Provide a concluding statement as to whether the stress tests impinge the project sponsor’s financial capability, both singly and collectively.

## **7. CONCLUSIONS**

- Conclusions should be formatted as a bulleted list
- The conclusions should be abstracted from second- and third-level headings in the body of the report
- Each conclusion should reference the section of the report to which the reader can refer for additional information

## **8. RECOMMENDATIONS**

- Recommendations should be formatted as a bulleted list



- Each recommendation should address an issue affecting financial capability that FTA should pursue with the project sponsor as a condition of the project's consideration for a construction grant agreement

Note that if directed by FTA, a section discussing the local financial commitment rating may be included following section 6 (Stress Tests). In that case, sections 7 and 8 above would become sections 8 and 9.

## **APPENDICES**

### **Appendix A: List of Documents Reviewed**

- Provide a title, source, and date of publication for each document reviewed.

### **Appendix B: Sources of Project Funds**

- Insert a one-page PDF of a worksheet showing the sources of funds for the project for each of the project sponsor fiscal years, from the current FY through the year of project opening, or final CIG funding allocation, whichever is later. Use a portrait orientation if practical.

### **Appendix C: Transit Operating Trend**

- This appendix presents trend data for the five-year historical look-back period analyzed in section 4. Use data reported to NTD, unless the NTD data is found to be unreliable for interpreting performance trends (e.g., due to a material change in how operating costs are allocated to modes), in which case the Financial Contractor should acquire the best available trend data from the project sponsor (e.g., operating data tracked by the project sponsor that are internally consistent and reliable for the look-back period). This type of anomaly usually becomes evident when unexplained or unreasonable changes in performance trends occur in the historical data. When such conditions arise, the Financial Contractor should review with the project sponsor specific examples of the apparent anomalies, and determine whether other data should be used for the trend analysis, or determine how the NTD data may be adjusted to present an internally-consistent trend over time.
- NTD data can be easily acquired from the annual NTD profiles available online.
- For each transit mode, provide annual values, the change over the five year historical look-back period (i.e., ending value less beginning value), and the CAGR for the historical look-back period for the following items at a minimum:
  - Operating cost
  - Farebox revenue

- Non-farebox operating revenue
- Subsidy (calculated as operating cost less farebox revenue less non-farebox revenue)
- Unlinked passenger trips
- Passenger miles
- Vehicle revenue miles (VRM)
- Vehicle revenue hours (VRH)
- Peak revenue vehicles (i.e., maximum vehicles in service)
- Total active revenue vehicles
- Average fleet age
- Selected metrics referenced in section 4; some suggestions:
  - Operating cost per VRM
  - Farebox revenue per VRM
  - Farebox ratio (i.e., farebox revenue divided by operating cost)
  - Total operating revenue per VRM
  - Subsidy per VRM
  - Unlinked passenger trips per VRM
  - Average farebox revenue per unlinked passenger trip
- Also include a system-wide summary for the above non-fleet items

**Appendix D: 20-Year Financial Plan**

- Reformat and abstract as necessary the project sponsor's 20-year financial plan to present major sources and uses of operating funds, operating cash flow, major sources and uses and capital funds, capital cash flow, and ending cash balances.

## Appendix C: Stress Test Examples

This appendix presents two step-by-step examples of conducting a stress test. These examples are provided to illustrate two possible methods for conducting stress tests. FTA expects Financial Contractors to use their professional judgement as to the appropriate stress test methods and to document and explain the methods in the FCA. The first example illustrates how to calculate the net annual impact on cash flow associated with a change in a forecast assumption. The second example illustrates how to calculate a project sponsor's net debt capacity (i.e., its capacity to issue additional debt beyond that included in its financial plan).

### **Example one: calculating the net annual impact on cash flow**

In most cases, a stress test can be performed by calculating the net annual impact on cash flow (i.e., incremental costs or revenues) of a change in the relevant assumption that is being tested. This net annual impact can then be used to adjust the annual cash flow and year-end cash balances that the project sponsor has projected in its financial model, as well as other metrics (e.g., the DSCR) that are affected by the stress test. This can be done through a series of simple calculations and need not require the Financial Contractor to manipulate the project sponsor's financial model or to build a parallel financial model.

An example of this approach can be illustrated by a stress test of the project sponsor's assumption regarding the projected rate of growth in O&M unit cost (i.e., O&M cost per VRM). For illustrative purposes, assume that the project sponsor has assumed a 3.0 percent CAGR for O&M unit cost, but the stress test is for a 4.5 percent CAGR, which was observed to be the historical growth rate. The Financial Contractor would calculate the net annual impact of this change in assumption by:

- using the unit cost for the first year of the forecast as the point of departure;
- calculating a new unit cost for each subsequent year in the forecast by applying the 4.5 percent growth rate to the prior year's unit cost;
- calculating new annual O&M costs by applying the stressed unit cost to the VRM forecast to be operated each year; and
- calculating the difference between the project sponsor's forecasted O&M cost and the stressed O&M cost.

Assuming an O&M unit cost of \$10.00 in the first year of the forecast, the stressed unit costs would be \$10.45 in year 2, \$10.92 in year 3, \$11.41 in year 4, and so forth. If in the fourth year the project sponsor plans to operate 20 million VRM, the stressed O&M cost would be \$228 million (\$11.41 x 20 million VRM). The project sponsor's forecast for year 4, at a 3.0 CAGR for O&M unit cost, would be \$219 million. Thus, the net annual impact of this stress test, in year 4, is \$9 million.

In this example, the stressed O&M costs are higher than in the original forecast. The additional cost would decrease the project sponsor's projected annual cash flow, and reduce the year-end cash balance. The project sponsor would survive the stress test if the resulting year-end cash balance is positive, and the project sponsor is able to satisfy other relevant metrics posed by its financial policies and credit agreements.

For example, the stress test may have an impact on the project sponsor's forecasted DSCR. In that case, the net annual impact of the stress test would be considered in calculating a stressed DSCR. For example, consider the case where the project sponsor must maintain a 1.5x net DSCR, wherein the net revenues used to calculate the net DSCR are equal to total sales tax revenues, less sales tax revenues used to subsidize the operating deficit. In the example above, the net annual impact of the stress test (i.e., higher operating costs) would result in a higher operating subsidy, thus reducing the net revenues used to calculate the net DSCR, and producing a lower DSCR. In this case, if the stressed DSCR stayed above 1.5x in all years of the forecast, the project sponsor would have survived the stress test.

There may be other metrics that are relevant to determining whether the project sponsor can survive the stress test. It is the Financial Contractor's responsibility to identify what these other metrics may be.

#### **Example two: calculating net debt capacity**

If a stress test requires an analysis of the project sponsor's debt capacity to accommodate the net annual impact as described above, additional calculations will be necessary. Consider, for example, a stress test that produces a negative ending cash balance, or violates some other financial policy of the project sponsor (e.g., cash balance falls below a Board-approved reserve threshold, such as an operating reserve sized at 15 percent of O&M costs). It may be necessary to determine whether the project sponsor has the debt capacity to finance a temporary cash flow shortfall. The simplest way to do this is calculate the project sponsor's net debt capacity in every year of the forecast, which can be determined generally as follows:

- Calculate a capital recovery factor (CRF), which expresses level annual debt service as a proportion of debt proceeds. In Excel, this is calculated using the PMT (or payment) function as follows:  $= -\text{pmt}(\text{interest rate}, \text{number of payments}, 1)$ . For example, the CRF for debt at a 4 percent interest rate amortized over 30 years is 0.0578. For every \$10 million of cash flow available to service debt, the maximum allowable debt would be ( $\$10 \text{ million} / \text{CRF}$ ) or about \$173 million.
- Calculate the revenues that are pledged for debt service (e.g., net revenues as described above). Assume, for example, that pledged revenues are \$50 million.
- Divide the pledged revenues by the DSCR to yield the pledged revenues available to service debt. Assume, for example, that the DSCR is 1.5. The

pledged revenues available to service debt would be ( $\$50 \text{ million} / 1.5$ ) or about \$33.3 million.

- Subtract debt service cost as forecasted by the project sponsor, to yield the amount of revenue available to service new debt. Assume, for example, that forecasted debt service is \$25 million. There would about \$8.3 million available to service new debt (i.e., \$33.3 million minus \$25 million).
- Divide by the CRF to estimate the debt proceeds that this amount of revenue could support. Based on the above assumptions, the project sponsor could finance an additional \$144.1 million ( $\$8.3 \text{ million} / 0.0578$ ).

The minimum net debt capacity in all years of the forecast is the most additional debt the project sponsor could incur, without affecting other financial plan assumptions.

However, please note that the calculation of net debt capacity can be complicated by other factors not considered above, that are specific to the project sponsor or to the characteristics of the project sponsor's forecasted cash flow. It is up to the Financial Contractor to conduct the due diligence to ensure that net debt capacity calculation is reasonably accurate.