

California Municipal Finance Authority

LAX Integrated Express Solutions, LLC (LINXS) Automated People Mover Project Presale Report

Ratings

New Issues

\$1,200,000,000 Senior Lien
Revenue Bonds (LINXS APM
Project), Series 2018A & B

BBB+
(EXP)

Outstanding Debt

Not applicable

Rating Outlook

Stable

PRESALE DISCLAIMER: Expected ratings do not reflect final ratings and are based on information provided by the issuer as of May 24, 2018. These expected ratings are contingent on final documents conforming to information already received. Ratings are not a recommendation to buy, sell or hold any security. The offering circular and other material should be reviewed prior to any purchase.

Peer Group

Purple Line Transit Partners

BBB+

Denver Transit Partners

BBB+

Related Criteria

[Rating Criteria for Infrastructure and Project Finance \(August 2017\)](#)

[Availability-Based Projects Rating Criteria \(July 2017\)](#)

Related Research

[Fitch Rates CMFA's Sr Project Revs \(LINXS APM Project\) 'BBB+\(EXP\)'; Outlook Stable \(May 2018\)](#)

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Key Rating Drivers

Summary: The ratings are driven by the design build (DB), O&M and lifecycle (LC) parent company guarantees (including the automated people mover [APM] vehicle-related obligations); a highly capable team of contractors with experience of large-scale projects; a strong revenue-paying grantor; and well-defined payment mechanism and operating standards. Financial metrics on the lower end for an investment-grade rating are offset by the credit quality of key counterparties guaranteeing any cost overruns and payment deductions in both the construction and operation phases.

Experienced DBJV, Adequate Security (Completion Risk: Midrange): The DB contractor contains experienced members with a strong history of working together. The large scale, long duration and integration with the rolling stock introduce some construction risk. Maintenance of traffic and interface with other ongoing construction projects at LAX are also concerns. The security package covers both short- and long-term liquidity needs under a worst-case analysis, benefiting from a joint and several 35% liability cap with creditworthy parent companies.

Contracted Operations, Parent Guarantees (Cost Risk: Midrange): O&M and lifecycle requirements are passed on to the O&M contractor and backed by creditworthy parent guarantees. APM obligations are fulfilled by Bombardier. Moderate lifecycle costs are well-defined with a five-year future handback reserve providing additional support. The lender's technical advisor (LTA) realistic outside cost (ROC) analysis shows an increased cost scenario of 3.2% and a 7.4x multiple of the ROC based on the minimum all-cost break-even of 23.5%.

Strong Revenue Counterparty (Revenue Risk: Stronger): Payments include construction milestones, additional design and construction (D&C) payments and availability payments (AP) from Los Angeles World Airports (LAWA, AA/AA-). APs are split between operating and capital, with the former paid by LAWA as an operating expense and capital (rated A) from its discretionary account. Capital payments (around 70% of total APs) escalate annually at 3% while operating payments escalate based on a weighted index. Deductions are clearly defined with ample cure periods.

Standard Features; Flat Coverage (Debt Structure: Midrange): Fixed-rate, fully amortizing debt benefits from a forward- and backward-looking 1.10x equity lockup. Stronger features are offset by a flat coverage profile and a six-month debt service reserve fund. Short-term debt will be repaid with the final milestone and equity injection while long-term debt has a final maturity closely matching the end of the design build finance operate maintain (DBFOM) agreement. Additional parity debt is permitted subject to certain restrictions.

Financial Profile: Fitch Ratings' rating case demonstrates average and minimum debt service coverage ratios (DSCR) of 1.16x and 1.15x, respectively. Though lower than a typical 'BBB+' rated project, coverage is offset by the parent company guarantees from strong counterparties covering all costs (except SPV) should they exceed budget, resulting in a higher rating than the DSCR would indicate. The 7.4x ROC multiple is consistent with a 'BBB' category rating and highlights the project's robust ability to withstand stress, supportive of the rating.

Peer Group

The most comparable Fitch-rated availability-based projects are Purple Line Transit Partners (PLTP; BBB+/Stable) and Denver Transit Partners (DTP; BBB+/Rating Watch Negative). Both are transit projects for the construction of rail projects in major metropolitan areas and benefit from similar creditworthy DB and O&M parent guarantees that include vehicle-related obligations. LINXS's underlying financial metrics are stronger than DTP's, but weaker than PLTP's, thus should the guarantees terminate or their creditworthiness deteriorate, the resulting rating pressure on LINXS would be in-between that of PLTP and DTP, assuming other rating factors remain unchanged.

Rating Sensitivities

Future developments that may, individually or collectively, lead to a negative rating action:

- Credit deterioration of key project counterparties, leading to weaker risk mitigation within the project.
- Construction delays that could delay project completion beyond the passenger service availability (PSA) date or lead to financial pressure.
- A removal of parent company guarantees would likely result in a low 'BBB' category project rating, all else unchanged.

Future developments that may, individually or collectively, lead to a positive rating action:

- An improved view of key project counterparties' creditworthiness could result in positive rating action. However, upward rating migration is limited given the nature of the asset.

Project Summary

Project Summary Data		Financial Summary Data	
Project Type	Airport rail transit system	Rated Debt Terms	\$1.2 billion fixed-rate PABs.
Project Location	Los Angeles, CA	Amortization Profile	Fully amortizing, escalating debt service profile.
Status	Construction	Tail Before Concession Maturity	None
Completion	Joint and several parent guarantees: ACS/Balfour Beatty/Fluor/HOCHTIEF	Reserves	DSRF: 6 mos.
Guarantor			Handback: 5-year forward looking (25/50/75/100/100) beginning in year 25.
Revenue Basis	Availability payment	Transaction Triggers	Equity Lockup: 1.10x (forward and backward looking). ABT: May be issued provided rating is not downgraded and subject to forward looking 1.15x DSCR test.
Concession Maturity	30 years (2048)		
Concession	Los Angeles World		
Granting Authority	Airports (LAWA, payment obligation: A)		
Contractor	DBJV with joint & several parent guarantees: Construction: Fluor (30%), Balfour Beatty (30%), Dragados USA (ACS) (20%), Flatiron (HOCHTIEF) (20%) Rolling Stock Subcontract: Bombardier		
Operator	OMJV with joint & several parent guarantees: Bombardier (55%), Fluor (20%), ACS (12.5%), HOCHTIEF (12.5%)		
Equity Sponsors	Fluor (27%), Balfour Beatty (27%), ACS (18%), HOCHTIEF (18%), Bombardier (10%)		
Technical Advisors	Infrata		
Equipment Suppliers	Bombardier		
Insurance Advisor	INTECH		
Independent Model Audit	Operis		

PABS – Private activity bonds. DSRF – Debt service reserve fund. ABT – Additional bonds test. DSCR – Debt service coverage ratio.

DBJV – Design build joint venture.

Source: Project documents.

Overview

Transaction Summary

Proceeds of the series 2018A&B bonds, along with a \$263 million design-build loan facility, \$1 billion in milestone payments from LAWA and \$96 million in developer equity will be used to pay project costs as well as capitalized interest during construction. The private activity bonds (PABs) are expected to price on or about June 5, 2018. Debt and equity figures remain preliminary and subject to change based on pricing.

LAX APM Project Profile

The project is being procured as an availability-based payment DBFOM Public Private Partnership (PPP or P3) project at the Los Angeles International Airport (LAX). LINXS entered into a project agreement with LAWA on April 11, 2018 for a concession term of 30 years from financial close, including an approximate five-year construction period. Under the terms of the project agreement, LAWA will make regular construction period milestone payments as certain percentage thresholds are met and additional design and construction (D&C) payments followed by availability-based payments during the operating phase. Project costs total approximately \$2.7 billion and PSA is expected on or before March 31, 2023. Failure to achieve PSA by the longstop date (12 months after the planned PSA date) is considered a developer default under the DBFOM agreement.

The APM project includes the provision of an APM system (including vehicles), which includes, among other things:

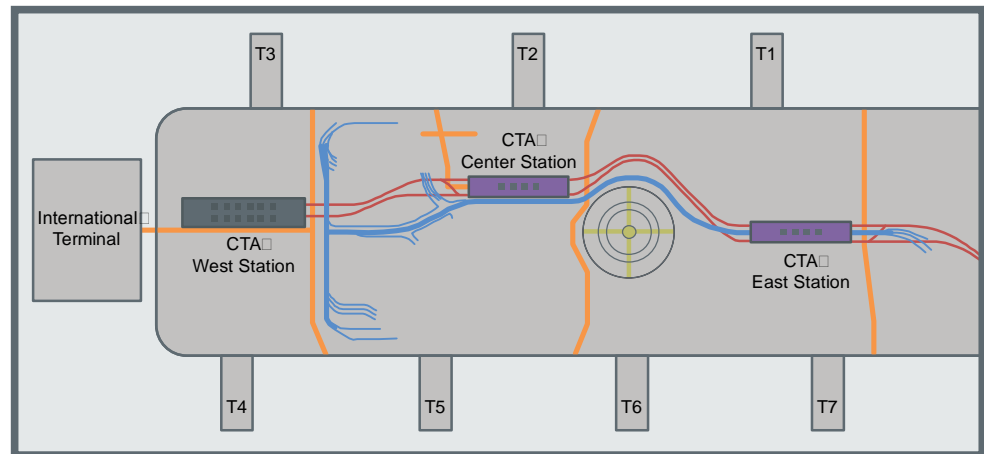
- Approximately 2.25 miles of elevated, grade-separated guideway
- Five stand-alone stations
- Installation of APM operating system components within a sixth station enclosure for the eventual consolidated rental car (ConRAC) facility (separate procurement)
- Mezzanine access to the Airport Metro Connector transit station (provided by others)
- Pedestrian walkways and access to the Theme Building from the APM system
- Procurement and delivery of APM operating system components, vehicles and equipment
- Maintenance & storage facility (MSF) and
- Traction power substation, central control and administrative offices.

Ownership and Sponsor

The grantor is the Los Angeles World Airports, a fiscally self-sufficient enterprise fund under the City of Los Angeles that owns and operates Los Angeles International Airport and Van Nuys Airport. Its senior bonds are rated 'AA'/Stable while its subordinate bonds are rated 'AA-' /Stable.

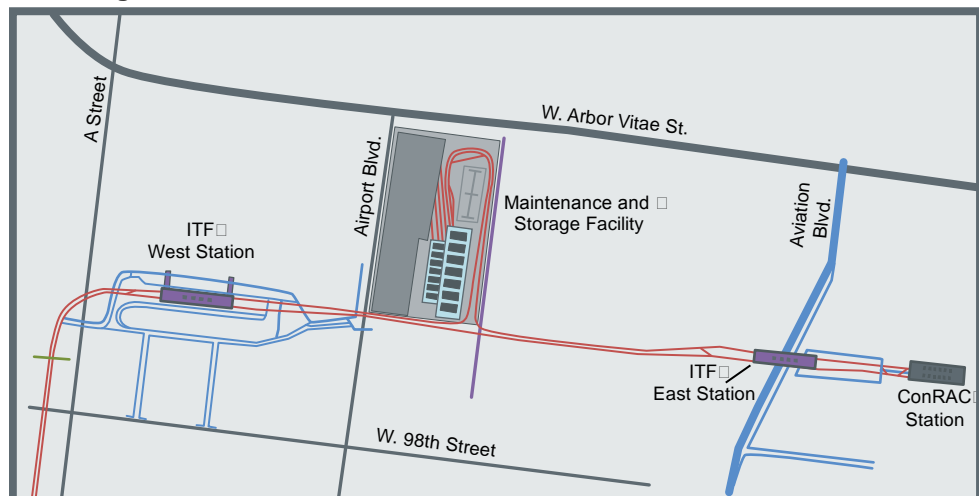
The project's financial sponsors are Fluor Enterprises, Inc. (27% equity), Balfour Beatty Investments, Inc. (27%), HOCHTIEF LINXS Holding, LLC (18%), ACS LINXS Holdings, LLC (18%), and Bombardier Transportation (Holdings) USA Inc. (10%). Total equity is estimated at approximately \$96 million (roughly 4% of the project's overall cost) and will be supported by acceptable letters of credit at financial close. In Fitch's opinion, the concessionaire comprises members with vast experience in the development of major P3 infrastructure projects in North America, particularly in the U.S. The consortium members' track record of successfully working together on a number of projects further strengthens its overall management expertise. Further, the project benefits from complete vertical integration providing for continuity and alignment of interests from the beginning.

AMP Site Plan in CTA



APM – Automated People Mover. CTA – Central Terminal Area. T – Terminal.
Source: Site Plan 8-16-17.

APM Segment ITF West to ConRAC



APM – Automated People Mover. ConRAC – Consolidated Rent-a-Center.
Source: Site Plan 8-16-17.

Project Analysis

Completion Risk

The DB contract is lump-sum, fixed-price and back-to-back with the DBFOM agreement, directly passing through the developer's risk related to construction to the DB contractor. Construction is estimated to take around five years at a cost of approximately \$1.95 billion, classifying the project as both large scale and long duration. Some degree of complexity is introduced to the project due to extensive utility relocation, traffic management and interface with multiple agencies and other ongoing construction projects within LAWA's modernization program. The vertical integration of the consortium provides continuity and mitigates risk with Bombardier responsible for both the APM system and the manufacturing of rolling stock. Interests are aligned and Bombardier is involved with the D&C from the beginning.

The LTA notes the vehicle manufacture and shipping schedule does not appear overly aggressive. Fitch incorporated the LTA's expertise into its analysis and the LTA is of the opinion that the proposed cost structure is well-developed and that LINXS has allowed for adequate funds to successfully deliver the project. Relative to comparable project benchmarks, the LTA found these cost estimates to be reasonable and within the expected range.

The DB contractor's project schedule assumes a construction period of 57 months with a PSA date of March 31, 2023. The LTA notes that the overall duration of 63 months from financial close to final completion is sufficient to carry out the scope of works. Still, several mitigants are in place to ensure timely project completion, such as sequencing construction in such a way that right of way (ROW) is received before it is needed, use of cast-in-place (CIP) construction to provide situational flexibility, including a full 12 months for testing and commissioning, early delivery of the maintenance and storage facility (MSF), and early delivery and site testing of APM vehicles. In addition, the schedule already includes contingency and there is the ability to increase teams and weekly work hours in order to minimize delays, should they arise.

Fitch takes comfort from the contractors' substantial experience in transportation infrastructure, which is considered appropriate for the project, and the LTA opined that each of the DB contractor members would be capable of completing the civil work on its own should the other members drop away. The members of the joint and several DB contractor are Fluor, Dragados USA, Balfour Beatty Infrastructure Inc., and Flatiron West. The APM operating system supplier, Bombardier, has experience providing APM trains to large, international airports and is a member of the equity sponsors, aligning interests and participating in the D&C. The APM operating system rolling stock will be through a subcontract with the DB contractor and covered by the DB contractor security package, including the joint and several parent company guarantees. The Bombardier subcontract also includes its own security package of a parent company guarantee with a 150% liability cap (including a 20% delay LD cap), 20% LOC, 55% performance bond, and 5% warranty bond. The nearly one-year cushion between expected vehicle completion and the proposed PSA date further helps to mitigate the supply chain risk. Bombardier expects to source the vehicles from its existing JV with CRRC, the largest rail transit supplier in the world and the most proficient railway rolling stock manufacturer in China. The LTA feels comfortable that either company would be capable of delivering the cars on its own.

In Fitch's opinion, the off the shelf nature of the APM vehicles and their proven track record provide additional comfort and should reduce risks related to parts and testing. Further, history indicates an ability to bring in replacement contractors to finish production or someone will buy the line and do it.

The DB security package contains joint and several parent company guarantees (with a 35% liability cap) from creditworthy counterparties, 43% payment and performance bonds and one or more LOCs sized to 3% of the contract price, with step-up provisions.

Replacement Contractor Analysis

To test the adequacy of the security package, Fitch reviewed the LTA's replacement contractor analysis that evaluated the effect of DB contractor default on the project at various stages of completion. The LTA's methodology considers potential default scenarios, assuming default of all members, throughout the construction period. The LTA considers multiple items in the event of DB contractor termination due to a default event, including performance deductions, developer tender costs, ransom creditors, consultancy fees, additional engineering, remedial costs, construction uplift %, and liquidated damages.

Based on the assumptions undertaken, the total potential liability in the LTA's worst case could be a 20.8% premium on the contract price. The LTA determined a contractor default in month 25 would be a worst-case scenario, as it results in the maximum impact on the construction cost and schedule (a nine-month delay). This liability falls well below the 35% limit of liability and the 43% payment and performance bonds.

Evaluating the worst case scenario for immediate liquidity needs, the LTA found that this would occur under scenario three in month 35 when 2.0% of the construction contract would be needed. The 3.0% LOC available at that time appropriately covers these potential short-term needs. Collectively, the security package is found to appropriately cover the potential short- and long-term needs under all default scenarios and the LTA opined that there are several replacement contractors with the experience to undertake the scope of activities required, including both civil and APM-related obligations. In Fitch's opinion, the credit strength of the DB contractor, in conjunction with the completion security package, is not a rating constraint to the 'BBB' category.

Fitch also took into consideration the cost and time delay associated with replacing the rolling stock provider. Based on discussions with the LTA and Fitch's own experiences with such projects, in the unlikely event of Bombardier ceasing to perform, it is highly likely that another world-class rolling stock manufacturer would acquire the business and that production of fleets already being supplied would continue unhindered. The most likely candidate would be CRRC, which is already part of the 50/50 JV expected to manufacture the vehicles.

Additional Cost to Complete the Project — Realistic Worst Case

(\$)	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Month	16	25	35	52
Total Capex		1,949		
Total Works Completed	348,265,624	635,373,338	1,056,431,165	1,760,492,712
Total Works Completed (%)	18	33	54	90
Balance to Complete	1,600,928,195	1,313,820,481	892,762,654	188,701,107
Balance to Complete (%)	82	67	46	10
Performance Deductions	112,917	127,031	127,031	127,031
Tender Costs	180,000	180,000	180,000	180,000
Ransom Creditors	19,864,094	14,357,809	32,944,140	32,846,631
Consultancy Fees	950,000	950,000	950,000	950,000
Additional Engineering	36,681,391	30,103,013	20,455,493	4,323,629
Remedial Costs	8,196,348	29,940,338	50,975,387	40,880,734
Construction Uplift	178,165,184	257,946,165	213,279,707	26,849,738
Liquidated Damages	63,477,531	71,412,222	71,412,222	71,412,222
Grand Total	307,627,464	405,016,578	390,323,980	177,569,985
% of Construction Contract	15.8	20.8	20.0	9.1

Source: Lender's technical advisor.

In an extreme worst case, which would be at the end of design/beginning of production, the greatest impact would likely be possibly a delay of six months for selection of a new supplier, in addition to the standard two to two and a half years lead time before the first vehicle is delivered. However, this would be partly mitigated by the 330 days of float in the delivery of the last APM vehicle in the current schedule. Further, the DB contractor would be very incentivized to accelerate this delivery timeframe (even if paying a large premium) with the replacement supplier to avoid default.

Still, the Bombardier Transportation (BT) contract is a subcontract to the DB contractor and as such the project company is sheltered through it having a turnkey DB contract. The DB contractor can call on commercial protections in the BT subcontract to offset additional costs. If a new supplier takes over BT, they would be honoring the fixed-price contract to supply the APM system and there should be no cost impact to the project directly related to purchasing the APM system. There could be a cost to the project due to delays caused by the BT bankruptcy, which would be a similar exercise to the DB replacement analysis discussed above. In addition, the LTA noted that signs of bankruptcy are often foreseeable and steps can be taken to line up a new supplier in advance.

In Fitch's view, based on its completion risk guidelines, the project's complexity, its large-scale contract and lengthy construction duration, the somewhat limited availability of replacement contractors, a sufficient security package, included contingency and creditworthy parent company guarantees support the 'BBB+' project rating.

Cost Risk

The project will be operated over the planned approximate 25-year O&M period by the developer's OM contractor comprising Bombardier, Fluor, ACS and HOCHTIEF with joint and several liability. Fitch takes comfort from the OM contractor's experience, which it considers appropriate for the concession. The OM contractor will be responsible for all O&M work, including but not limited to: operation of the APM System; routine maintenance, renewal work and inspection, repair and replacement activities, safety of the APM system, security of the APM system in nonpublic spaces, and landscaping and drainage.

Cost risk during the operating period is considered midrange, given the O&M and lifecycle scope, strong cost predictability and adequate structural protections. The full scope of O&M and lifecycle responsibilities is held by the developer and passed down to the OM contractor. Fitch views maintenance as moderately complex, given the elevated structure and APM system, with some concentration of lifecycle costs due to vehicle and APM system renewals. Structural protections include cost indexation, reserve lifecycle look-forward and a five-year handback reserve as required under the DBFOM agreement.

Additionally, the O&M contract includes parent company guarantees, a 40% annual payment LOC, a 100% annual liability cap, and a 150% termination limited liability cap through the life of the DBFOM agreement with no renewal risk. The LTA undertook a similar analysis as in the construction replacement contractor analysis above and similarly found the O&M security package sufficient to cover a worst case scenario for both short- and long-term liquidity needs.

O&M and lifecycle (LC) obligations, and their respective payment streams, are passed down to the OM contractor on a back-to-back basis, which Fitch views as favorable insulation for LINXS as the O&M contractor would ultimately bear any deductions to the payment stream. Fitch further views the ability to match the available basket of indices to the various components of the AP as an appropriate risk mitigant against most cost escalations in addition to a 40% annual payment LOC.

Fitch looks to the LTA to provide a ROC analysis, which identifies areas where costs may exceed initial projections in a conservative scenario (not a worst-case scenario). The LTA's ROC analysis assumed increased costs related to three scenarios. First, an increased number of passengers leading to additional operating and energy costs for day-to-day operations, increasing planned preventative maintenance on the conveyancing systems, stations and APM vehicles due to more wear and tear. This resulted in an O&M increase of 2.9%. Next, earlier degradation of assets from factors such as climatic conditions and increased passenger numbers could lead to shorter intervals between LC interventions and LC costs increasing by 3.5%. Lastly, higher incidents/graffiti/vandalism could result in more call-outs for conveyance malfunction, additional cleaning, earlier degradation of asset condition, and increased security costs.

This could increase O&M by another 0.8%. Since these are not mutually exclusive they sum to an O&M ROC of 3.7% and a LC ROC of 3.5% or a weighted average ROC across all costs of 3.2%, somewhat lower than the criteria guideline of 7.5% for midrange projects, but in line with ROCs used for other transit projects.

In Fitch's opinion, the rehabilitation and handback requirements are typical for P3 projects seen elsewhere in North America, particularly the highly prescriptive asset management plan. Furthermore, annual third-party inspections and the inclusion of a five-year handback plan further support the project's handback requirements and provide additional comfort with the somewhat technically complex nature of APM maintenance and rehabilitation. In addition, the LTA performed a benchmarking analysis with similar projects and considers both the O&M and renewal programs to be appropriate and the pricing to be reasonable.

Revenue Risk

Revenue will be contracted payments from LAWA and consist of six milestone payments (and additional D&C payments) during construction, the last of which will be paid 60 days after final completion, followed by availability payments during operations, which commence from the later of the planned early PSA date and the PSA date. The developer is not entitled to earn any APs before the PSA date and in no event will APs commence earlier than Dec. 31, 2022. Capital APs will escalate at a fixed 3.0% per annum while operating APs will escalate based on a variable weighted average mixed basket of indices (estimated at around 1.75%). Positively, the escalation basket of indices appear appropriate and broadly aligned to operating costs incurred.

LAWA's payment obligation rating (A/Stable) reflects the security of APs from LAWA, as a strong project revenue financial counterparty to the LINXS financing. The LAWA AP will be bifurcated into an operating component and a capital component. The operating component is expected to be treated as an operating expense under the airport's flow of funds, senior to all bond debt service payments. The capital component is treated as an obligation paid from its discretionary account, which is junior to all outstanding senior and subordinate-lien revenue bonds and CP payments. In Fitch's view, this payment structure still provides a satisfactory framework at the 'A' rating level to support the future obligations to the project developer and does not constrain the project's 'BBB' category rating. Because this is an AP transaction, volume risk is not an issue.

Importantly, the LTA's assessment of noncompliance points for both the D&C and O&M periods show them to be inside any termination thresholds. During the operating period the limiting case for deductions is noncompliance occurrences rather than unavailability and the LTA's assessment of potential worst-case deductions is in line with LINXS's valuations.

In Fitch's opinion, the structure of the payment mechanism is logical and appropriate for the service being delivered. It is considered standard, albeit slightly strengthened due to the indexing mechanism, with similar transit projects procured as availability-based P3 projects in North America. As noted, the grantor serves as a strong counterparty to LINXS and has included reasonable payment deductions and performance measures within the project agreement, consistent with its objectives of providing reliable service at LAX.

Financial Analysis

Debt Structure

Project debt includes a mix of approximately \$263 million short-term bank facility and \$1.2 billion of fixed-rate senior PABs. Short-term debt is expected to be fully repaid with the final completion milestone payment and equity injection. The remaining \$1.2 billion of long-term availability PABs will be fully amortizing over 25 years post completion/PSA with final maturity of 2048 that is coterminous with the end of the project agreement. Annual debt service escalates slightly at a 2.7% CAGR and is sculpted to maintain a relatively flat DSCR profile of around 1.15x. LINXS's equity contribution will be secured by LOCs through the end of construction and injected at the time of receipt of the final milestone payment.

A restrictive additional bonds test, coupled with a six-month debt service reserve fund (DSRF) and a 1.10x forward- and backward-looking equity lock-up test provide lenders with sufficient protection. Fitch views these covenants and structural features as being a mix of midrange and stronger features for an availability-based project.

The lack of a longer-term forward-looking major maintenance reserve account (MMRA) is viewed as a weaker attribute, although it is not uncommon and the cash flow profile and annual inspections serve as mitigants to the volatility of lifecycle costs. Further, should major maintenance deficits be identified on a testing date (the tenth, fifteenth and twentieth anniversaries of PSA), the OM contractor would be responsible for making up the deficit and the LTA considers the asset management program to be consistent with the expected requirements to maintain the system in the condition specified throughout the operating period and to achieve the prescribed handback requirements.

Financial Profile

Fitch Base and Rating Cases

Fitch has adopted the sponsor's case as the Fitch base case due to Fitch's comfort level with the project's construction, O&M and LC cost assumptions as a result of analysis and dialogue with the LTA. The model is sculpted to a relatively flat 1.15x DSCR profile. Loan life coverage ratio (LLCR) in the first operational year is 1.29x (when discounting is begun after construction), whereas net leverage at the onset of operations is approximately 14.4x first-year cash flow available for debt service. The results are consistent with a 'BBB' category rating per criteria. However, DSCR is at the low end of the range.

Due to the strength of parent company guarantees for all of the O&M contractor's obligations, Fitch adopted the base case as the rating case. Fitch views the strength of the parent guarantees on the project obligations as sufficient to mitigate any likely downside impacts on costs. SPV costs, though not covered by the parent company guarantees, are likely non-material and controllable, posing minimal risk.

Fitch Stress (ROC) Case

Fitch looks to the LTA to identify the ROC (expressed as a percentage) level of O&M, LC, special-purpose vehicle and insurance expenses exceeding initial projections in a conservative cost overrun scenario, based on its experience with similar projects and an assessment of potential scenarios. The ROC is applied to the base case to measure the project's financial flexibility to absorb reasonable cost increases.

The LTA's ROC analysis resulted in an O&M increase of 3.7% and LC and energy costs each increasing by 3.5%, or a weighted average ROC across all costs of 3.2%, somewhat lower than the criteria guideline of 7.5% for midrange projects, but in line with ROCs used for other transit projects and reasonable given the level of risk/profit/contingency already embedded in the costs. The results are a 1.15x average and 1.13x minimum DSCR. Stress-case DSCRs are on the lower end of the 'BBB' category. However, as noted above, the base case was adopted as the rating case due to the parent company guarantees from strong counterparties wrapping all costs.

Fitch Break-Even Case

Fitch analyzed a number of coverage ratio break-even scenarios related to the proposed financial structure and considers the levels consistent with investment grade. When run on the adopted Fitch base case, the model indicates the financial structure can withstand an approximate 23.5% increase in total costs (the break-even rises above 30% in most individual years when pinch-points are excluded). This translates to a robust 7.4x breakeven (as a multiple of the ROC), sufficient for a high 'BBB' category rating for a midrange project. While the average DSCR correlates to the low end of the 'BBB' category for a midrange project, the support from strong parent company guarantees allows the project to achieve a 'BBB+' project rating. Were the guarantees to drop off or deteriorate in credit strength, the financial metrics would still indicate a 'BBB' category rating.

Break-Even Summary

Break-Even Scenario	Break-Even Cost Increase (%)
Operating and Maintenance	52
Lifecycle Costs	126
All Costs	23
Break-Even as a Multiple of the ROC (x)	7.4

ROC – Realistic outside cost.
Source: Fitch Ratings.

The ratings above were solicited and assigned or maintained at the request of the rated entity/issuer or a related third party. Any exceptions follow below.

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