NAHEFFA 2018 Fall Conference

Rating Agency Methodologies

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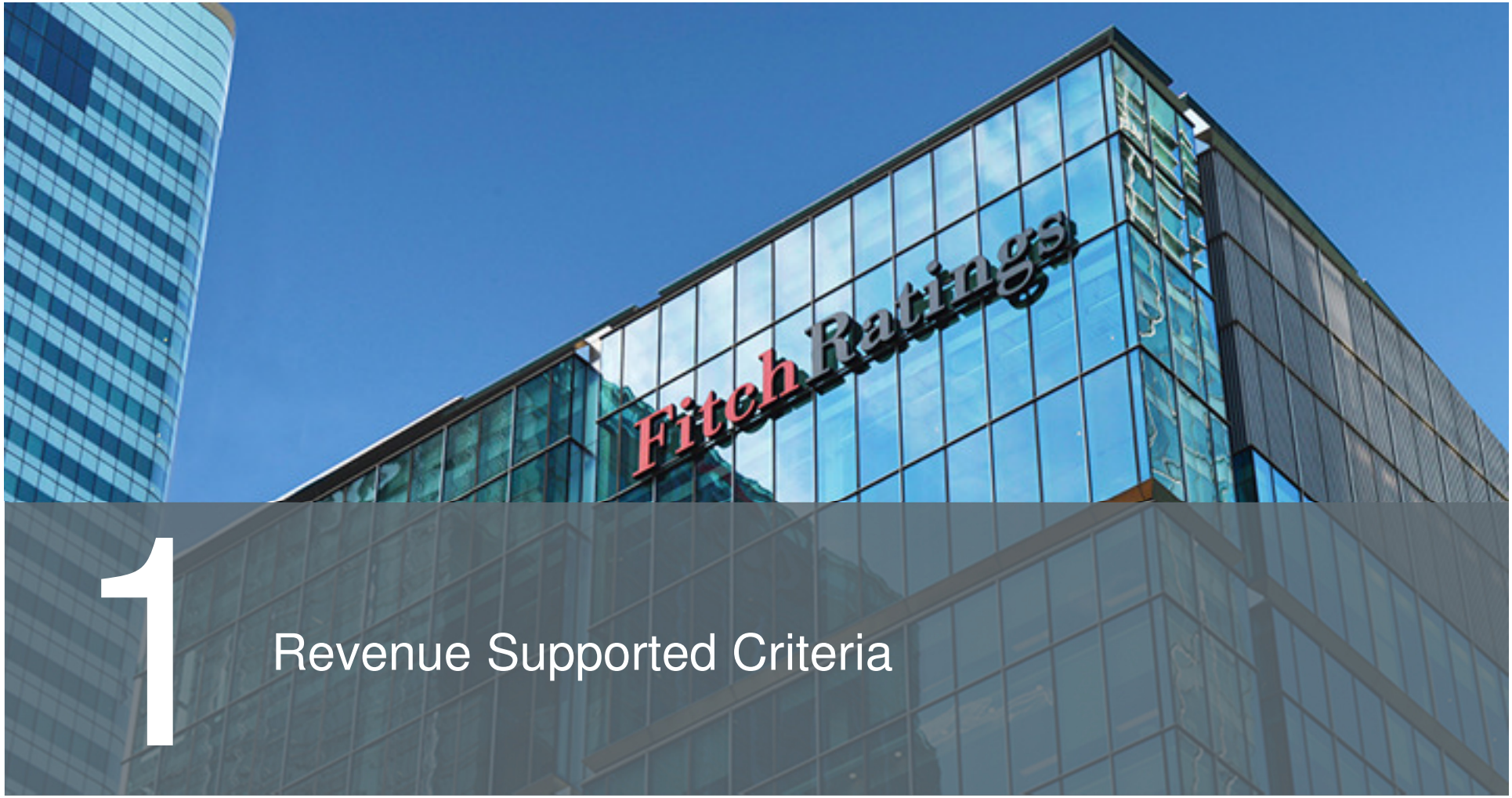
FitchRatings

Contents



1 Revenue Supported Criteria

Revenue Supported Criteria

Rating Criteria for Public-Sector, Revenue-Supported Debt

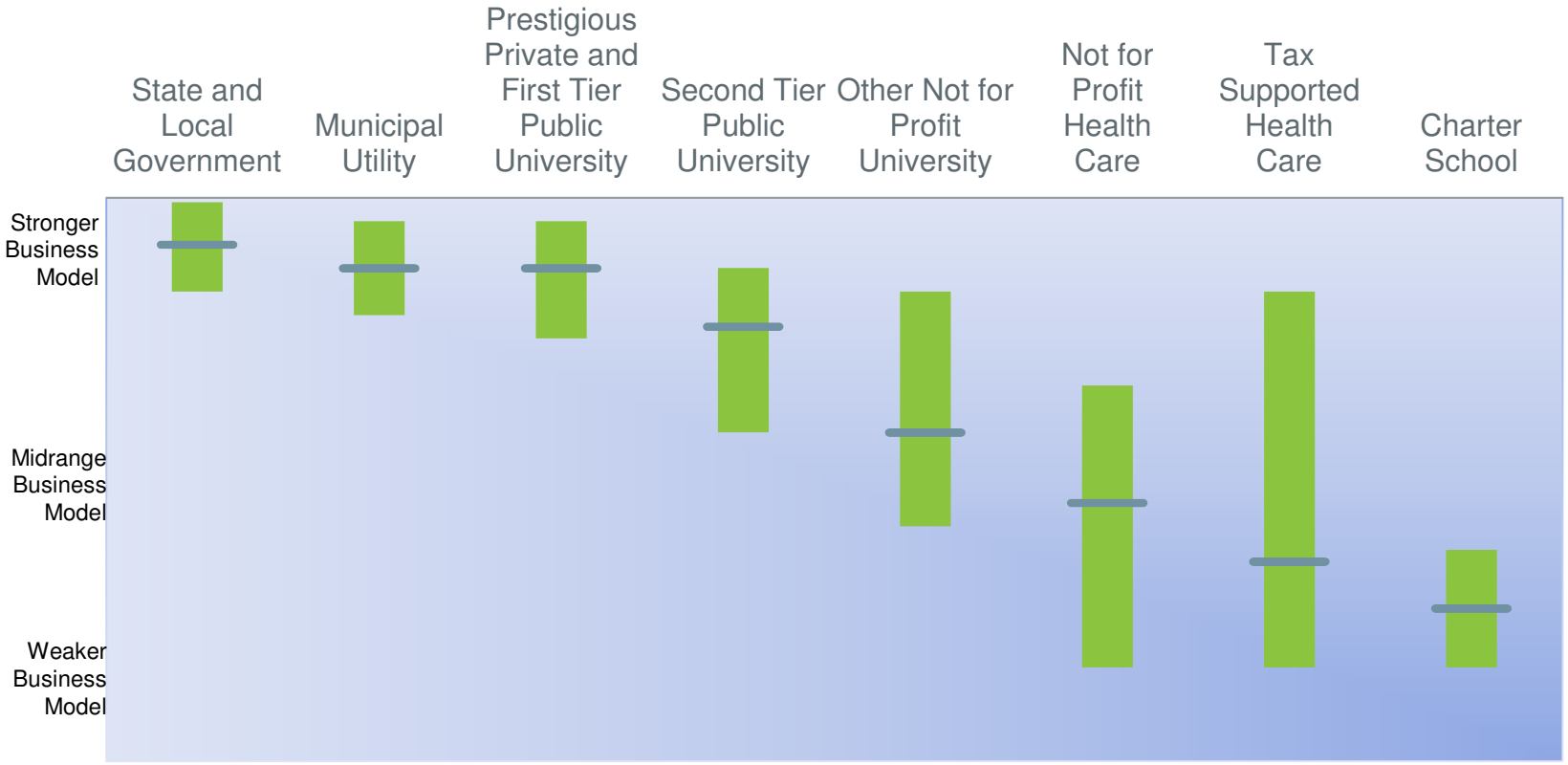
Common framework of key rating drivers to account for relative strength in a sector's enterprise business model when considering the appropriate financial leverage at a given rating level.

Key Rating Drivers

- Revenue Diversity
- Operating Risks
- Financial Profile
- Asymmetric Considerations

Revenue Supported Criteria

Spectrum of Public Enterprise Profiles



Source: Fitch Ratings

Revenue Criteria – Revenue Defensibility

Fitch's analysis addresses the issuer's ability to generate cash flow based on its legal framework and fundamental economics. Fitch will evaluate **demand** and pricing characteristics that influence revenue volatility and the tools available to the issuer to respond to fluctuation in demand.

	Demand Characteristics
Stronger Attributes	• Fully contracted (lease or "take-or-pay" contracts) with strong financial strength counterparties equal or exceeding rated debt life. • Demonstrated and expected lower volatility user-based demand; expected to decline marginally in economic downturn or decline marginally on a countercyclical basis (less than the change in corresponding macro variable). • Diverse customer base with no meaningful concentration of customers. • Demand growth in service area expected to be strong due to strong economic growth prospects in the region.
Midrange Attributes	• Fully contracted (lease or "take-or-pay" contracts) weighted with midrange financial strength counterparties equal or exceeding rated debt life • Demonstrated user based demand expected to fluctuate with changes in the macro economy generally, including countercyclical change (e.g., generally tracks with a change in GDP). • Diverse customer base but some customer concentrations (top ten customers account for a moderate proportion of demand). • Demand growth in service area expected to be marginally positive due to solid economic growth prospects in the region.
Weaker Attributes	• Fully contracted (lease or "take or pay" contracts) weighted with counterparties with weaker financial strength. • Demonstrated user based demand expected to contract materially more than a corresponding change in macro environment, including countercyclical change of demand (e.g. generally declines as a multiple of a GDP change). • Diverse customer base but mixed with high customer concentrations (top ten customers account for a significant proportion of demand). • Demand growth in service area is expected to be flat to slightly negative due to limited or negative economic growth in the region.

Revenue Criteria – Revenue Defensibility

Fitch's analysis addresses the issuer's ability to generate cash flow based on its legal framework and fundamental economics. Fitch will evaluate demand and **pricing** characteristics that influence revenue volatility and the tools available to the issuer to respond to fluctuation in demand.

	Pricing Characteristics
Stronger Attributes	• Issuer has independent ability and full flexibility to collect revenues sufficient to cover all costs through increases in charges/tariffs/taxes. • Change in charges/tariffs unlikely to materially affect demand. • Market dominance provides negotiating strength on key revenue contracts. • Tax revenues collected by or on behalf of the issuer exhibit growth in line with rate of inflation. • Revenues sufficient to support operating margins require periodic draws from investment funds (e.g. "endowments") but at levels well below expected annual long term investment returns.
Midrange Attributes	• Legal or contractual framework establishes ability to collect revenues sufficient to recover at least inflationary increases in costs through increases in charges/tariffs/taxes and recover commodity price volatility. • Supportive regulatory regime aims to maintain compensation for services at a level consistently supporting solvency of not-for-profit or public authority providers of an essential public service. • Change in charges/tariffs may marginally affect demand but within limits will provide increased revenues. • Market position as a significant competitor supports bargaining position on key revenue contracts. • Tax revenues collected by or on behalf of the issuer exhibit growth generally below rate of inflation. • Subsidy regime has long, stable history and not politically sensitive. • Revenues sufficient to support operating margins require periodic draws from endowment funds at levels approximating expected long term investment returns.
Weaker Attributes	• Legal or contractual framework constrains ability to collect revenues sufficient to recover costs through increases in charges/tariffs/taxes to levels likely below inflationary price increases or constrains the ability to recover volatile commodity costs. • Regulatory regime maintains compensation for services at levels that may challenge solvency of not-for-profit or public authority providers of an essential public service, requiring other resources such as gifts, grants or extraordinary supports for balance. • Demand characteristics reveal high price elasticity limiting ability to recover costs to below inflationary price increases or limits ability to recover volatile commodity costs. • Weaker market position may require discounting to maintain demand at required levels. • Full exposure to market price risk on fully contracted revenues. • Market position is exposed to existing or expected competing providers that may erode market position. • Tax revenues collected by or on behalf of the issuer exhibit declining growth trajectory over time. • Politically challenged or untested subsidy regime. • Revenues sufficient to support operating margins requires periodic draws from endowment funds at levels significantly above expected long-term investment returns, and fundraising to replenish a diminished endowment balance may be a challenge over time.

Revenue Criteria – Operating Risk

Fitch's analysis considers the issuer's operating profile, including predictability and volatility of **costs**, life cycle/capital renewal risks, key resource cost risks and the **ability to manage growth in costs over time**.

	Operating Costs
Stronger Attributes	• Well-identified cost drivers and low potential volatility in major items. • Flexibility in timing for major costs (life-cycle)/limited near term capex expected/ not capex-intensive. • Strong ability to vary cost with demand shifts. • Operating and maintenance cost increases fully recoverable through regular revenue adjustments (tariffs/charges) with transparent methodology. • Full pass through of costs to entities with strong financial capacity.
Midrange Attributes	• Well-identified cost drivers with moderate potential volatility. • Material capex in the near term//reasonable but limited flexibility on timing for major costs (life-cycle). • Ability to vary marginal cost with fluctuation in demand/usage. • Inflationary operating and maintenance cost increases recoverable in regular revenue adjustments (tariff/charges adjustment) with transparent methodology. • Full pass through of costs to entities with midrange financial strength.
Weaker Attributes	• High sensitivity of cash flows to the timing of costs. • Material capex expected in near term with little flexibility on timing for major costs. • Operating and maintenance cost volatility highly uncertain with potential to be significant (labor/energy/technology). • Severely limited ability to pass through cost growth. • Weak or no operating reserves. • Full pass through of costs to entities with weaker financial strength.

Revenue Criteria – Operating Risk

Fitch's analysis considers the issuer's operating profile, including predictability and volatility of costs, life cycle/capital renewal risks, **key resource cost risks** and the ability to manage growth in costs over time.

	Resource Management Risk
Stronger Attributes	• No supply constraints for labor or resources (amount, cost, timing). • Excellent transportation/utility infrastructure. – Connecting infrastructure in place - alternatives exist. – Commoditized nature of key supplies from many sources. – Sufficient independently verified reserves. – Supply cost increases fully recovered through regular revenue adjustments (tariffs/charges) with transparent methodology. – Full pass through of supply price and volume risks on long-term contract to a financially strong counterparty.
Midrange Attributes	• Adequate supply of resources and labor with limited volatility (amount, cost and timing – Good transportation/utility infrastructure. – Connecting infrastructure in place — limited alternatives. – Supply cost increases substantially recoverable, with timing lags, through regular revenue adjustments (tariffs/charges) using transparent methodology. – Full pass through of supply price and volume risks to an entity with midrange financial strength.
Weaker Attributes	• Potential for supply or labor resource constraints (amount, cost, timing). – Monopolistic source of supply. – Poor transportation/utility infrastructure. – Weakness in connecting infrastructure. – Reliance on development of reserves. – Full pass through of supply risks to an entity with weaker financial strength.

Revenue Criteria – Operating Risk

Fitch's analysis considers the issuer's operating profile, including predictability and volatility of costs, **life cycle/capital renewal risks**, key resource cost risks and the ability to manage growth in costs over time.

	Capital Planning and Management
Neutral to Operating Risk Assessment	• Adequate or strong mechanisms for capital planning and funding. • demonstrated history of generally effective management. • debt maturity significantly within expected economic life. • established but current technology. • Capex benefits from documented engineering assessment and aligns to plan in a reasonable way.
Negative to Operating Risk Assessment	• Weak planning mechanisms, history of deferred maintenance/cost overruns. • Complex or new technology judged to be a higher risk for cost escalation during the development, design and construction process • Economic life nearly co-terminus with debt maturity. • Emerging competing technology, e.g. lower cost or substitute.

Revenue Criteria – Financial Profile

Fitch assesses the level of financial flexibility that an issuer can sustain as it encounters stresses expected to occur over the relevant forecast period. Metrics are used to evaluate the issuer's operating margins, liquidity profile and overall leverage in the context of the issuer's overall risk profile.

Master Criteria Rating Positioning Table

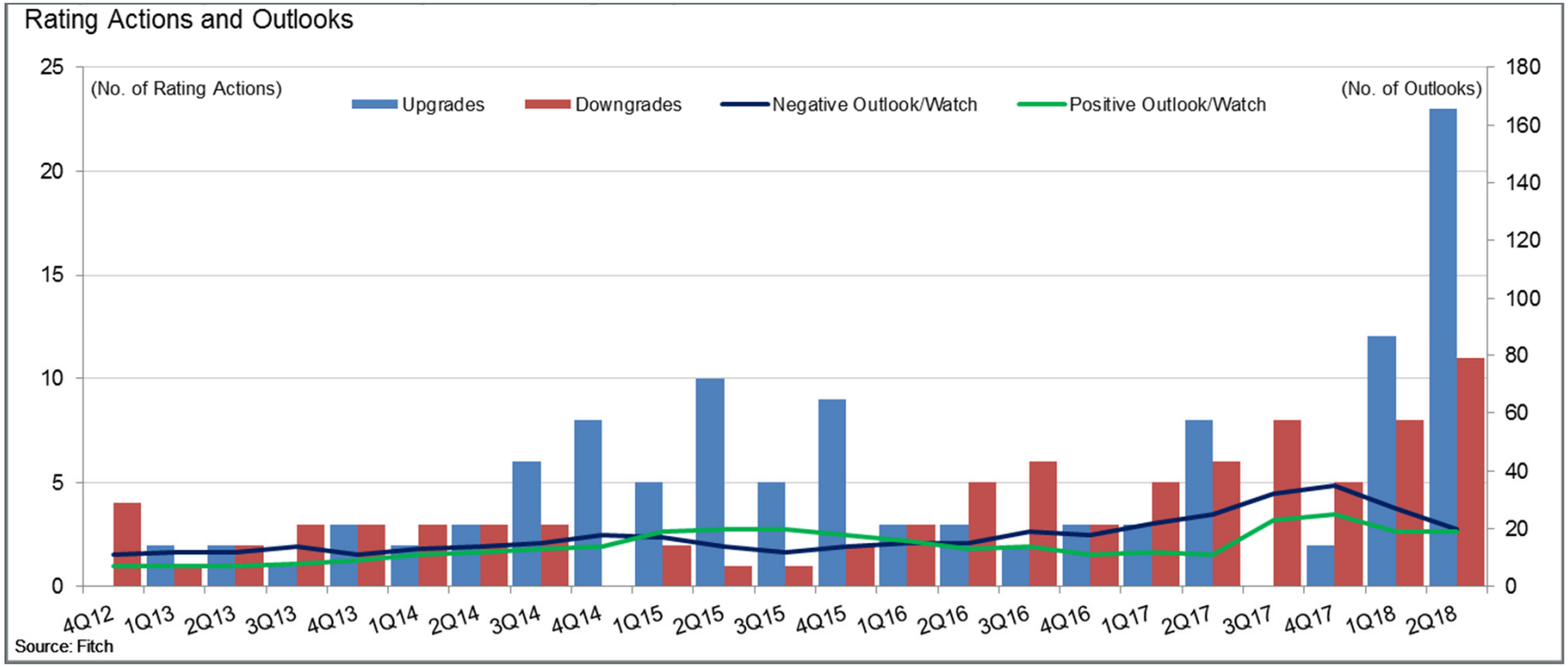
Revenue Defensibility Assessment[a]	Operating Risk Assessment	Financial Profile Assessment Leverage (Net Debt to CFADS/EBITDA)			
		Strong		Midrange	Weaker
Strong	Strong/Midrange	< 8x	8x–12x	12x–15x	> 15x
Midrange	Strong	< 4x	4x-8x	8x–12x	> 12x
Midrange	Midrange	< 0x	0x–4x	4x–6x	> 6x
Midrange	Weaker	< 0x	0x–2x	2x–4x	> 4x
Weaker	Midrange	—	< 0x	0x–2x	> 2x
Weaker	Weaker	—	< -3x	-3x–0x	> 0x
Suggested Analytical Outcome		**AA**	**A**	**BBB**	**BB**

[a]Stronger (aa and a); Midrange (bbb); Weaker (bb and b).

Source: Rating Criteria for Public-Sector,Revenue-Supported Debt, Fitch Ratings.

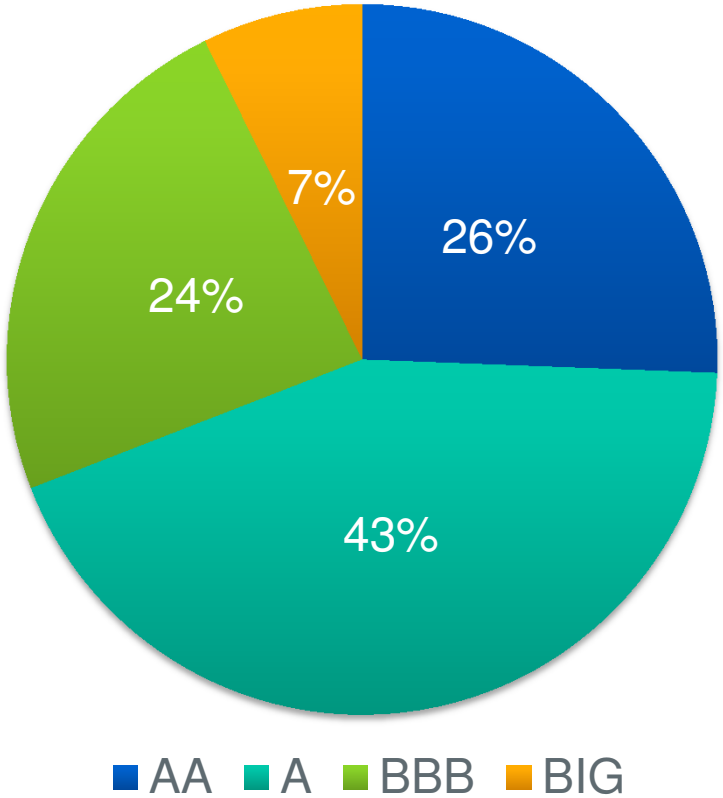
US Public Finance Ratings Snapshot

2Q 2018 Rating Activity



2 Healthcare Sector Overview

Ratings Distribution – U.S. Not for Profit Healthcare



* Includes private ratings.
Source: Fitch Ratings

Healthcare Criteria – Key Factors

- Revenue Defensibility
  - **Revenue source characteristics**: Gross payor mix with Medicaid and self-pay less than 25% is considered to be midrange, while gross payor mix with Medicaid and self-pay above 25% is considered to be weaker
  - **Market position**: A multi-state / multi-market provider with a leading inpatient market share position in key markets, or, a single market / stand-alone provider with an inpatient market share position above 70% or at least two times its next closest competitor is considered midrange
  - **Service area characteristics**: Population growth, unemployment rates and income levels will be assessed. Markets with stable population demographic trends are considered midrange.
- Operating Risk
  - **Operating Cost Flexibility:** Fitch considers the trend of revenue growth to cost growth in each of the last five years in the context of historic profitability. Key metrics used by Fitch to measure profitability or margin are operating earnings before interest, taxes, depreciation and amortization, or operating EBITDA margin, and EBITDA margin.
  - **Capital Expenditure Needs:** High capital spending needs are identified by capital spending as a percent of depreciation of <80% combined with average age of plant > 13 years. Moderate capital spending needs are identified by capital spending as a percent of deprecation of >120% combined with an average age of plant of < 10 years.

Healthcare Criteria – Key Factors

An assessment of an organization's financial flexibility through a range of stresses intended to assess its relative capacity to repay its debt and other liabilities.

- Leverage Profile
  - **Cash to Adjusted Debt**: Unrestricted cash and investments (including DSRF) divided by total debt (including current portion and long term debt, capital leases, draws on lines of credit, less than 80% unfunded DC pension liabilities and 5x operating leases)
  - **Net Adjusted Debt to Adjusted EBITDA (NADAE)**: Unrestricted cash and investments netted against total outstanding debt and other long term liabilities.
- Liquidity Profile
  - **Days Cash on Hand**: Days cash on hand below 75 days is weak and is risk additive; days cash on hand above 75 days is considered neutral
  - **Debt Service Coverage Ratio**: Debt service coverage (maximum) with a 0.2x cushion over the required legal covenant is considered neutral; coverage of less than 1.0x actual is considered weak.

Healthcare Criteria – Rating Positioning Table

- The table is constructed assuming any asymmetric risk additive features are neutral and the issuer does not have a weak liquidity profile.

Rating Positioning Table

Revenue	Operating	Net Adjusted Debt to Adjusted EBITDA	Cash to Adjusted Debt	Suggested Analytical Outcome
Mid-Range	Strong	Less than 0x	Above 120%	AA
Mid-Range	Strong	Less than 1x	Above 75%	A
Mid-Range	Strong	Less than 3x	Above 50%	BBB
Mid-Range	Strong	Greater than 3x	Less than 50%	Below Investment Grade
Mid-Range	Mid-Range	Less than 0x	Above 190%	AA
Mid-Range	Mid-Range	Less than 0x	Above 120%	A
Mid-Range	Mid-Range	Less than 1x	Above 75%	BBB
Mid-Range	Mid-Range	Greater than 1x	Below 75%	Below Investment Grade
Mid-Range	Weak	Less than 0.5x	Above 100%	Investment Grade
Weak	Weak/Mid-Range	Less than 0x	Above 120%	Investment Grade
Weak	Weak/Mid-Range	Greater than 0x	Below 120%	Below Investment Grade

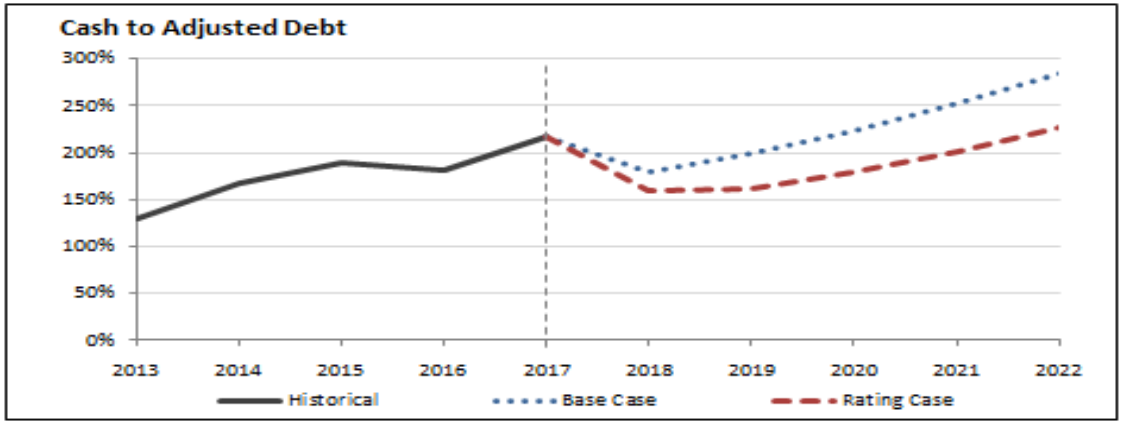
Strong (aa and a); Mid-Range (bbb); Weak (bb and b). Net leverage is evaluated using both net adjusted debt to adjusted EBITDA and cash to adjusted debt. Adjusted debt includes unfunded pension liability capped at 80% of funded status and 5.0x operating lease expense.

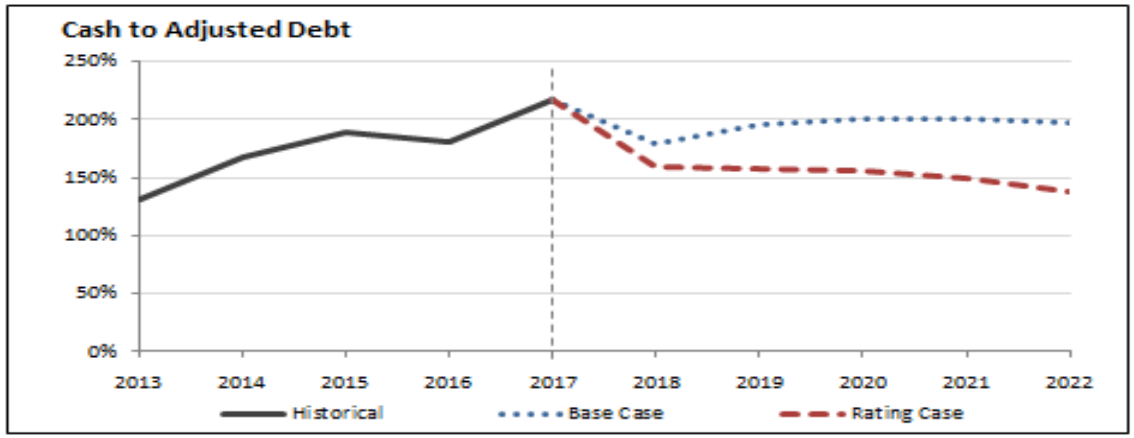
FAST: Forward-Looking Analysis

FAST Summary	Base Case					Rating Case				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Balance Sheet ($000)										
Unrestricted Cash & Investments	2,041,225	2,225,601	2,453,874	2,730,270	3,059,430	1,958,934	2,011,595	2,144,560	2,318,619	2,537,897
Total Debt	1,727,651	1,670,062	1,614,394	1,560,581	1,508,561	1,727,651	1,670,062	1,614,394	1,560,581	1,508,561
Adjusted Debt	1,983,336	1,925,747	1,870,079	1,816,266	1,764,246	1,983,336	1,925,747	1,870,079	1,816,266	1,764,246
Net Adjusted Debt	-57,889	-299,854	-583,795	-914,004	-1,295,184	24,402	-85,848	-274,482	-502,353	-773,650
Income Statement ($000)										
Total Revenues	4,417,940	4,743,733	5,093,551	5,469,166	5,872,480	4,335,650	4,612,018	4,998,243	5,366,830	5,762,597
Total Expenses	4,178,749	4,464,025	4,769,248	5,095,796	5,445,143	4,178,749	4,464,025	4,769,248	5,095,796	5,445,143
Operating EBITDA	460,815	512,071	568,304	629,966	697,545	378,525	380,355	472,996	527,629	587,662
EBITDA	460,815	512,071	568,304	629,966	697,545	378,525	380,355	472,996	527,629	587,662
Adjusted EBITDA	511,952	563,208	619,441	681,103	748,682	429,662	431,492	524,133	578,766	638,799
Metrics										
Cash / Debt	118%	133%	152%	175%	203%	113%	120%	133%	149%	168%
Cash / Adjusted Debt	103%	116%	131%	150%	173%	99%	104%	115%	128%	144%
Days Cash on Hand	186	190	196	204	214	179	172	171	173	178
Operating EBITDA Margin	10.4%	10.8%	11.2%	11.5%	11.9%	8.7%	8.2%	9.5%	9.8%	10.2%
EBITDA Margin	10.4%	10.8%	11.2%	11.5%	11.9%	8.7%	8.2%	9.5%	9.8%	10.2%
Net Adj Debt / Adj EBITDA	-0.1x	-0.5x	-0.9x	-1.3x	-1.7x	0.1x	-0.2x	-0.5x	-0.9x	-1.2x
Scenario Assumptions										
GDP Growth	2.0%	2.0%	2.0%	2.0%	2.0%	-1.5%	0.5%	2.0%	2.0%	2.0%
FAST Portfolio Sensitivity	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Revenue Growth	7.4%	7.4%	7.4%	7.4%	7.4%	5.4%	6.4%	8.4%	7.4%	7.4%
Expense Growth	6.9%	6.9%	6.9%	6.9%	6.9%	6.9%	6.9%	6.9%	6.9%	6.9%
Principal Paydown ($000)	59,574	57,588	55,669	53,813	52,019	59,574	57,588	55,669	53,813	52,019
New Issuance ($000)	0	0	0	0	0	0	0	0	0	0
Capital Expenditures ($000)	211,768	226,460	242,171	258,972	276,939	211,768	226,460	242,171	258,972	276,939

FAST: Forward-Looking Analysis

Stable through a cycle





Not stable through a cycle

Select Median Ratios Over Time - Healthcare

FYE	2005	2010	2015	2016	2017**
Days Cash on Hand	157.8	166.8	203.4	195.5	213.9
Cash to Debt (%)	99.4	104.8	141.8	142.8	159.0
Operating Margin (%)	2.1	2.8	3.0	2.8	1.9
EBITDA Margin (%)	10.8	9.3	11.7	10.5	10.3
EBITDA MADS* Coverage (x)	3.3	2.9	4.0	3.6	3.8
MADS as % of Revenue	3.4	3.1	2.9	2.6	2.6
Average Age of Plant (yrs)	9.8	10.0	10.6	11.0	11.2
Capex as % of Depreciation	133.3	127.1	106.6	115.8	121.4

*MADS = Maximum Annual Debt Service
**Preliminary data, subject to change.
Source: Fitch Ratings

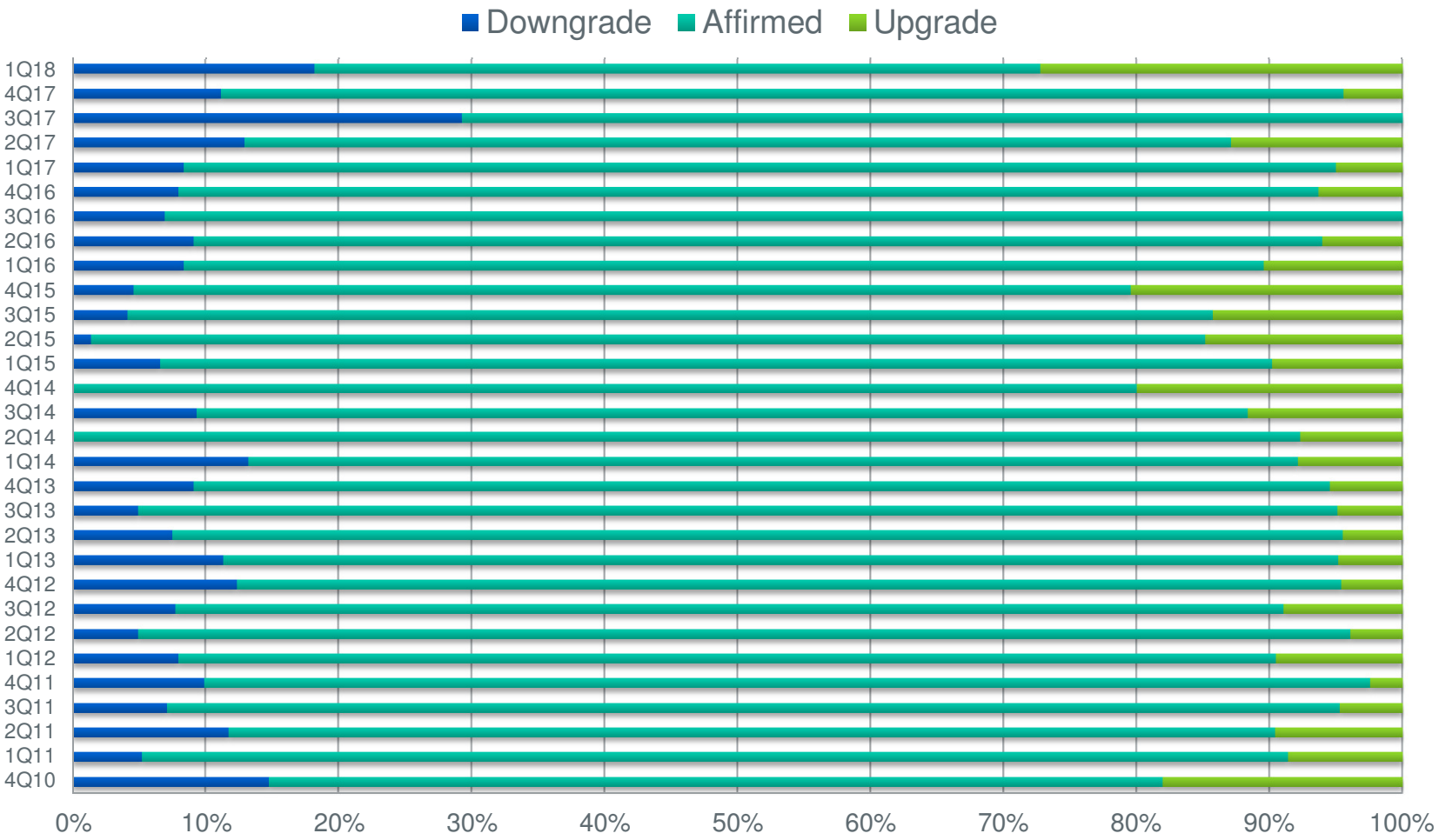
Key Credit Issues

Key credit issues include:

- 2018 Negative Sector Outlook / 2018 Stable Rating Outlook
- Continued Pressure on Margins, driven by payor mix erosion, the ongoing shift to value-based/risk-based contracts, the expected reduction of commercial insurers participating in state exchanges and ongoing contraction in commercial rate increases, and increased consumerism and price sensitivity among patients.
- Uncertainty Regarding Legislative Landscape and "Non-Traditional" Entrants into Sector
  - The future of the ACA, while not likely to result in a full "repeal and replace," is still uncertain due to continued piecemeal disassembling of the original legislation.
  - Any further disruption of the ACA would negatively impact reimbursement as a result of reduced exchange enrollment and insurer participation, increasing uncompensated care.
- Continued Consolidation and Widening Credit Gap.
  - Fitch believes M&A activity will continue to be brisk, and there will be a return of the "mega mergers".
  - Organizations with broader operating footprints and financial resources tended to outperform smaller, independent ones, which often, but not always, widened the credit gap.

Recent Rating Activity - Healthcare

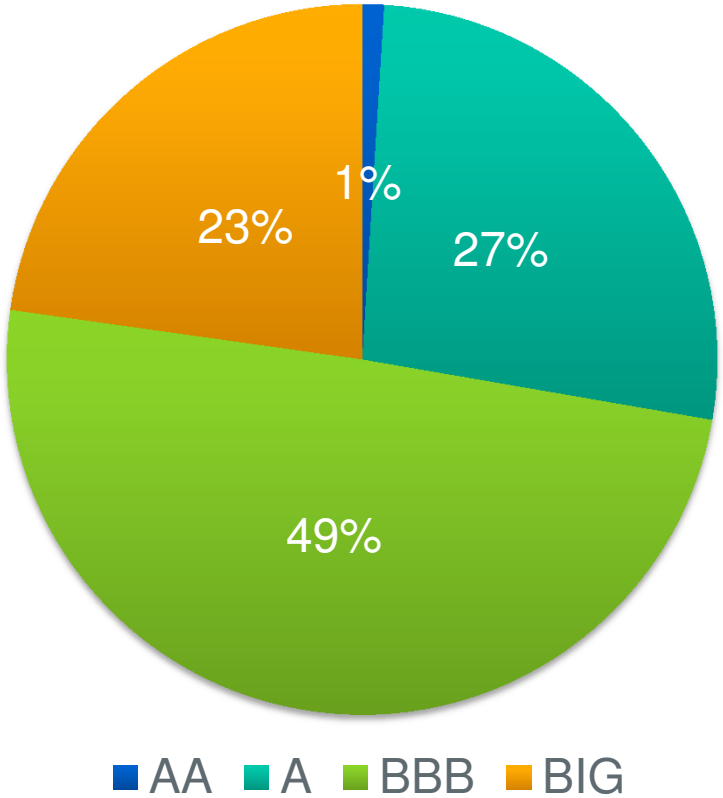
Nonprofit Hospitals Upgrades/Downgrades/Affirmed as a % of Quarterly Rating Actions



Source: Fitch.

3 Senior Living Sector Overview

Ratings Distribution – Senior Living



* Includes private ratings.
Source: Fitch Ratings

Key Credit Issues – Senior Living

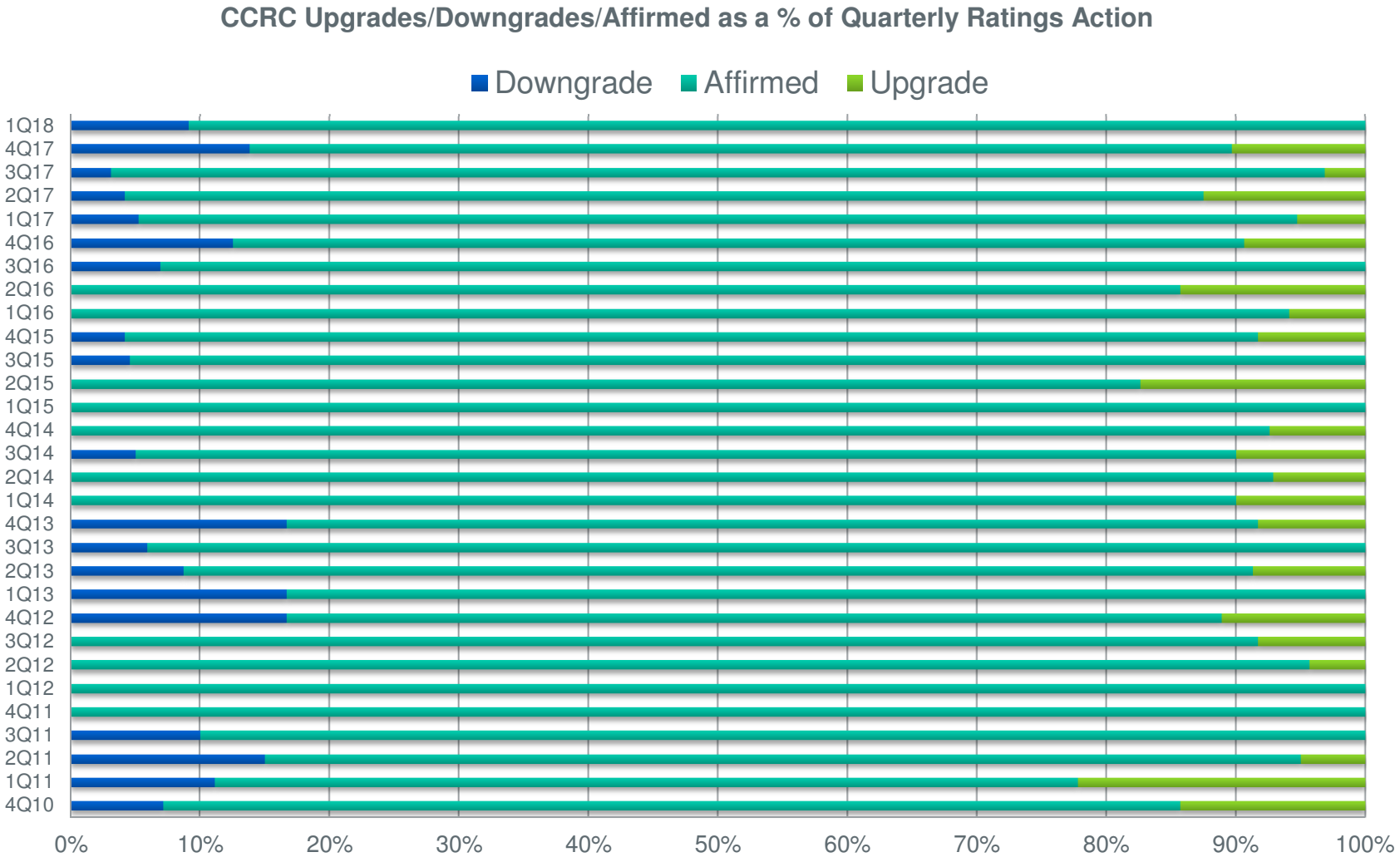
- Stable Sector and Rating Outlook.
- Healthy independent living (IL) occupancy driving solid core operating performance.
- Pressured post-acute care census in skilled nursing facilities.
- Tightening employment markets increasing staffing costs.
- Healthy real estate markets support strong demand.
- Continued investments in facilities and programs; capital access remain favorable.

Select Median Ratios Over Time – Senior Living

FYE	2013	2014	2015	2016	2017
Days Cash on Hand	457.0	462.8	477.0	486.3	539.8
Cash to Debt (%)	75.1	75.9	67.9	69.8	83.3
Operating Ratio (%)	97.3	95.7	96.5	96.1	95.4
Net Operating Margin-Adj (%)	21.7	20.4	23.0	24.7	23.3
MADS* Coverage (all-in, x)	2.2	2.4	2.3	2.5	2.4
MADS as % of Revenue	11.6	11.5	11.9	11.5	10.9
Average Age of Plant (yrs)	10.9	11.3	11.2	11.3	11.7

Note: Data reflects investment grade portfolio median.
*MADS = Maximum Annual Debt Service
Source: Fitch Ratings

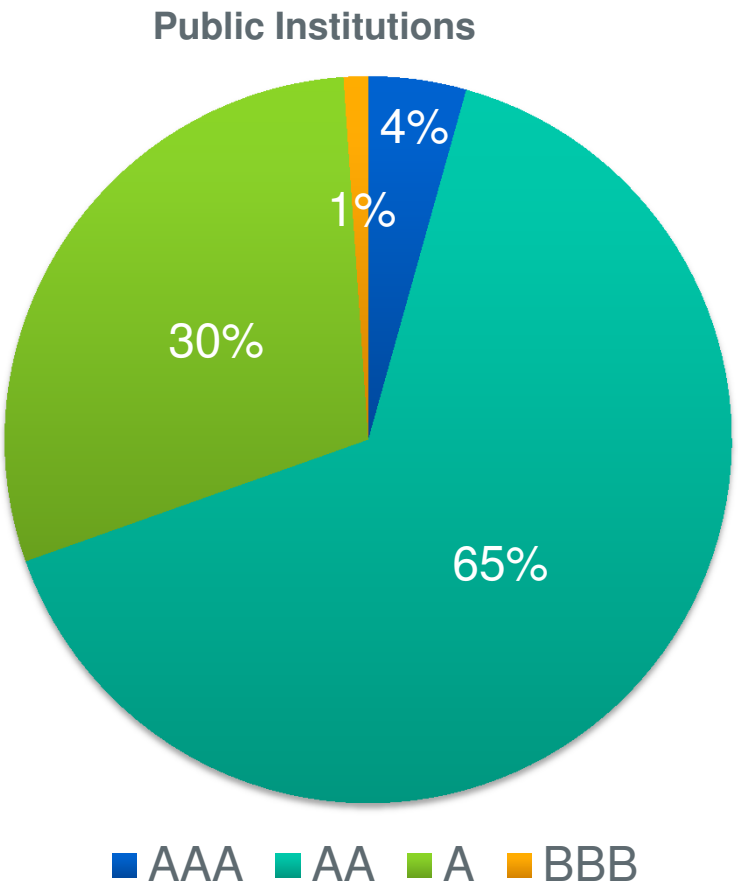
Recent Rating Activity – Senior Living

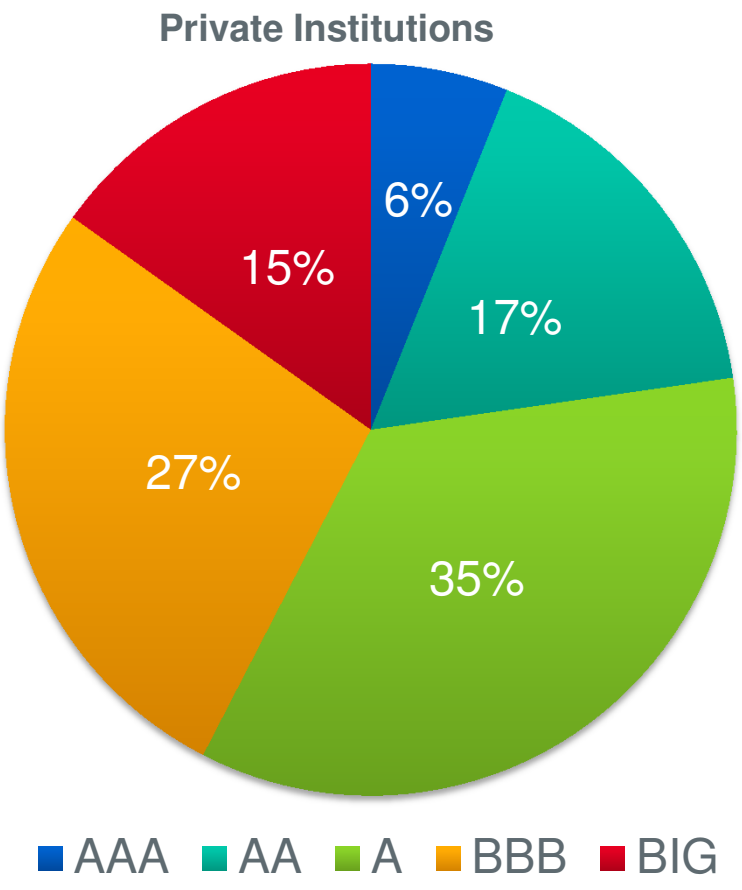


Source: Fitch.

4 Higher Education Sector Overview

Ratings Distribution – Higher Education





Note: Includes private ratings.
Source: Fitch Ratings

Key Credit Issues – Higher Education

- Stable Sector and Rating outlook.
  - Operating performance (student demand and enrollment), financial resources and liquidity will remain manageable for most institutions; however, certain market segments continue to experience growing pressure, and ongoing challenges exist.
  - In particular, institutions with narrow or niche offerings, very high reliance on student-driven revenue, or susceptible to demographic shifts will see more pressure than their counterparts.
- Persistent Affordability Concerns, with pressures on both institutional and external student aid evident particularly at the lower end of the rating spectrum. Alternative pricing structures are gaining popularity, as are alternative education delivery methods to help contain costs.
- Longer-Term Demand Pressures Remain evident, with enrollment and demographic challenges presenting uneven pressures across the sector.
- Federal and State Funding Environment is mixed at best, with generally stable federal funding and uneven state funding which is still generally below pre-recession levels.
- Maintenance of Financial Flexibility remains key for those institutions using endowment draws to support operations.

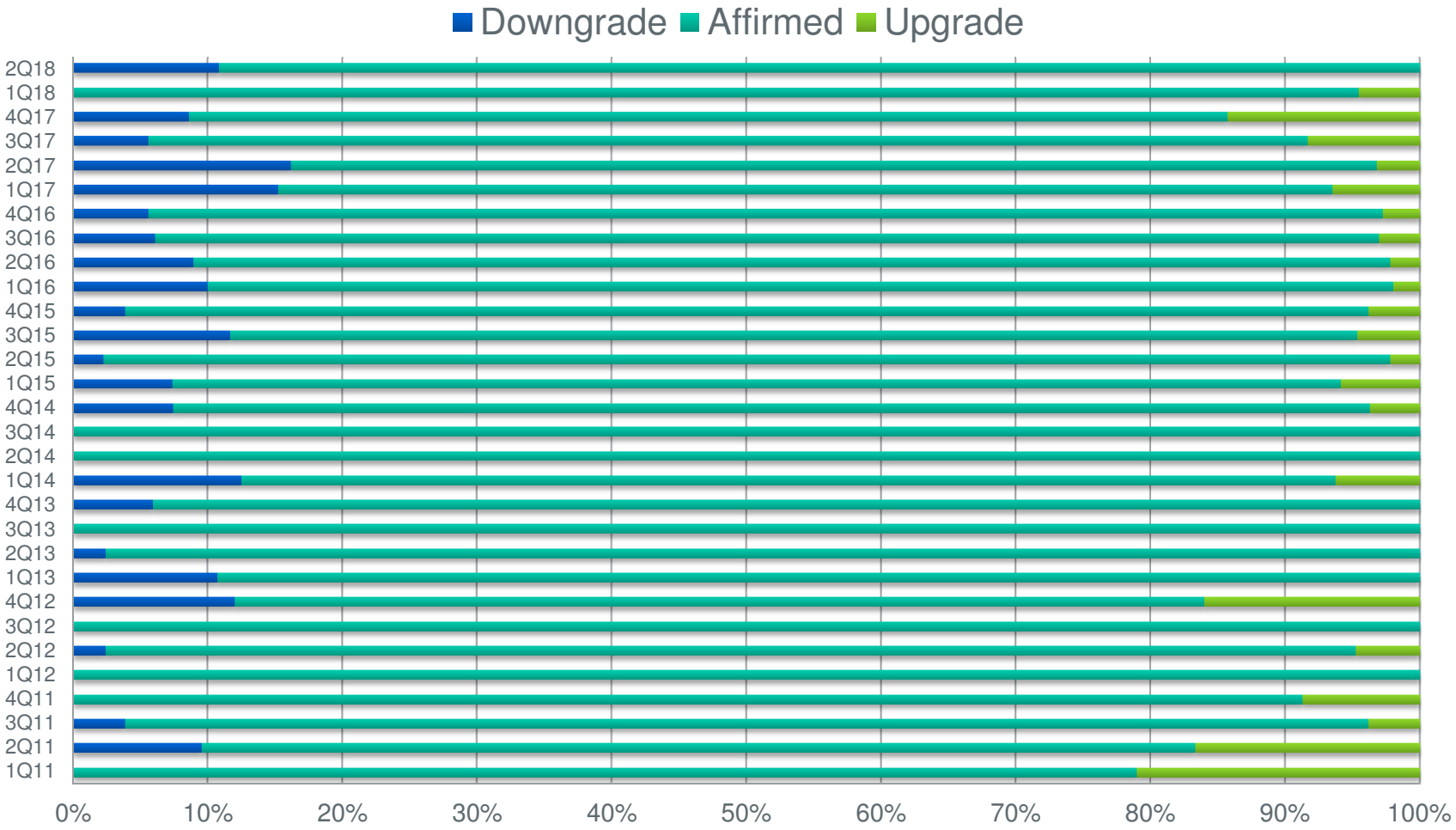
Select Median Ratios Over Time – Higher Education

FYE	2015	2015	2016	2015	2016	2017
		Public			Private	
Available Funds / Tot Op Exp (%)	47.1	47.7	47.4	89.8	86.6	97.8
Available Funds to Debt (%)	91.4	86.1	90.6	106.4	106.5	109.7
Student Fees as % of Revenue	38.8	39.2	39.2	82.2	81.6	82.7
Net Operating Margin-Adj (%)	1.2	(0.1)	(0.5)	3.0	3.3	2.7
Current Coverage (x)	1.6	1.7	1.5	2.0	2.0	2.1
Current Debt Burden (%)	5.1	4.9	5.6	5.5	5.8	5.3

Source: Fitch Ratings

Recent Rating Activity – Higher Education

Higher Education Sector Upgrades/Downgrades/Affirmed as a % of Quarterly Rating Actions



Source: Fitch.

5 Charter Schools Overview

Charter Schools Rating Methodology

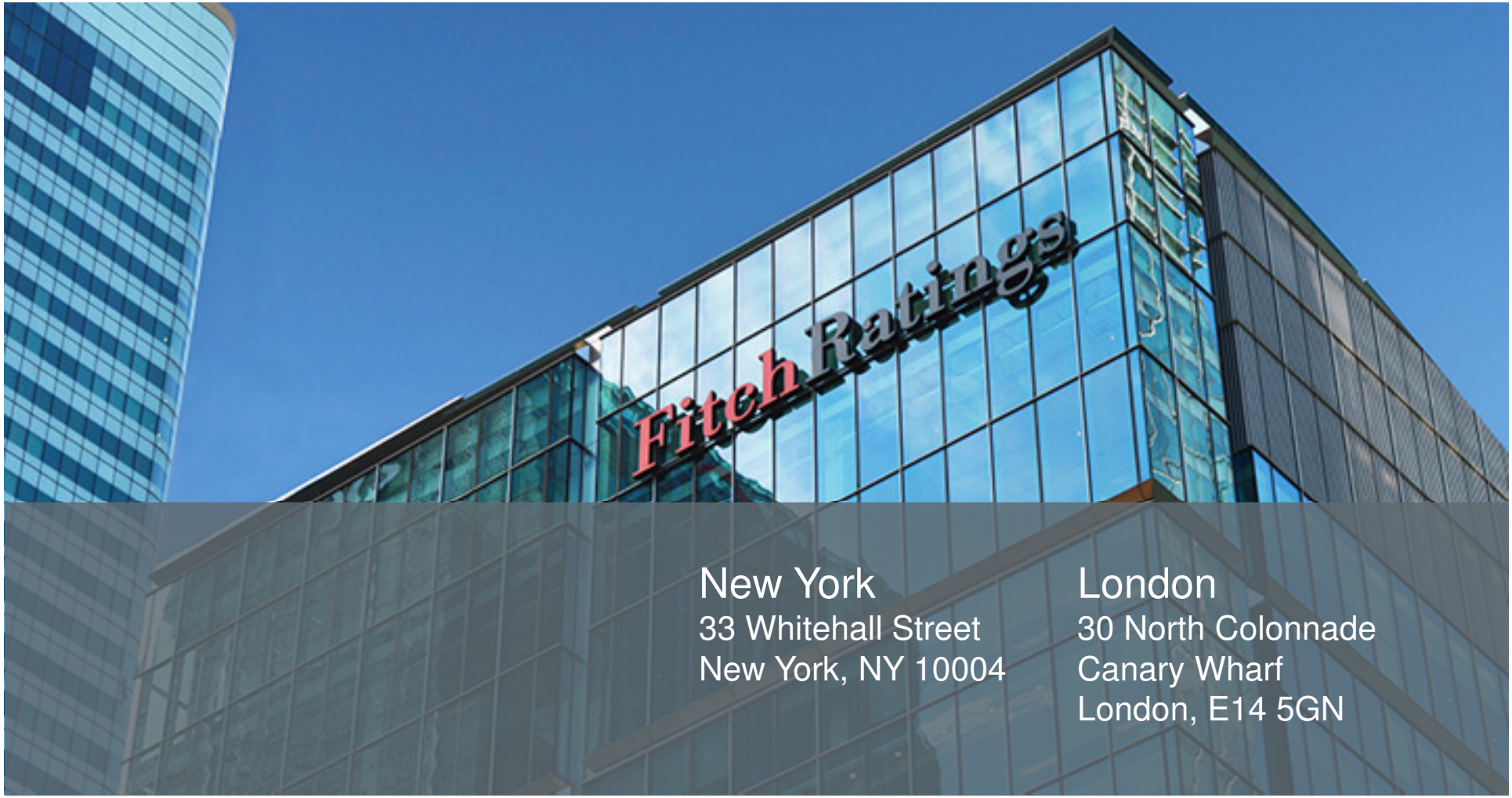
- Rated under Fitch' revised U.S. Public Finance Tax-Supported Rating Criteria
  - Now uses top-down approach in establishing MO ratings.
- Moral obligation (MO) is a non-binding "promise" provided by a governmental entity to support debt issued by the MO provider or a different issuer.
- MO ratings notched down from credit quality of the MO provider.
- In most cases, MO ratings are three notches below the MO provider's issuer default rating (IDR).
- Strongest MO pledges can result in only a two notch spread.

Charter Schools Rating Methodology

- Moral Obligation (MO) ratings can be applied to charter schools in certain states.
- States must have charter school moral obligation program.
- Eligibility to participate in state MO program may vary.

Example:

- Colorado charter school MO program requires investment-grade rating for charter schools.
- Fitch rated the Colorado MO charter school program 'AA-', based on MO mechanics and the credit quality of the state. Key rating drivers:
  - **State Reserve Fund Replenishment Moral Obligation**: CECFA shall request the governor to seek a state appropriation to replenish participating charter schools' bond reserves if the reserves fall below maximum annual debt service requirements, and the governor shall request a legislative appropriation to replenish the reserve.
  - **Sound School District Intercept Program Mechanics**: State law establishes clear processes that would allow for timely payment of principal and interest, if a school district does not make a scheduled debt service payment on GO bonds and certain electoral authorized lease purchase agreements issued after July 1991.
  - **State Credit Quality and Broad Source of Enhancement**: The program ratings reflect the state of Colorado's overall credit quality and the broad financial resources available for the enhancements provided.
  - **Strong State Support of Education**: Colorado's support for its public and charter schools is strong, evidenced by ongoing state financial oversight, loan programs for charter schools, and the provision of interest-free loans to school districts for cash flow assistance.



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