Fitch Ratings 2023 Outlook: U.S. Public Finance Compendium

Outlook Compendium Report

Fitch's Sector Outlook: Deteriorating

Six of eight sectors in Fitch Ratings' U.S. Public Finance (USPF) portfolio have 'deteriorating' sector outlooks for 2023, indicating our expectation that credit pressures will worsen this year amid slowing economic growth, persistent inflation and continuing cost pressures. These assessments are consistent with Fitch's U.S. economic outlook for 2023, which anticipates a mild recession in mid-2023. The 'neutral' outlook for community development & social lending (CDSL) reflects continued federal support and strong financial profiles and the 'neutral' outlook for transportation infrastructure reflects continued financial and volume gains.

Rating Outlook Distribution

Overall, the distribution of Rating Outlooks continues to reflect the credit stability typical of USPF, with an increasing percentage of Stable and Positive Rating Outlooks and a shrinking share of Negative Rating Outlooks. Approximately 92% of USPF ratings have Stable Rating Outlooks, 5% have Positive Rating Outlooks and only 3% have Negative Rating Outlooks. Community development & social lending recorded the biggest change, ending 2022 with 85% Stable Rating Outlooks and 11% Negative Rating Outlooks, versus 44% and 52%, respectively, in 2021. These Rating Outlook changes reflect the large number of ratings tied to the U.S. sovereign rating ('AAA') whose Rating Outlook was revised to Stable from Negative in 2022. Water & sewer utilities have the highest proportion of Positive Rating Outlooks (14%), reflecting improving leverage profiles despite incorporating higher capex and operating costs.

What to Watch

- A recession that is better or worse than the mild recession forecast in Fitch's December 2022 Global Economic Outlook could materially alter the sector outlook for US Public Finance credits.
- In particular, a longer and deeper downturn could affect tax receipts and cause public finance entities to make short-term budgetary choices, such as payment deferrals and operating deficits, that are detrimental to longer term credit quality. Conversely, a "soft landing" for the economy that averts a recession could improve the outlook for sectors with "deteriorating" outlooks.
- A rapid reduction in inflation, paired with a more favorable labor market environment, could also cause the "deteriorating" outlooks to improve; however, persistent inflation that does not respond to Fed tightening measures would lead to a continuation of expenditure pressure, both for materials and supplies and for labor costs, keeping the outlooks at "deteriorating" and putting pressure on ratings.

Arlene Bohner, Managing Director
Head of U.S. Public Finance

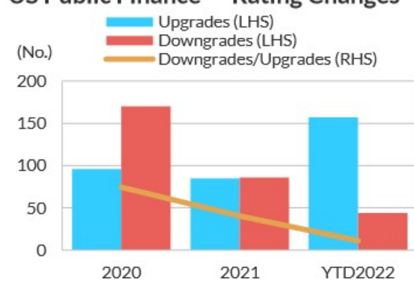
"An expected economic slowdown, culminating in a brief recession in mid-2023, contributes to the "deteriorating" outlook for many of our US Public Finance sectors this year. Although we expect the overall operating conditions to be tougher this year, most of our rated credits have built financial resilience, which should shield them from rating downgrades in 2023."

Core Credit Drivers: US Public Finance

		Revenues			Expenditures				Financial Profile		
Subsectors	Outlooks	Personal Income/ Afford-ability	Real-Estate Values	Demand/ Volumes	Labor Costs	Labor Avail-ability	Non-Labor Operating Costs	Capital Input Costs	Leverage	Cost of Debt	Financial Reserves & Liquidity
States and Local Governments	Deteriorating	↓	↘	N.A.	↘	↘	↔	↘	↘	↘	↔
Hospitals	Deteriorating	N.A.	N.A.	↔	↘	↘	↘	↘	↘	↘	↔
Life Plan Communities	Deteriorating	↘	↘	↗	↓	↘	↘	↘	↔	↘	↔
Education and Nonprofits	Deteriorating	↘	N.A.	↘	↘	↔	↘	↘	↔	↘	↔
Community Development & Social Lending	Neutral	↘	↔	↗	N.A.	N.A.	↘	N.A.	↔	↘	↔
Public Power	Deteriorating	↘	N.A.	↔	↘	↔	↘	↘	↘	↘	↔
Water & Sewer	Deteriorating	↘	N.A.	↔	↘	↔	↘	↘	↘	↘	↔

N.A. – not a material driver of credit quality in sector; ↑ improving - high relevance; ↗ improving - moderate relevance; ↔ neutral; ↘ deteriorating - moderate relevance; ↓ deteriorating - high relevance.
Source: Fitch Ratings.

US Public Finance — Rating Changes



Source: Fitch Ratings.

US Public Finance — Rating Outlooks

Source: Fitch Ratings.

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Core Credit Drivers: North America Transportation Infrastructure

		Volume			Price	Costs		Financial		
Subsectors	Outlooks	Economic Environment	End-User Afford-ability	Industry Growth Prospects	Regulatory and Political Environment	Operating Costs	Capital Input Costs	Leverage	Cost of Debt	Financial Reserves and Liquidity
Airports	Neutral	↔	↔	↗	↔	↘	↘	↔	↔	↔
Toll Roads	Neutral	↘	↔	↔	↔	↘	↘	↔	↔	↔
Ports	Neutral	↘	↔	↔	↔	↘	↘	↔	↔	↔

N.A. – not a material driver of credit quality in sector; ↑ improving - high relevance; ↗ improving - moderate relevance; ↔ neutral; ↘ deteriorating - moderate relevance; ↓ deteriorating - high relevance.
Source: Fitch Ratings.

U.S. Economic Forecast

(%)	Annual Avg. 2017–2021	2021	2022F	2023F	2024F
GDP Growth	1.9	5.7	1.7	0.5	1.7
Consumer spending	2.3	7.9	2.5	0.9	1.9
Fixed investment	3.4	7.8	1.3	(0.1)	2.2
Net trade (end-year)	(0.6)	(1.9)	(1.1)	(0.3)	(0.5)
CPI inflation (end-year)	2.5	7	7	3.6	2.7
Unemployment rate	5.1	5.4	3.7	4.7	5.2
Policy investment rate (end-year)	1.22	0.25	4	4	3.5
Exchange rate	0.87	0.88	1	1	1

F – Forecast.
Source: Fitch Ratings.

U.S. States and Local Governments Outlook 2023

Ample Fiscal Capacity Offsets Weakening Economy

Fitch's Sector Outlook: Deteriorating

While slowing economic growth in 2023 will weaken the macro conditions facing U.S. states and local governments, Fitch anticipates credit quality will remain stable and strong given governments' prudent efforts in recent years to bolster financial resilience. Robust reserves, in many cases exceeding pre-pandemic levels, as well as other prudent budget management measures, leave state and local governments well positioned to face this economic weakness.

Federal support, through direct aid and overall economic stimulus, was a key driver of the positive budget results for governments in recent years. That support has largely ended. Employment, income, and GDP growth will all slow next year. The real estate market is likely to continue cooling as the Federal Reserve's monetary policy actions tighten credit access. These economic factors will drive slower tax revenue growth, or even declines in some cases, for state and local governments.

Rating Outlook Distribution

The vast majority of state and local government Rating Outlooks are Stable. This is an improvement from the 2021 and especially the 2020 distributions, which were heavily affected by pandemic-driven challenges. The stability in 2022 reflects the fundamental strengths of state and local governments, including broad and diverse revenue bases, control over revenues and spending, moderate long-term liabilities and sound financial cushions.

Over 2022, Fitch took a limited number of positive rating actions on state and local governments, and almost no negative actions. This also reflects improvement from the pandemic-driven activity of the prior two years. The macro environment has proved favorable for state and local governments in 2022, and allowed them to consolidate fiscal gains and build additional resilience that will prove important as sector conditions deteriorate in 2023.

Eric Kim, Senior Director

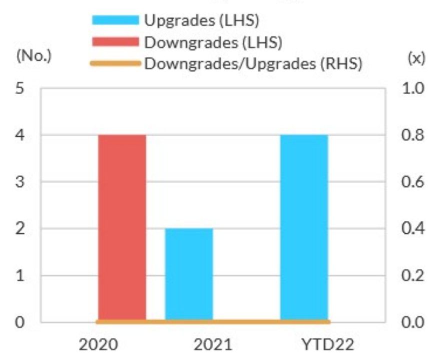
"Robust reserves, in many cases exceeding pre-pandemic levels, as well as other prudent budget management measures, leave states and local governments well-positioned to face this economic weakness."

Core Credit Drivers: States and Local Governments

	Revenues			Expenditures				Financial Profile		
Subsectors	Personal Income/ Affordability	Real-Estate Values	Demand/ Volumes	Labor Costs	Labor Availability	Non-Labor Operating Costs	Capital Input Costs	Leverage	Cost of Debt	Financial Reserves & Liquidity
States and Local Governments	↓	↘	N.A.	↘	↘	↔	↘	↘	↘	↔

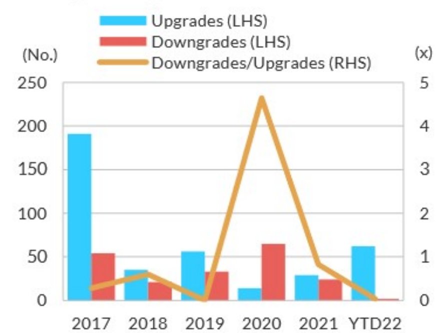
Note: N.A. not a material driver of credit quality in sector; ↑ improving - high relevance; ↗ improving - moderate relevance; ↔ neutral; ↘ deteriorating - moderate relevance; ↓ deteriorating - high relevance.
Source: Fitch Ratings.

State IDRs — Rating Changes



Source: Fitch Ratings.

Local Government IDRs — Rating Changes

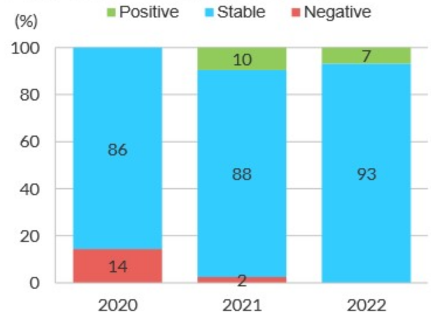


Source: Fitch Ratings.

What to Watch

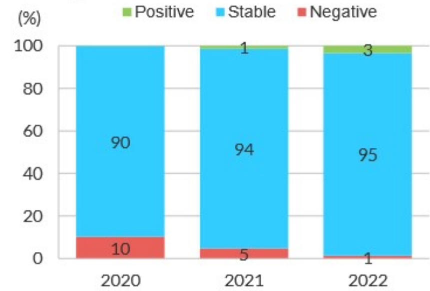
- A significantly deeper and prolonged recession could lead governments towards credit negative budget choices such as sustained pension funding deferrals or payment delays.
- A sharp and sustained drop in housing prices approaching Great Recession levels, potentially driven by continued aggressive Federal Reserve monetary policy tightening.
- Sustained growth in key economic indicators at 2022 levels that allows states and local governments to make even more material progress in building up financial resilience.
- Substantial and widespread public sector labor market challenges putting pressure on expenditure bases to fiscally challenging levels.
- Following this year's elections, new political leadership in states charting radical new courses in fiscal management practices.

State IDRs — Rating Outlooks



Source: Fitch Ratings.

Local Government IDRs — Rating Outlooks



Source: Fitch Ratings.

U.S. Not-For-Profit Hospitals and Health Systems Outlook 2023

Protracted Labor Expense Growth Driving Weaker Margins

Fitch's Sector Outlook: Deteriorating

Fitch expects that core credit drivers for the sector will remain challenged for 2023 as highlighted by our mid-year sector outlook revision to Deteriorating in August 2022. The sector is seeing labor pressures and generationally elevated inflation, compressing margins for virtually all providers. These macro headwinds, specifically the labor supply, became highly pronounced in a very short period of time, with sector pressure further compounded by investment losses in 2022.

The largest single expense for healthcare providers is labor (salary, wages and benefits) typically at 50% or higher, followed by supplies, which, when including pharmaceuticals, is typically at 25% or higher. Consequently, 75% or more of a providers' expenses are currently under intense expense pressure, and operating metrics are down significantly in 2022 for most providers, with 2023 not expected to show a rapid operational recovery for most.

For providers that suffered significant operational losses in 2022, Fitch believes that break-even on a month-to-month basis should return sometime in 2023, with gradual improvement from there. Others who suffered only modest losses may return to profitability on a month-to-month basis by late 2022 or early 2023. A select few health systems continue to enjoy strong operating margins (excluding one-time supplemental support), which is a mark of distinction in the current sector landscape.

While liquidity has provided a significant rating cushion for years, and should allow most providers to weather the current environment, asset price corrections are reducing unrestricted liquidity levels from sector highs seen in 2021. As a result, deteriorating operating conditions will be felt more acutely in 2023.

Fitch is not calling for downgrades across the entire sector, but does predict a period in which downgrades and negative outlooks outpace upgrades and positive outlooks. The larger pool of providers, generally the unrated universe, which are typically smaller and often rural providers, have fared far worse than the rated universe, and Fitch believes this will remain the case for them in 2023.

Fitch expects a more manageable endemic period in which Covid-19 cases and hospitalizations are generally disconnected. This will allow most providers to continue servicing elective procedures and a much-reduced volume of Covid-19 inpatients simultaneously, even with possible heightened winter "surge" periods. The pronounced spread of the Omicron variant in late 2021 and early 2022, however, highlights the ongoing uncertainty of the coronavirus and the challenge facing hospitals to respond should an unknown variant or lineage emerge.

Rating Outlook Distribution

As you can see in the accompanying chart, while the vast majority of Rating Outlooks remain Stable (at 86%), there has been another notable year-over-year shift, with Negative Rating

Kevin Holloran, Senior Director

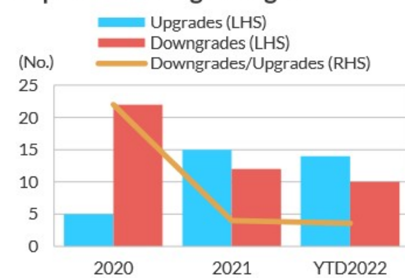
"Over the last three years, not-for-profit hospitals and health systems have endured multiple disruptions caused first by the coronavirus pandemic, and now by labor shortages, intense wage pressure, and generationally elevated inflation. Volumes have generally rebounded from early pandemic lows, but expense inflation remains pronounced, particularly for labor. Even as inflation is expected to attenuate eventually, labor expenses appear to have been reset at a permanently higher level. Remedying this will take all of 2023, and likely beyond."

Core Credit Drivers: Hospitals

	Revenues			Expenditures				Financial Profile		
	Personal Income/ Affordability	Real-Estate Values	Demand/ Volumes	Labor Costs	Labor Availability	Non-labor Operating Costs	Capital Input Costs	Leverage	Cost of Debt	Financial Reserves & Liquidity
Hospitals	N.A.	N.A.	↔	↘	↘	↘	↘	↘	↘	↔

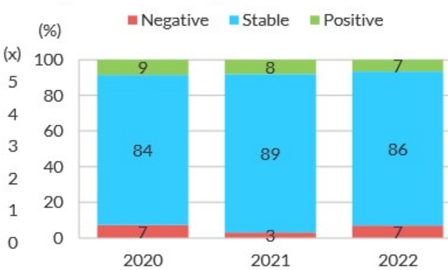
Note: N.A. not a material driver of credit quality in sector; ↑ improving - high relevance; ↗ improving - moderate relevance; ↔ neutral; ↘ deteriorating - moderate relevance; ↓ deteriorating - high relevance.
Source: Fitch Ratings.

Hopitals — Rating Changes



Note: YTD through 11/10/22.
Source: Fitch Ratings.

Hopitals — Rating Outlooks



Note: YTD through 11/10/22.
Source: Fitch Ratings.

Outlooks more than doubling to 7% from 3% the year prior. Positive Rating Outlooks remained about the same at 7% compared to 8% the prior year. The negative shift is not surprising given the financial results posted throughout calendar 2022, but also recognizes concerted efforts by all management teams to reduce operational losses in 2023. While a full recovery in 2023 is not expected, meaningful progress towards break-even is, hence more Negative Rating Outlooks versus downgrades in 2022.

Rating Changes

Despite protracted expense pressure, affirmations have remained the most common rating outcome in 2022, despite the pronounced expense pressures, as credits have relied on balance sheet strength built up over the last several years. Rating actions in 2022 YTD through Nov. 10 indicate that upgrades have only just outpaced downgrades, comparing similarly to 2021's rating results. Looking at these two results, it is initially surprising that 2021 and 2022 would mimic one another, with 2021 being among the stronger years in the sector, compared to 2022, which could go down as one of the worst years ever in the sector. This highlights the general resiliency of the sector and built up financial cushion, but also Fitch's sector approach throughout the coronavirus pandemic to attempt to limit rating changes until a clear instance for rating action presents itself.

What to Watch

- A sector outlook revision to Neutral would require demonstrable improvement in the current amount of labor availability, specifically for nurses, who were in high demand before the pandemic, with the last three years exacerbating the level of need.
- Record levels of cash accumulated through much of 2021 buffered current operating challenges in 2022 (median days' cash on hand reached 260 days in 2021). Recent operational and equity market losses have weakened, but not eliminated, this rating headroom. Equity market stability and a return to year-over-year positive returns would restore and increase rating headroom, signaling a more Neutral sector outlook.
- A change in current regulatory policies limiting mergers and acquisitions in the sector should allow for increased M&A activity, permitting additional consolidation of services, and therefore some expectation of sector stability, particularly among our lower rated universe of credits. The unrated universe of usually financially weaker providers will benefit the most, merging with larger and financially stronger provider hospitals or health systems.
- Local economics will remain an important factor determining hospital credit quality with strong population growth and a favorable payor mix providing more top-line revenue opportunities in certain markets. An unexpected positive change in Medicaid funding (or expansion) may also stimulate additional revenues that would aid in offsetting expense challenges.

U.S. Not-for-Profit Life Plan Communities Outlook 2023

Headwinds May Stall Sector Recovery

Fitch's Sector Outlook: Deteriorating

Fitch Ratings expects the general operating environment for life plan communities (LPCs) to deteriorate, year over year, in 2023. While demographic trends should continue to support healthy demand for LPCs, Fitch has a deteriorating outlook on many of the other key drivers of fundamental credit quality that have historically supported sector stability — decelerating real estate price growth and rising operating costs, among the most notable examples. Fitch expects that these headwinds may stall the sector's continued recovery following the coronavirus pandemic.

The LPC sector continues to experience a number of expense pressures, particularly with staffing. While positive trends in occupancy have supported the sector's ability to pass through most of this cost escalation to their revenue base of entrance and monthly service fees over the last two years, occupancy and demand could soften if rate increases continue above historical norms or if cost-cutting erodes service quality. Decelerating growth in real estate pricing may also slow the current strong pace of independent living unit (ILU) sales and limit a LPC's ability to raise entrance fees to absorb cost inflation.

A sector outlook revision to neutral would require sustainable improvement in labor and supply availability, demonstrated efficacy of higher than average rate increases to counteract inflationary cost pressures and stabilization of real estate values and interest rates.

Rating Outlook Distribution

Fitch's net outlook balance recovered to negative 2 in 2022, compared to negative 8 in 2021 and negative 10 in 2020, reflecting the improvement in LPC operations and successful stabilization of many capital projects. This led to an uptick in Positive Rating Outlooks and a decrease in the number of Negative Outlooks compared to the two previous years.

Despite positive momentum in ratings in 2022 and a more negative sector outlook, Fitch does not expect a material increase in negative rating actions in 2023. Certain sector headwinds, notably volatility in construction costs and increased borrowing costs, may result in postponing major capital projects; this could stabilize leverage among our rated LPCs.

What to Watch

- Unexpected surge in highly infectious disease(s).
- Increased regulatory requirements.

Margaret Johnson, CFA, Senior Director

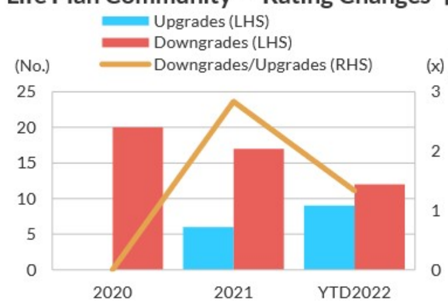
"While Fitch expects demographic trends to continue to support healthy demand, decelerating real estate price growth and cost inflation are significant headwinds that may stall the sector's recovery since the onset of the coronavirus pandemic."

Core Credit Drivers: Life Plan Communities

	Revenues			Expenditures				Financial		
	Personal income/ affordability	Real-estate values	Demand/ volumes	Labor costs	Labor availability	Non-Labor operating costs	Capital input costs	Leverage	Cost of debt	Financial reserves & liquidity
Life Plan Communities	↘	↘	↗	↓	↘	↘	↘	↔	↘	↔

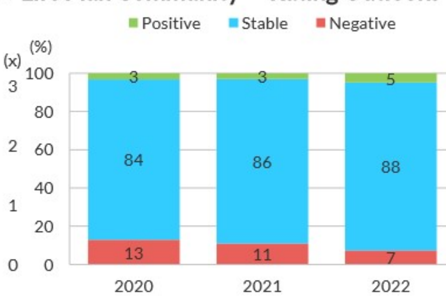
↑ Improving: high relevance. ↗ Improving: moderate relevance. ↔ Neutral. ↘ Deteriorating: moderate relevance. ↓ Deteriorating: high relevance.
Source: Fitch Ratings

Life Plan Community — Rating Changes



Source: Fitch Ratings.

Life Plan Community — Rating Outlooks



Source: Fitch Ratings.

U.S. Higher Education Outlook 2023

More Operating Pressures Ahead

Fitch's Sector Outlook: Deteriorating

Fitch Ratings anticipates a deteriorating credit environment for U.S. Public Finance Higher Education in 2023 relative to 2022. Core credit factors will be challenging sectorwide, with meaningful macroeconomic headwinds in inflation, labor and wage pressure, along with generally soft enrollment. All of these headwinds have the potential to erode operating margins in 2023. Inflation may provide practical cover for some limited increases in tuition; however, such increases are unlikely to be sufficient to mitigate increased costs. Continued controls over operational and capital spending are expected to preserve some budgetary flexibility, but these efforts will yield diminishing returns amid the current macroeconomic environment. Sector bifurcation will continue to widen the credit gap between larger, more selective institutions versus their smaller, less selective and more tuition-dependent counterparts.

Despite these conditions, the predominant Rating Outlook remains Stable and widespread downgrades are not anticipated. For rated institutions, inflationary impacts have been relatively muted thus far, enrollment continues to be mixed across student groups and institutions and tuition growth prospects remain restrained — although 2022–2023 tuition did reflect a reversion from the prior two years of below-inflationary increases. Unrated institutions, which constitute the majority of the sector, are generally smaller, more tuition dependent and remain more vulnerable to variability in enrollment and operating costs compared to their rated counterparts.

Rating Outlook Distribution

Upgrades have outpaced downgrades in Fitch's rated portfolio YTD through November 2022, and the net Rating Outlook balance is Positive. The vast majority of Rating Outlooks remain Stable, at 88%. However, despite the generally positive totals, rating actions have become decidedly more negative through 2H22, with a 4:1 downgrade-to-upgrade ratio since July coupled with a series of unfavorable Rating Outlook revisions. These downgrades and Rating Outlook revisions all reference enrollment pressure as a key factor that, while not a new concern for all four institutions, was exacerbated by the coronavirus pandemic. These rating changes have impacted both public and private institutions.

What to Watch

- A sector outlook reversion to neutral would require evidence of a sustainable enrollment recovery, particularly in pipeline student groups that include incoming freshman and at two-year institutions.
- Sharp or sustained improvement in GDP and market indicators, including interest rates and inflation, thereby muting the impact to endowments and expenditure flexibility.
- Meaningful inter- and intra-institution consolidation that effectively stabilizes revenue and operating risks as nonrecurring federal support rolls off in 2023.
- For public institutions especially, improved state funding for operations and capital needs, particularly if funding is ongoing rather than one-time in nature.

Emily Wadhwani, Senior Director

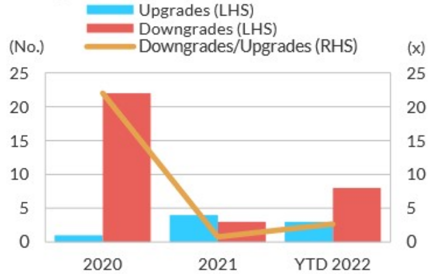
"Fitch anticipates increasingly challenging operating conditions for U.S. higher education institutions in 2023 as they grapple with inflationary costs, mixed enrollment trends and a continued need for elevated expenditure controls. Possible countering factors include a relatively favorable state budget environment, with remaining stimulus funds, and early prospects for easing enrollment pressures in incoming and international student groups."

Core Credit Drivers: Education and Nonprofits

Revenues			Expenditures				Financials		
Personal Income/ Affordability	Real Estate Values	Demand/ Volumes	Labor Costs	Labor Availability	Non-Labor Operating Costs	Capital Input Costs	Leverage	Cost of Debt	Financial Reserves and Liquidity
↘	N.A.	↘	↘	↔	↘	↘	↔	↘	↔

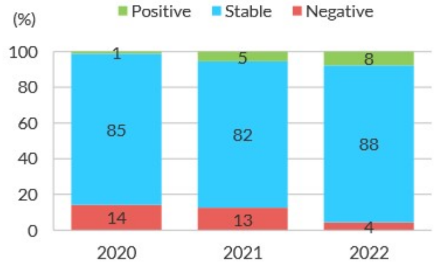
Notes: ↑ – Improving, high relevance. ↗ – Improving, moderate relevance. ↔ – Neutral. ↘ – Deteriorating, moderate relevance. ↓ – Deteriorating, high relevance. N.A. – Not a material driver of credit quality in sector.
Source: Fitch Ratings.

Education and Nonprofits — Rating Changes



Source: Fitch Ratings.

Education and Nonprofits — Rating Outlooks



Source: Fitch Ratings.

U.S. Community Development & Social Lending Outlook 2023

Ongoing Federal Support & Strong Financial Profiles Should Insulate CDSL Sector from Effects of Looming Recession

Fitch's Sector Outlook: Neutral

The U.S. Community Development & Social Lending (CDSL) sector faces numerous headwinds heading into 2023. The decline in home prices thus far (notably from peak levels) has not been enough to offset rising mortgage rates, exacerbating the already acute housing affordability crisis. Homeowners and renters are contending with the looming threat of job losses as the risk of recession escalates, further contributing to housing insecurity. Persistent shortages of affordable housing and ever-increasing community development needs continue to present challenges. Given Fitch's macroeconomic forecast for 2023, demand for the essential services provided by CDSL issuers will inevitably rise. At the same time, falling home prices and rising unemployment could potentially lead to higher delinquency and default rates. In Fitch's view, CDSL issuers are well positioned to face these challenges, given their solid financial profiles, their effective oversight of loan portfolios, and the strong federal government support they typically receive, in the form of loan guarantees, mortgage insurance, housing subsidies, tax exemptions, and other forms of assistance.

In 2022, the sector experienced a decline in bond issuance for affordable housing lending, from $40 billion in 2021 to $25 billion as of October 2022, largely driven by the market turbulence present throughout much of this year. Yet affordable housing and community development needs have only continued to grow. Rising interest rates, while triggering higher demand for the below-market rate lending products offered by CDSL issuers, also mean a higher cost of debt, thereby potentially limiting issuers' market access. Fitch expects that CDSL issuers and their financial partners will find innovative ways to surmount these obstacles, as they have successfully done in the past.

Rating Outlook Distribution

While the sector's ratings are largely unchanged, there were a number of favorable Rating Outlook revisions during 2022. The rating actions taken by CDSL in 2022 included two upgrades, two downgrades, and 26 favorable Rating Outlook revisions (from either Negative to Stable or from Stable to Positive). Many of the revisions from Negative to Stable Rating Outlooks were driven by the direct linkage between certain housing finance agencies (HFAs) and the U.S. IDR, the Rating Outlook of which Fitch revised to Stable in July. Approximately 86% of CDSL ratings have Stable Rating Outlooks, 3% have Positive Rating Outlooks, and 11% have Negative Rating Outlooks.

What to Watch

- A deeper and longer recession than currently envisaged, leading to more job losses, sustained high unemployment rates, and more severe loan losses than currently projected.
- Reduction in federal support for sector due to higher sovereign budgetary constraints.
- Persistent heightened financial market volatility, further limiting market access.

Karen Fitzgerald, CFA, Senior Director

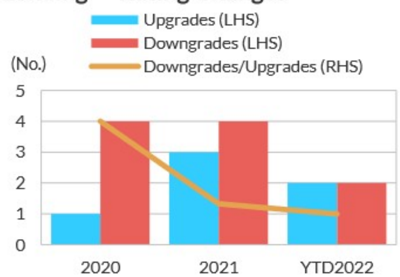
"Although the Community Development & Social Lending (CDSL) sector is facing strong headwinds, demand for the essential services provided by CDSL issuers will inevitably rise, given the worsening macroeconomic environment that is forecast for 2023. In our view, CDSL issuers are well positioned to respond due to their solid financial profiles and the strong federal government support from which they typically benefit."

Core Credit Drivers: Community Development & Social Lending

	Revenues			Expenditures				Financial Profile		
Subsectors	Personal Income/ Affordability	Real-Estate Values	Demand/ Volumes	Labor Costs	Labor Avail-ability	Non-Labor Operating Costs	Capital Input Costs	Leverage	Cost of Debt	Financial Reserves & Liquidity
Community Development & Social Lending	↘	↔	↗	N.A.	N.A.	↘	N.A.	↔	↘	↔

Note: N.A. not a material driver of credit quality in sector; ↑ improving - high relevance; ↗ improving - moderate relevance; ↔ neutral; ↘ deteriorating - moderate relevance; ↓ deteriorating - high relevance.
Source: Fitch Ratings.

Community Development & Social Lending — Rating Changes



Source: Fitch Ratings.

Community Development & Social Lending — Rating Outlooks

Source: Fitch Ratings.

North American Transportation Infrastructure Outlook 2023

Macroeconomic Headwinds Threaten Growth Momentum

Fitch's Sector Outlook: Neutral

The sector outlook for 2023 is neutral, pointing to Fitch Ratings' expectation for stable overall credit conditions compared with 2022. Although Fitch projects a mild and relatively short-lived economic softening in 2023, we expect growth to remain modestly positive for the year, and for transportation enterprises to retain recent years' financial and volume gains following sizable losses early in the pandemic.

Rating Outlook Distribution: Stable for Airports, Toll Roads and Ports

The portion of Stable Outlooks is very high and is comparable to pre-pandemic levels, an indication that the lingering effects from the pandemic are less influential to the credit profiles in these sectors in North America. In 2022, there were 15 rating upgrades and no rating downgrades.

Modest Economic Prospects

While port and toll road volumes are fully, or nearly, recovered from the pandemic and lockdowns, airports still have some headroom, currently at roughly 90% of 2019 enplanements. Business and international travel continue to return to pre-pandemic patterns, leaving comparatively more demand upside for airports relative to other sectors. Fitch's latest *Global Economic Outlook* forecast assumes a mild and short-lived recession in the North America region next year, although a deeper and prolonged recession is a key downside risk. Fitch also projects currently elevated inflation levels to moderate during 2023

Rate and Cost Pressures Create Uncertainty

From a capital structure perspective, Fitch believes the direct impact of high rates will be muted for most transportation credits, as the sector's debt profile is dominated by fixed rate debt. However, persistent inflation coupled with higher interest costs will make operating costs as well as the financing of capital projects significantly more expensive. This environment could drive delays or paring back of capital improvement projects (CIPs). Federal infrastructure grants and subsidized borrowing programs already authorized could serve as a positive counterbalance.

What to Watch

- Traffic performance following a weaker economic environment.
- Persistently higher than anticipated inflation.
- Rising capital spending with material downward shift in federal assistance.
- Deterioration in counterparty credit quality, likely more impactful to public-private partnership issuers.

Seth Lehman, Senior Director

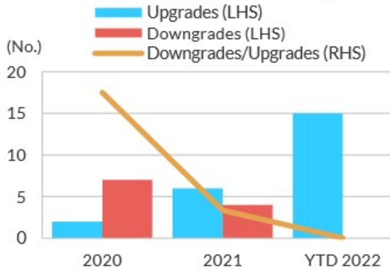
"Fitch holds a neutral outlook for the sector and for ratings, despite a significant softening of the broader economy in 2023 with Fitch economists calling for recession in the spring. This is not to say that transportation will not need to weather some headwinds."

Core Credit Drivers: North America Transportation Infrastructure

	Volume			Price	Costs		Financial		
Subsectors	Economic Environment	End-User Affordability	Industry Growth Prospects	Regulatory and Political Environment	Operating Costs	Capital Input Costs	Leverage	Cost of Debt	Financial Reserves and Liquidity
Airports	↔	↔	↗	↔	↘	↘	↔	↔	↔
Toll Roads	↘	↔	↔	↔	↘	↘	↔	↔	↔
Ports	↘	↔	↔	↔	↘	↘	↔	↔	↔

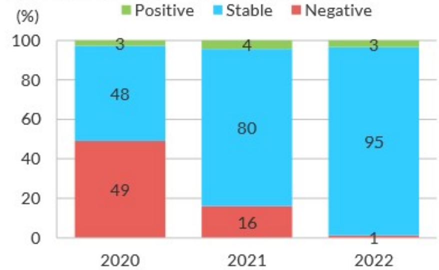
N.A. – Not a material driver of credit quality in sector. ↑ Improving – High relevance. ↗ Improving – Moderate relevance. ↔ Neutral. ↘ Deteriorating – Moderate relevance. ↓ Deteriorating – High relevance.
Source: Fitch Ratings.

North America Transportation Infrastructure — Rating Changes



Source: Fitch Ratings.

North America Transportation Infrastructure — Rating Outlooks



Source: Fitch Ratings.

U.S. Public Power and Electric Cooperatives Outlook 2023

Mounting Cost Pressures Threaten Operating Performance

Fitch's Sector Outlook: Deteriorating

Fitch Ratings' Deteriorating Outlook for the Public Power and Electric Cooperatives sector reflects our expectation economic and business conditions will create a more challenging operating environment in 2023, relative to 2022. Strong headwinds related to general inflationary pressures, higher natural gas and slower economic growth are expected to contribute to diminished operating performance. This could lead to a weakening in credit quality across the sector, absent aggressive efforts to reduce or recover operating costs, and increase rates to preserve margins.

Rating Outlook Distribution

Rating Outlooks throughout the sector remain overwhelmingly stable and we do not expect many rating changes in the sector next year. Approximately 91% of public power and cooperative ratings assigned by Fitch maintained a Stable Outlook. Around 5% of the ratings maintained a Positive Outlook or Watch and 5% a Negative Outlook or Watch.

The lower ratio of downgrades and percentage of Negative Outlooks in 2022 largely reflects Outlook revisions to Stable from Negative of 12 issuers operating in the Electric Reliability Council of Texas (ERCOT) market. We maintained Negative Outlooks on 15 ERCOT-based issuers as of YE 2021, resulting from structural weaknesses in the market that were exposed by the February 2021 winter storm event. Outlook revisions in 2022 reflect our view market reforms and risk mitigation activities taken by these issuers adequately reduced the magnitude of potential financial risk during future market disruptions.

Rating changes and Outlook revisions for pre-paid energy issuers were largely positive in 2022, driven by the improved financial profiles of major supply counterparties, such as Macquarie Group Limited (A/Stable) and Morgan Stanley (A+/Stable). However, pre-paid energy issuers were excluded from the sector rating metrics, as ratings are predominately driven by the credit quality of financial institution counterparties.

Kathy Masterson, Senior Director

"Sustained cost pressures and slower economic growth through 2023 will result in the most challenging operating environment the Public Power sector has faced in many years. While disciplined cost recovery and rate-setting are a hallmark of the sector, a prolonged period of high inflation and lower demand could undermine efforts to preserve financial margins."

Core Credit Drivers: Public Power

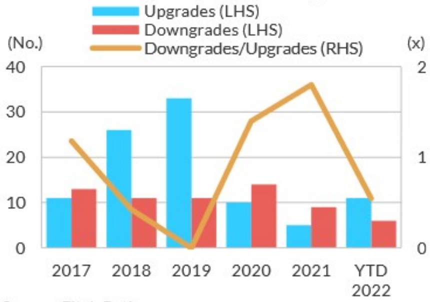
	Revenues			Expenditures				Financial Profile		
Sub-Sectors	Personal Income/ Affordability	Real-Estate Values	Demand/ Volumes	Labor Costs	Labor Availability	Non-Labor Operating Costs	Capital Input Costs	Leverage	Cost of Debt	Financial Reserves & Liquidity
Public Power	↘	N.A.	↔	↘	↔	↘	↘	↘	↘	↔

↑ Improving — High relevance. ↗ Improving — Moderate relevance. ↔ Neutral. ↘ Deteriorating — Moderate relevance. ↓ Deteriorating — High relevance. N.A. – Not a material driver of credit quality in the sector.
Source: Fitch Ratings

Public Power — Rating Outlooks

Note: Excludes pre-paid energy issuers.
Source: Fitch Ratings

Public Power — Rating Changes



Source: Fitch Ratings

What to Watch

- Improved operating cost environment, including lower natural gas prices and interest rates.
- Sustained balance of capacity and demand.
- Demonstrated stability in the affordability of electric service.
- Expanded implementation of emissions limits.
- Improved efficiency in capital spending.

U.S. Water and Sewer Outlook 2023

Inflationary Pressures Mounting

Fitch's Sector Outlook: Deteriorating

Fitch Ratings' deteriorating outlook for the Water and Sewer sector reflects its expectation that economic and business conditions will create a more challenging operating environment in 2023 relative to 2022. Strong headwinds related to general inflationary pressures, notably higher chemical, labor and power costs, and weaker economic growth are expected to contribute to weaker financial performance. This could lead to a weakening in credit quality across the sector, if not offset with commensurate rate adjustments to keep pace with the higher cost environment. Despite these pressures, the distribution of Rating Outlooks across the portfolio is predominantly Stable, as most utilities still have headroom for absorbing higher costs.

Rating Outlook Distribution

Fitch expects limited rating changes in 2023, yet a narrowing of financial margins is likely. As of November 10, 2022, 84% of the water and sewer ratings assigned by Fitch maintained a Stable Rating Outlook. Approximately 14% have a Positive Rating Outlook or are on Rating Watch Positive, and 3% have a Negative Rating Outlook or are on Rating Watch Negative. Ratings trending positive are dominated by utilities with improving leverage profiles despite incorporating higher capex and operating costs. Conversely, ratings trending negative are predominantly driven by utilities with rising leverage as a result of increasing operating or capital expenses without offsetting rate support.

What to Watch

- Utilities budgeting for sustained higher operating expenses.
- Capital spending to continue rising in light of higher costs and to address various sector needs.
- Impact of federal funding.
- Trends in service affordability.
- The regulatory environment and effects on capital programs and operations.

Audra Dickinson, Senior Director

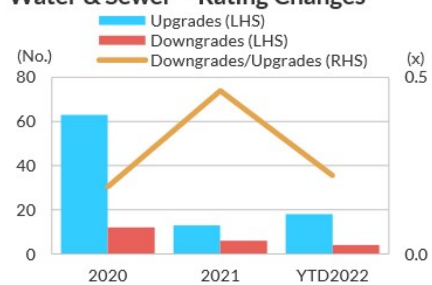
'More acutely than any time over the last decade, the sector's outlook is deteriorating, largely based on our expectations that 2023 will represent a second consecutive year of cost and capital pressures. The operating environment will remain challenging in the upcoming year, and could worsen further if high inflation is prolonged or supply chains experience additional disruption.'

Core Credit Drivers: Water & Sewer

	Revenues			Expenditures				Financial		
Subsectors	Personal income/ affordability	Real-estate values	Demand/ volumes	Labor costs	Labor availability	Non-labor operating costs	Capital input costs	Leverage	Cost of debt	Financial reserves & liquidity
Water & Sewer	↘	N.A.	↔	↘	↔	↘	↘	↘	↘	↔

Note: N.A. not a material driver of credit quality in sector; ↑ Improving. high relevance. ↗ Improving: moderate relevance. ↔ Neutral. ↘ Deteriorating: moderate relevance. ↓ Deteriorating: high relevance.
Source: Fitch Ratings

Water & Sewer— Rating Changes



Note: 2020 is a criteria change year.
Source: Fitch Ratings.

Water & Sewer — Rating Outlooks

Source: Fitch Ratings.

Outlooks and Related Research

2023 Outlooks
Global Economic Outlook
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Strong Margins, Significant Gains Boost Some 2021 Medians for US Colleges & Universities (July 2022)
Persistent Lack of Supply & Rising Rates Strain Housing Affordability (December 2022)
Fitch State Finance Agencies Peer Review (October 2022)
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Global Airport Traffic Tracker (October 2022)
U.S. Airport Capital Spending Ramps Up (Ratings Expected to Remain Stable with Growth in Capacity and Enplanements) (September 2022)
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Global Port Labor Issues Add to Bottlenecks, Limited Credit Effect (July 2022)
Rising Fuel Costs and Inflationary Trends Pressure Public Power (August 2022)
Public Power – Fitch Analytical Comparative Tool (FACT) – 2022 (June 2022)
U.S. Public Power – Peer Review (June 2022)
Reforms Could Stabilize Texas Public Power and Cooperative Rating Outlooks (Credit Profiles Improving One Year After 2021 Winter Storm Disruption) (March 2022)
Drought Augurs Risk for California Water Agencies (October 2022)
U.S. Water and Sewer – Peer Review 2022 (August 2022)

Analysts

Arlene Bohner
+1 212 908 0554
arlene.bohner@fitchratings.com

Dennis Pidherny
+1 212 908 0738
dennis.pidherny@fitchratings.com

Emily Wadhwani
+1 312 368 3347
emily.wadhwani@fitchratings.com

Eric Kim
+212 908 0241
eric.kim@fitchratings.com

Michael Rinaldi
+212 908 0833
michael.rinaldi@fitchratings.com

Karen Fitzgerald
+1 415 796 9959
karen.fitzgerald@fitchratings.com

Mark Pascaris
+ 1 312-368-3135
mark.pascaris@fitchratings.com

Kevin Holloran
+1 512 813 5700
kevin.holloran@fitchratings.com

Margaret Johnson
+1 212 908 0545
margaret.johnson@fitchratings.com

Marco Longinotti-Buitoni
+1 212 908 0628
marco.longinotti-buitoni@fitchratings.com

Audra Dickinson
+512 813 5701
audra.dickinson@fitchratings.com

Kathryn Masterson
+1 512 215-3730
kathryn.masterson@fitchratings.com

Seth Lehman
+212 908-0755
seth.lehman@fitchratings.com

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