NORTHERN TRUST
ASSET MANAGEMENT

MUNICIPAL BONDS: HOW UTILITIES MAY DELIVER RESILIENCE IN RECESSION

STRONG FUNDAMENTALS AID UTILITIES' RISK PROFILES

Higher interest rates, the result of the Federal Reserve's inflation fight, have spurred investor concerns about recession. A deteriorating economic outlook combined with changing interest rates could continue to create volatility in the bond market. To help navigate this risk, investors can construct municipal bond strategies to include utilities. With reliable income and stable credit ratings, utilities historically have helped buffer portfolios against volatility during a recession.

WHO ISSUES MUNICIPAL UTILITY BONDS

Utilities such as water, sewer, and electricity form the bedrock of society's infrastructure. This essentiality underlies the sector's strong credit quality and it makes utility bonds an excellent fit for municipal bond portfolios. City government enterprises such as the Los Angeles Department of Water and Power or the Jacksonville Electric Authority provide these services. In these cities, the utilities directly bill residents. In other cases, the utility provides services as a wholesaler, selling power to other utilities that bill residents. The Washington Suburban Sanitary District is an example of a wholesaler, where its water and sewage services ultimately reach nearly 2 million residents of Prince George's and Montgomery counties in Maryland. These types of government-supported entities can issue tax-exempt municipal bonds.

Utilities issue revenue bonds to fund their capital projects such as new power generation and upgrades to water distribution and wastewater treatment. Payments to bondholders are secured by revenues to utilities. Municipal utility bonds are typically high quality, with only a handful of large defaults over the last 50 years. Moreover, recent federal infrastructure spending has alleviated some of the need for bond issuance to cover ongoing heavy capital needs, making this sector more attractive.

THE FUNDAMENTAL STRENGTH OF UTILITY BONDS

We think these fundamental characteristics support the credit strength of the utility sector:

- **Monopolies**: Municipal utilities are almost always monopolies. This virtually eliminates competitive pressures, which lends to more stable profits and cash flows.

Key Takeaways

- U.S. municipal utility bonds (water, sewer, and power) have limited losses during past recessions, providing investors with an opportunity to fortify their portfolios against economic weakness by investing in strategies holding utility bonds.
- Municipal utility credit fundamentals are exceptionally strong because they are monopoly providers of essential services. Full rate-setting power allows utilities to pass through variable costs to customers.
- To be sure, a recession may dent utility credit metrics as customer delinquencies rise and consumption marginally declines. However, major issuers typically have large cash reserves that likely will limit credit ratings downgrades.

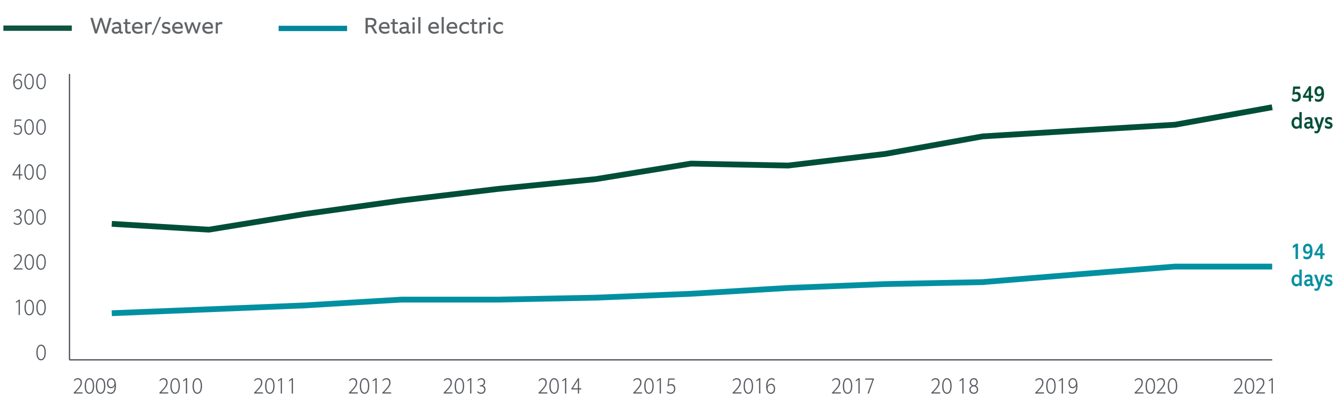
- **Essential services**: Consumption of water, sewer and power is unlikely to significantly decline during an economic downturn. Even during the Global Financial Crisis and the COVID-19 pandemic, revenues at key municipal utilities remained resilient.
- **Rate-setting power:** Unlike for-profit utilities, municipal utilities do not typically need a regulator's approval to raise rates. Well-run utilities typically raise rates modestly every year or two to avoid large, politically difficult increases.
- **Ability to pass through costs**: Many utility rate structures comprise fixed- and variable-rate components that insulate their finances from commodity price spikes. Higher natural gas prices drive up costs to generate power at gas-fired plants, yet many issuers can pass on higher commodity costs to customers. Utilities have also increased their base charges to offset declining use due to conservation efforts and use of rooftop solar.
- **Affordable rates:** Municipal utility rates are generally more affordable than investor-owned, for-profit utilities.
- **Strong financial metrics:** Utility issuers tend to hoard cash. The median water/sewer issuer had 549 days cash for fiscal 2021, meaning that the average issuer could cover more than a year of operating expenses with zero revenues (see Exhibit 1). We also use debt service coverage ratios — the amount of annual revenues, after expenses, divided by debt service — as a key metric to evaluate issuers. Coverage typically averages a robust two times debt service.

Even during the Global Financial Crisis and the COVID-19 pandemic, revenues at key municipal utilities remained resilient.

EXHIBIT 1: UTILITIES' GROWING CASH CUSHIONS

Utilities' liquidity (holdings in days cash) has grown steadily over the last decade, providing significant cushion for a downturn.

Utilities' Average Days of Cash in Reserve



Source: Northern Trust Asset Management, Merritt Research Service, data from 2009 to 2021. Years shown generally represent fiscal years.

- **Nimble management:** Utilities develop playbooks to manage through recessions, including slowing capital plans, tapping cash reserves, trimming expenses and refinancing debt. These management actions can keep credit metrics steady through tough times.
- **Strong ratings:** Like most municipal bond issuers, utilities are highly rated. According to the ratings agency Standard & Poor's, more than half of its 600 water/sewer ratings are rated in the AA or AAA categories. Power ratings are slightly lower, with 59% of its 190 retail electric ratings in the A category.
- **Low default rates:** Utility bonds defaults rates are lower than the average for municipal bonds. According to Moody's Investors Service, only three electric utilities and two water/sewer utilities defaulted from 1970 to 2021.

Utility bond default rates are lower than the average for municipal bonds

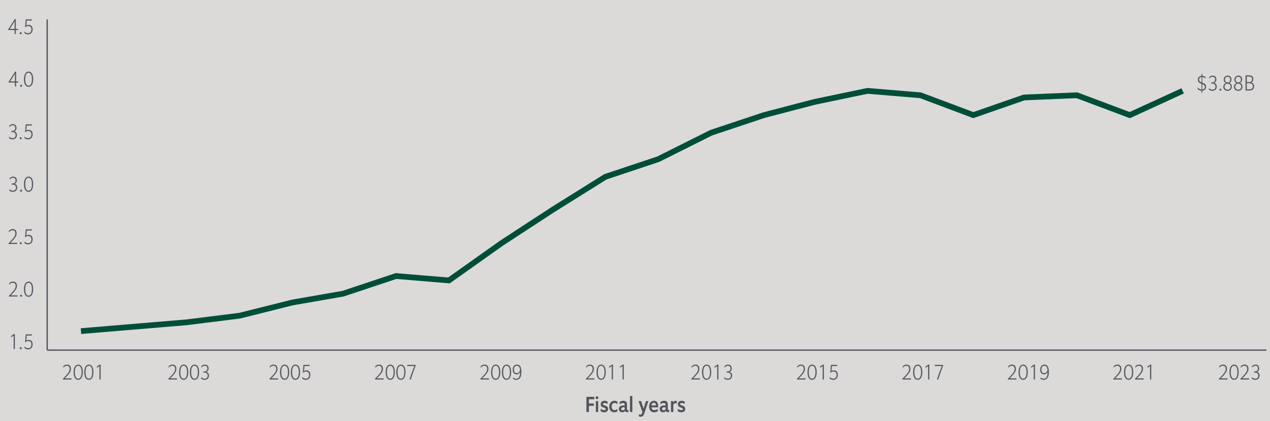
CASE STUDY: NEW YORK CITY WATER

New York City's water and sewer system is rated Aa1/AA+/AA+ by the three major rating agencies and it is widely held across our municipal funds and strategies. The system has excellent water supply, sourcing water from protected, city-owned areas of the Catskill Mountains. The massive sewage system treats 1.2 trillion gallons a day in 14 treatment plants. The exceptionally large, wealthy and diverse customer base is a key credit strength. New York's system generates about $4 billion of gross revenues per year. These revenues have grown, and major economic events have barely dented revenues (see Exhibit 2). The Global Financial Crisis caused revenue to fall 1.5% in the 2008 fiscal year, but revenue rebounded 17% the following year in part because of a rate increase. The pandemic caused a 4.6% revenue decline in the 2021 fiscal year, but in the following year revenue increased 6%.

EXHIBIT 2: REVENUE MOMENTUM

Operating revenue for the New York City Water has remained steady even during times of economic downturn.

New York City Water Revenues ($ billions)



Source: Northern Trust Asset Management, Merritt Research Service, data from fiscal years 2001 to 2022. Years shown are fiscal years ended June 30.

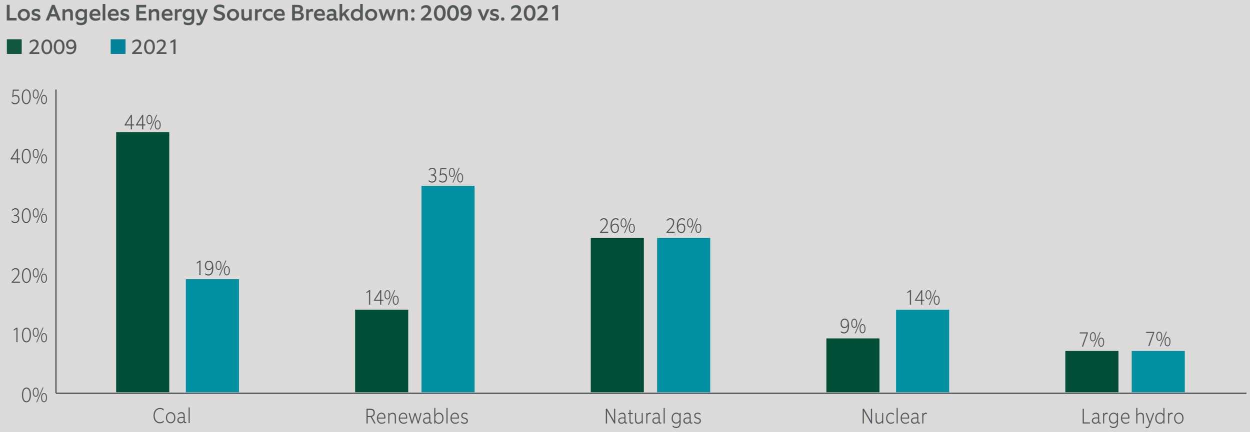
CASE STUDY: LOS ANGELES DEPARTMENT OF WATER AND POWER

The Los Angeles Department of Water and Power is the nation's largest municipal utility. It issues water and power bonds through separate credits, both of which are examples of core holdings in our municipal bond strategies and funds. Los Angeles is in the midst of a transition to energy sources with lower carbon emission and today 35% of energy is sourced from renewable energy such as solar and wind (see Exhibit 3). The utility's electric revenues have demonstrated remarkable resiliency to economic conditions. During the Global Financial Crisis, electric revenues fell less than 1% in its 2009 fiscal year but recovered to grow 18% the following year. During the pandemic, electric revenues fell by 6% in the 2020 fiscal year and then rose 2% in 2021 and 8% in 2022.

EXHIBIT 3: LOS ANGELES' POWER TRANSITION

The Los Angeles Department of Water and Power has maintained strong credit quality while rapidly transitioning its power sources to renewable energy from coal.

Los Angeles Energy Source Breakdown: 2009 vs. 2021



Source: Northern Trust Asset Management, Los Angeles Department of Water and Power, Official Statement, March 16, 2023 and prior

HOW DO WE EVALUATE A UTILITY BOND FOR RESILIENCY?

Credit analysis is a key part of our municipal bond selection process. As part of this process, we examine an issuer's financial metrics, management quality, governance (rate-setting procedures), legal framework (bond covenants) and affordability of an issuer's capital plans. We also review the local economy, demographics, access to ample water or power supply, and regulatory risks. Most importantly, we track trends in credit factors because these metrics can precipitate downgrades to published ratings and negatively impact bond pricing.

We monitor for risks including:

- **Weakening governance:** Increasing political pressure over the rate-making process can result in weakened financial performance.
- **Regulatory risks:** Power issuers with older power plants can face elevated costs to reduce pollution. Sewer authorities, particularly those in older cities, often face federal regulations to reduce combined sewer overflows into waterways after heavy rain events, which are becoming more common due to climate change. In both cases, we consider the cost of remedies.

- **Population loss and/or economic decline:** A shrinking population means fewer ratepayers to maintain aging infrastructure. Increasing poverty puts more pressure on utilities to keep rates low, which can compromise other goals.
- **Reduced financial strength:** Key metrics include liquidity, debt service coverage and debt affordability.

We also opportunistically seek to invest in issuers that we believe will improve their credit quality, which can lead to bond price appreciation. Signs of improving credit can include forward-looking management, capital plans that are commensurate with resources, economic vibrance and growing liquidity.

Signs of improving credit can include forward-looking management, capital plans that are commensurate with resources, economic vibrance and growing liquidity.

MANAGING UTILITIES IN A MUNICIPAL BOND PORTFOLIO

The broader utility sector (including both water/sewer and electric) is the third largest in the diverse municipal market, after general obligations and transportation. The sector is generally high grade: the Bloomberg water/sewer index average credit quality is AA1/AA2 and electric is AA3/A1. Our municipal bond strategies tilt to high-quality bonds, particularly when the economy is expected to slow.

Depending on market conditions and the portfolio mandate, we may seek opportunities for additional yield available for lower-rated utility credits. For example, investors from AA rated bonds to A rated could gain, on average, 56 basis points of additional yield. This additional spread may be compelling for some accounts and would depend on our analyst's view of the credit.

We generally choose highly liquid bonds from large population centers as opposed to small municipalities. For example, the New York Water and the Los Angeles Department of Power and Water were both among the 15 most traded issuers in 2022, allowing for liquidity even during difficult markets and adding to this sector's appeal.

Historic sector performance is similar to the municipal market as a whole, but with resiliency amid volatility. For example, during three years of negative municipal performance during economic downturns (2008, 2013, and 2022), utility sectors showed resiliency during those years (see Exhibit 4), especially compared to high yield bonds.

CONCLUSION: UTILITIES TO FORTIFY A MUNICIPAL BOND PORTFOLIO

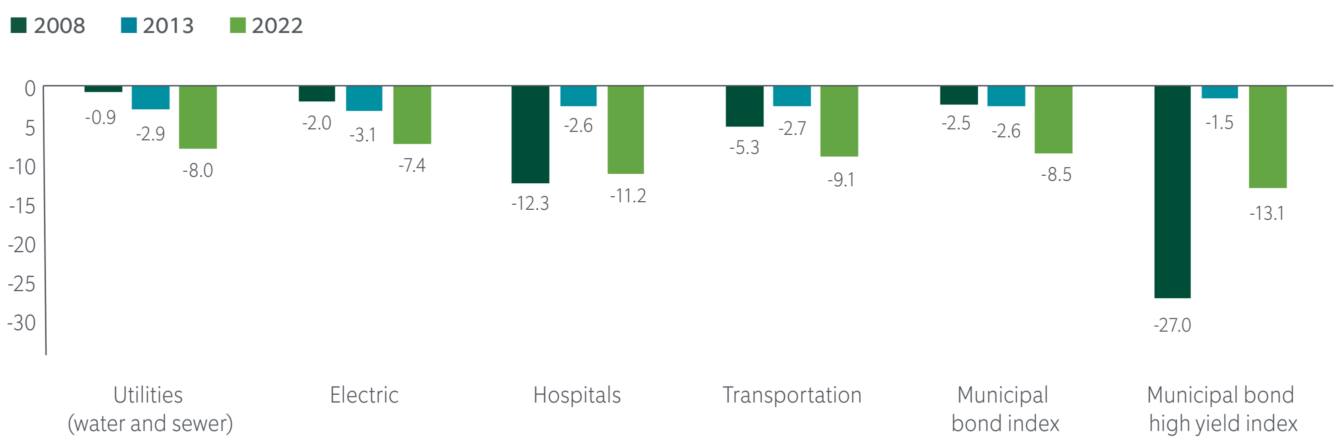
We believe an allocation to municipal utilities aid a municipal bond portfolio's ability to limit losses amid volatility and an economic downturn. Strong fundamental characteristics such as monopoly market positions and rate-setting ability support their excellent credit quality. Should the U.S. economy fall into recession, some credit metrics could be modestly dented, but we do not anticipate widespread downgrades.

We believe an allocation to municipal utilities aid a municipal bond portfolio's ability to limit losses amid volatility and an economic downturn.

EXHIBIT 4: UTILITIES' RESILIENT PERFORMANCE IN VOLATILITY

Utilities' returns have generally limited losses amid market volatility.

Municipal Bond Returns (%) in Years When Indexes Had Losses



LEARN MORE

Visit our website to learn more about municipal bond investing at Northern Trust Asset Management.

How helpful was this paper?

Source: Northern Trust Asset Management, Bloomberg