NORTHERN TRUST
ASSET MANAGEMENT

2022 MUNICIPAL CREDIT OUTLOOK

STRONG OUTLOOK AND RESILIENCY IN 2022 SUPPORTED BY ECONOMIC STRENGTH AND FEDERAL STIMULUS

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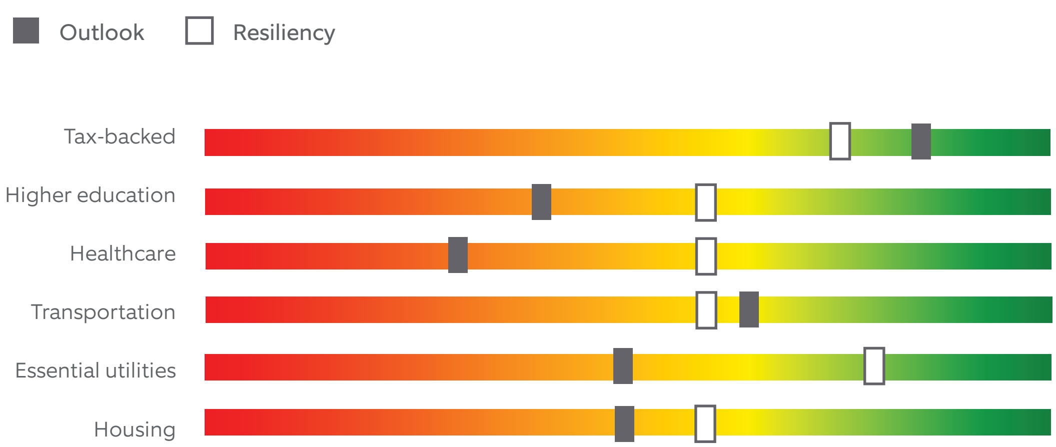
The federal government intervened on a massive scale to avoid widespread economic distress throughout the pandemic. This massive influx of cash along with robust revenue growth has put most state and local governments in a position of fiscal strength not seen in recent history.

Key tax streams should continue to benefit in 2022 from personal income growth driven by job security for high-income earners, strong consumer spending, as well as home price appreciation. Stock market gains have boosted endowment values and pushed pension funding to levels not seen in over a decade. Revenue sectors, including transportation, higher education and healthcare saw less resiliency in revenue collections during the pandemic. They remain largely stable with the help of federal aid and will continue to benefit from economic growth.

We expect municipal credit strength to moderate as inflation, wage and tax growth slows in late 2022 and stimulus dollars are spent without any expectations for more funding. While federal funds are propping up credit in the near term, it will not last forever and will not erase the long-term challenges that exist for certain credits and sectors. The impact of the pandemic remains a key risk case for our outlook.

EXHIBIT 1: OUTLOOKS AND RESILIENCY SHIFT MORE POSITIVE FOR NEXT 12-18 MONTHS

Sector outlooks generally shift more positive. Higher education and hospitals continue to face sector specific challenges.



Source: Northern Trust Asset Management, as of January 2022.

TAX-BACKED (STATE AND LOCAL GOVERNMENTS & SCHOOL DISTRICTS)

Three key tax streams drive our strong tax-backed projections for 2022: income, sales and property.

Outlook

The strong outlook is tied to projected strength in three key tax streams and receipt of second tranche of federal funds (ARPA) in May 2022.

- Income tax collections will be supported by rising wages, corporate profits and strong stock market returns (2021 returns reflected in April 2022 collections). School districts will benefit from the strength of state budgets.
- The growth in sales taxes supported by wage growth, return to work, increase in travel and continued economic reopening.
- Local government entities benefit from property tax associated with realized home price appreciation. A subset of downtown-based property taxes are likely to recover more slowly due to extended work from home.
- Tourism-based taxes will continue their recovery at a slower pace.

Resiliency

All-time high reserves support very strong resiliency moving into 2022. For 2023 and beyond, resiliency will likely wane, with the loss of federal cash infusions and less exceptional stock market returns to support elevated spending.

High yield

Government stimulus and reserve funds have provided support for project or tourism based high yield names, allowing for pandemic recovery. Chronically stressed issuers got band-aid, but no cure for long-term challenges associated with demographic changes, pension burdens, and inadequate spending controls.

EXHIBIT 2: STATE AND LOCAL TAX REVENUE GROWTH YEAR-OVER-YEAR CHANGE (%)

Economic reopening and inflation pressure will likely drive wage and sales tax growth through 2022.

Source: Northern Trust Asset Management, US Census Bureau, data as of June 2021

HIGHER EDUCATION

The unprecedented levels of federal aid, strong market returns and a return to campuses bolster an improved, but still challenged outlook for the higher education sector in 2022.

- Significant federal COVID-19 relief funding ($76.2 billion in total) supports stability, covering revenue losses and pandemic-related expenses through fiscal 2023.
- Return to campus will support improvement in auxiliary revenues.
- Strong revenue performance at state level will provide near-term stability in state aid for public universities.
- Record endowment returns will support increased spending.
- Demographic challenges will continue to pressure the sector over the medium to long-term.

Resiliency
Short-term sector resiliency is supported by federal aid, good budget management during the coronavirus pandemic. Strong market returns have bolstered balance sheets. Demographic shifts and notion of price/value remain longer-term hurdles.

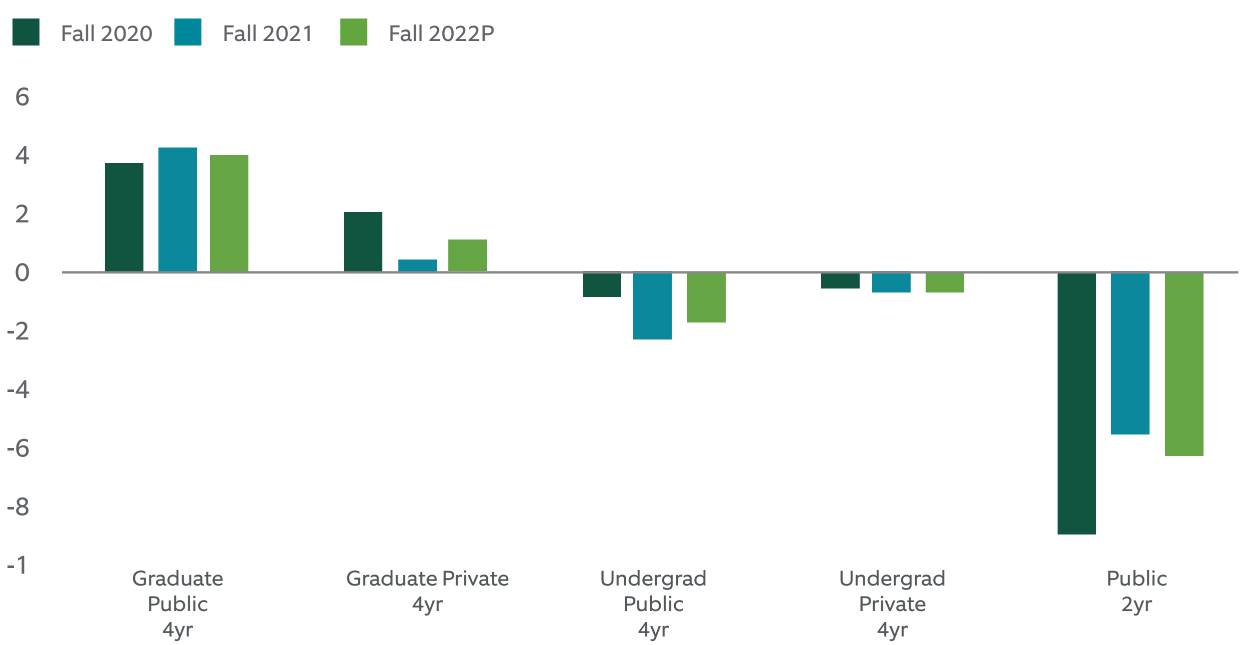
High yield
Lower credit quality bonds face significant enrollment and pricing power pressure resulting in credit deterioration for many. Increased rate of closures expected in the medium term. Security selection is key.

Aided by return to campus, higher education will see short-term improvement - though shifting demographics still mean challenges in the long run.

EXHIBIT 3: ENROLLMENT CHANGE BY INSTITUTIONAL TYPE (%)

Initial fall 2021 enrollment counts show enrollment has yet to recover to pre-pandemic levels, particularly at community colleges.

Enrollment change by institutional type (%)



Sources: National Student Clearinghouse Research Center, data as of October 2021

HEALTHCARE

Margins expected to be lower in 2022 as federal stimulus wanes and expenses continue to rise.

- Revenue likely to be squeezed as volumes remain challenged (seasonal COVID spikes disrupt higher-margin procedures) and the payor mix continues to shift towards lower-reimbursing governmental payors.
- Higher labor costs, which make up 50% to-60% of expenses, will pressure operations. Staffing pressures that were in place pre-COVID will be exacerbated, leading to burnout, higher turnover, wage inflation and an increase in overtime and temporary labor.
- Liquidity likely to come down from all-time highs as hospitals pay back Medicare advanced payments that temporarily boosted balance sheets.

Resiliency
Hospitals have demonstrated their resilience through COVID and should continue to adjust to uncertainties. Margins are pressured while improved liquidity provides a cushion.

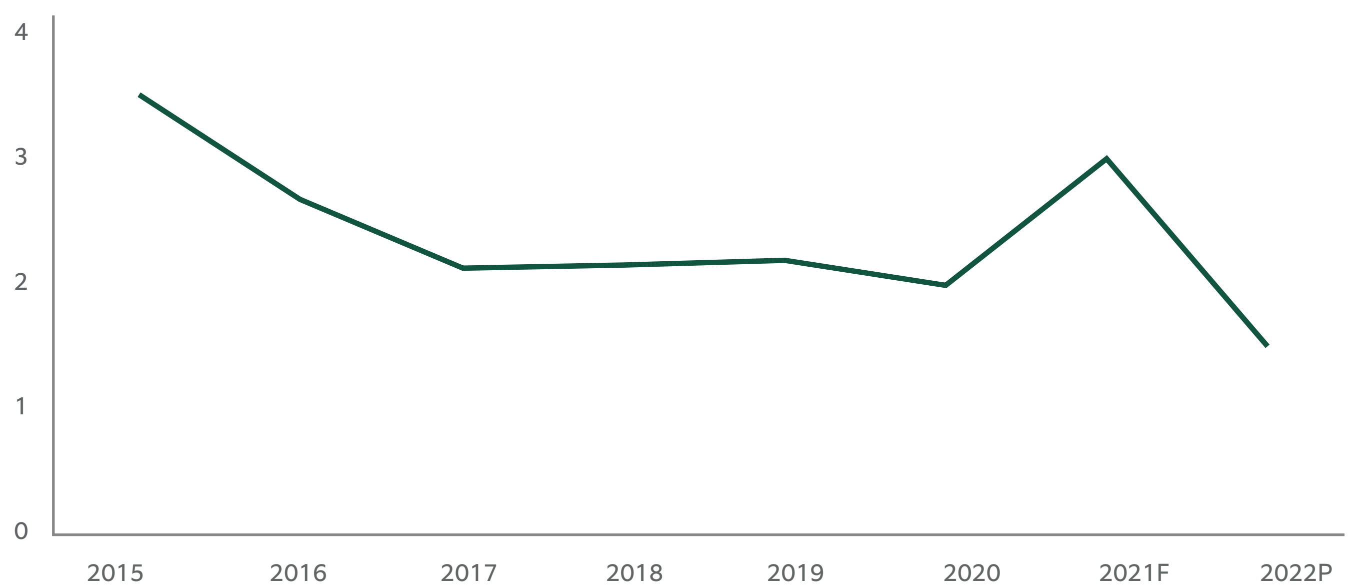
High yield
The senior living sector will be stressed as occupancy is still recovering and adjusting to COVID. The sector also struggles with similar staffing issues as hospitals.

The sector's anticipated challenges stem from dwindling stimulus effects, staffing squeezes and seasonal COVID spikes.

EXHIBIT 4: MARGIN PRESSURE ON THE HORIZON IN 2022

Margins were boosted by stimulus and recovering volumes in 2021. Expected decline in 2022 as stimulus dries up and cost pressures mount.

Hospital Operating Margin (%)



Sources: Northern Trust Asset Management, Merritt Research Services, data as of November 2021

TRANSPORTATION

Airport and toll road revenues rebounded in 2021. Recovery should continue in 2022, but growth will likely taper. Mass transit fare revenues should be bolstered by return to work progression, but remain below peak volume. Infrastructure legislation provides additional support.

- Airports continue to benefit from unexpended federal funds (ARPA) and a slow, but steady recovery in business and international travel.
- Continued growth in return to work will boost toll road transaction volume. Higher revenue from increased toll rates, many of which are indexed to inflation, will provide further support.
- Liquidity for both toll roads and airports should remain strong, as many quickly cut operating and capital costs in response to the COVID-19 pandemic.

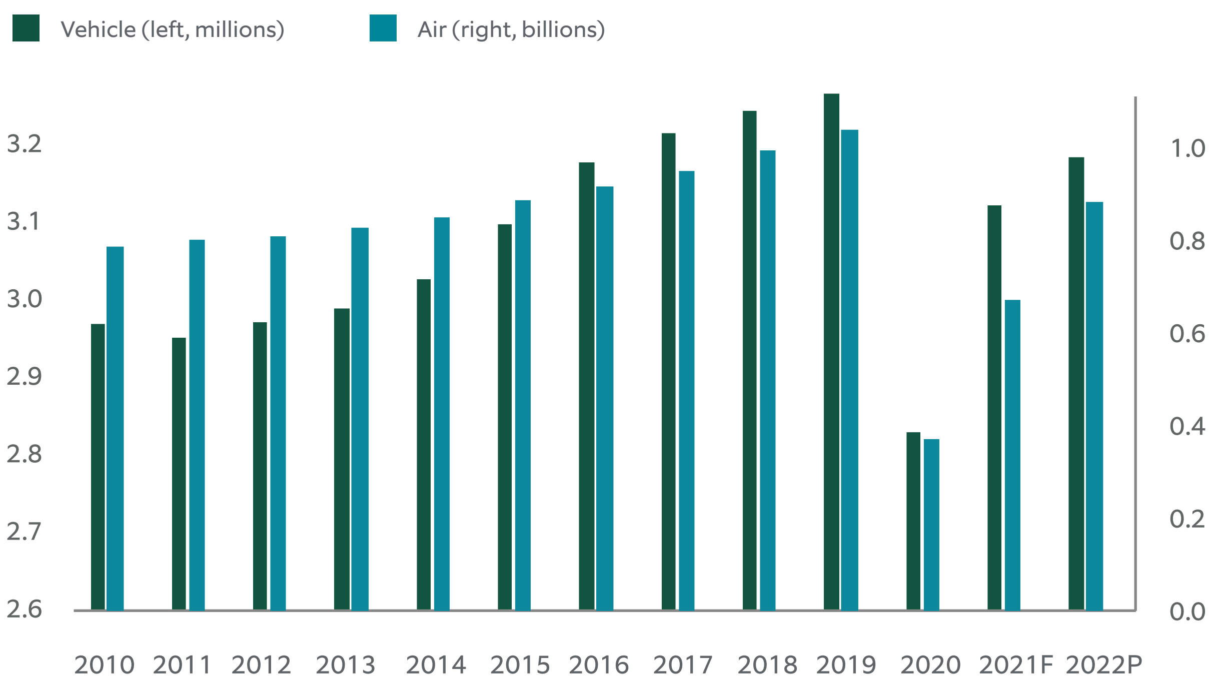
Resiliency

Both airports and toll roads remain resilient, supported by essentiality, healthy liquidity and federal stimulus. Continued traffic and enplanement recoveries, although at a slower pace, will help maintain positive momentum in the sectors.

As the workforce prepares for a mass return to office, transportation should continue to rebound and move closer to pre-pandemic levels.

EXHIBIT 5: VEHICLE AND AIR MILES

Both air and toll road travel declined significantly in 2020, but have recovered from the lows and are approaching pre-pandemic levels.



Sources: Northern Trust Asset Management, Federal Highway Administration, Department of Transportation, vehicle miles are seasonally adjusted, vehicle data as of August 2021 and airline data as of July 2021

ESSENTIAL UTILITIES (WATER/SEWER & POWER)

Public utilities are well positioned in 2022 due to healthy liquidity and strong federal infrastructure spending

- Debt service coverage and liquidity to remain healthy despite pandemic pressures.
- Automatic fuel cost adjustments will insulate many electricity providers from volatility in generation resource (i.e. natural gas) prices.
- Renewed federal focus on climate change, along with recently passed infrastructure legislation including funds for renewable sources and grid resiliency will likely increase the already rapid pace of shifting away from coal to greener electric generating sources such as solar and wind.

Resiliency

Utilities demonstrated their resilience through COVID. They are supported by their often monopolistic status with very high barriers to entry, inelastic demand, strong liquidity, healthy coverage and independent rate setting authority.

High yield

Growing investment in alternative power and new recycling technologies represent small, but increasing share of high yield issuance.

Utilities are poised to perform well in 2022, bolstered by liquidity and federal focus on infrastructure.

HOUSING

Increasing home prices, the improving job market, and declining share of mortgages in forbearance will improve loan performance and provide stability to the sector. High demand for affordable housing benefits Housing Finance Agencies, but lack of supply will continue to limit loan origination.

- The low interest environment is driving an increase in loan origination (but limited supply) while also squeezing margins due to low investment income. Margins have been impacted by an uptick in delinquencies and foreclosures, but the rebound in the economy and job market will likely be supportive.
- Asset-to-debt ratios are currently solid, but are expected to modestly decline due to reduced interest income, limited loan origination and debt being refinanced by commercial banks. Federal loan modifications on delinquent borrowers will likely reduce mortgage revenue, but agencies have adequate resources to absorb the losses.

Resiliency

Most HFAs have continued to strengthen their portfolios by adding MBS and government insurance, which can withstand potential loan losses in the near term. Strong liquidity and overcollateralization supports resiliency.

High yield

Low interest rates continue to drive housing demand and growth of development projects across the nation. Key risk is slowdown in demand due to inflated construction costs and home prices. Retail, office and commercial development districts remain stressed, as occupancy is still recovering and adjusting to pandemic changes.

An improved job market and increasing home prices means the housing sector will likely see increased stability from improved loan performance despite a low interest environment.

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How helpful was this paper?

DEFINITIONS

Outlook: The outlook for each municipal sector reflects our opinion on whether key macroeconomic and sector-specific factors will be predominantly supportive or challenging for the sector's fiscal health in the next 12 to 18 months. Individual outlooks reflect our base case expectation — modest general economic growth in the short term — as well as unique sector-specific factors and trends. The outlook does not reflect an issuer's ability to navigate these macro factors, nor does it suggest credit trajectory or rating movement for any individual issuer. The sector outlook considers all issuers in the sector, but is also weighted by market presence. For example, the state of California (the largest issuer in the market) will affect the state outlook more than Nebraska (one of the smallest issuers in the market).

Resiliency: Resiliency reflects a sector's relative ability to withstand a material economic downturn within the outlook's timeframe. This view specifically considers historical and projected revenue volatility, elasticity of market demand, flexibility of operating costs, fixed cost burden and current reserve position relative to projected need.

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