

nuveen

A TIAA Company

4Q

CHART TALK | 4Q 2020

Opportunities in municipal bonds and global fixed income

The what, why and how of the municipal and global fixed income markets

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.
NOT FDIC INSURED | NO BANK GUARANTEE | MAY LOSE VALUE

Table of contents

Municipal market

3	Key 2021 themes
4	Municipal market overview
11	Interest rate environment
14	Credit health
18	State of the market
25	Nuveen leadership

Fixed income market

26	Key 2021 themes
27	Interest rate environment
30	Income generation
34	Credit health
37	Sector highlights
47	Nuveen leadership

The municipal bond market themes/predictions for 2021

- 2021 will be a transition year as we seek an end to the coronavirus outbreak. The path to normalization will be long but ultimately successful.
- The Federal Reserve and U.S. Treasury will work together to support the markets, benefiting municipals.
- Monetary stimulus and low rates should boost economic activity as conditions stabilize.
- Inflation will remain low as labor productivity increases.
- Treasury yields will increase moderately, but the effect on municipals will be cushioned by yield spreads and the scarcity of tax-exempt bonds in light of a growing proportion of taxable municipals.
- The importance of the underlying municipal projects typically stabilizes the underlying credit for the investor.
- Downgrades and defaults will be lower than expected, and clarity on credit health will lift investor confidence.

Certain statements may be deemed forward-looking statements. Please note that any such statements are not guarantees or intended to constitute a prediction of any future performance; actual results or developments may differ materially from those projected.

The market is dominated by high quality and essential service sectors

THE WHAT

THE WHY—RATES

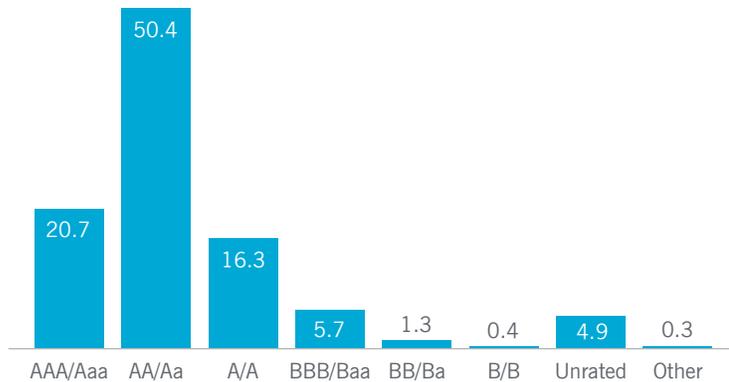
THE WHY—CREDIT

WHY NOW

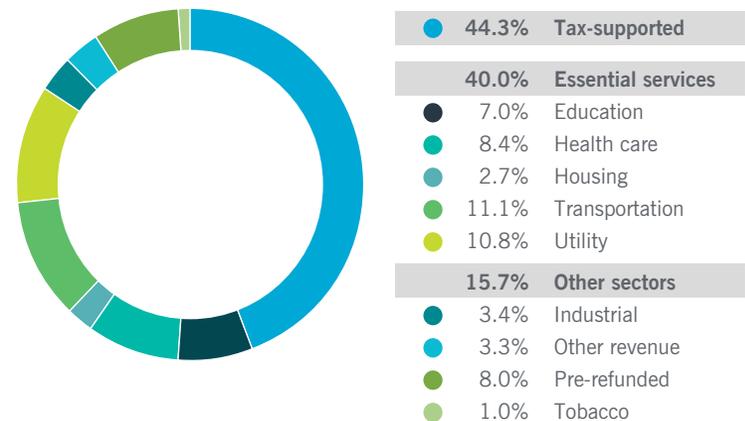
THE HOW

Municipal market overview

Municipal market credit quality breakdown (%)



Municipal market sector breakdown



Data source: Standard & Poor's for the S&P Municipal Bond Index as of 31 Dec 2020. Ratings shown are the highest rating given by one of the following national rating agencies: Standard & Poor's (S&P), Moody's Investors Service, Inc. (Moody's) or Fitch, Inc. (Fitch). Credit ratings are subject to change. Aaa, Aa, A and Baa are investment grade ratings; Ba, B and Caa/Ca/C are below investment grade ratings. Certain bonds backed by U.S. government or agency securities are regarded as having an implied rating equal to the rating of such securities. Holdings designated N/R are not rated by these national rating agencies. High yield or lower-rated bonds and municipals bonds carry greater credit risk and are subject to greater price volatility. Totals may not add up to 100% due to rounding.



Municipal bonds generally feature high credit qualities and are backed by tax revenues or linked to essential services

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Municipals have exhibited lower volatility ...

THE WHAT

THE WHY—RATES

THE WHY—CREDIT

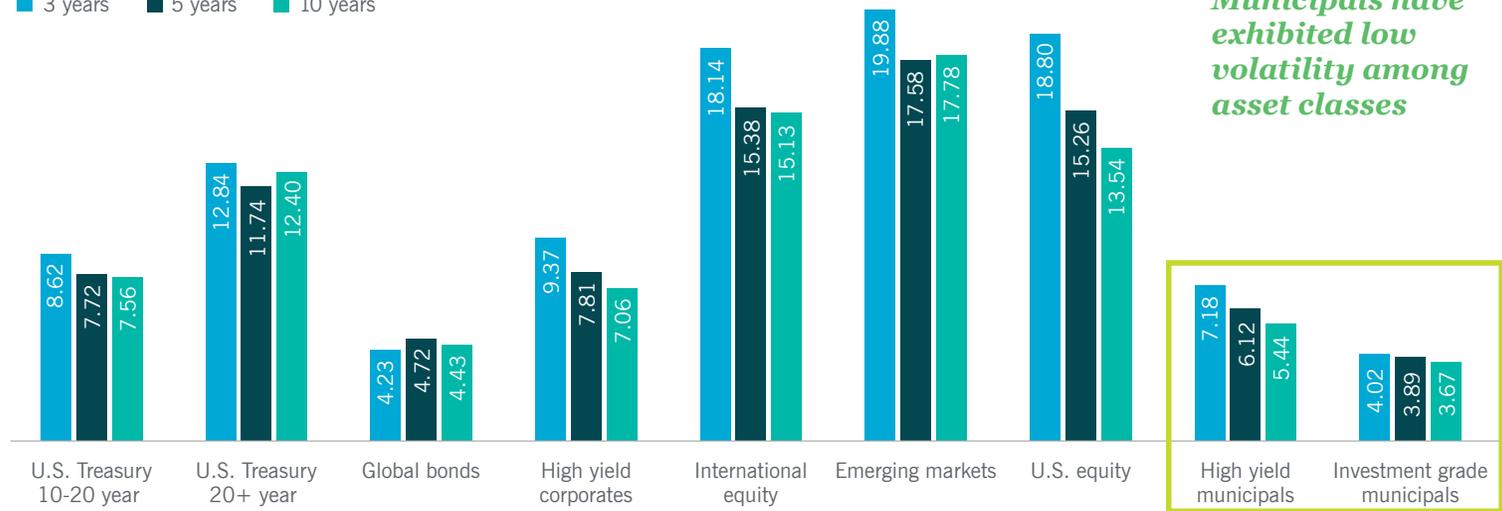
WHY NOW

THE HOW

Municipal market overview

Asset class volatility (standard deviation)

■ 3 years ■ 5 years ■ 10 years



Municipals have exhibited low volatility among asset classes

Data source: Morningstar, period ending 31 Dec 2020. **Past performance is no guarantee of future results. Representative Indexes:** **Treasuries:** Bloomberg Barclays U.S. 10-20 Year Treasury Index and the Bloomberg Barclays U.S. 20+ Year Treasury Index; **Global Bonds:** Bloomberg Barclays Global Aggregate Unhedged Index; **High Yield Corporates:** Bloomberg Barclays High Yield Corporate Index; **International Equity:** MSCI EAFE Index; **Emerging Markets:** MSCI Emerging Markets Index; **U.S. Equity:** S&P 500 Index; **High Yield Municipals:** S&P Municipal High Yield Index and **Investment Grade Municipals:** Bloomberg Barclays Municipal Bond Index.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

... while producing strong risk-adjusted returns

THE WHAT

THE WHY—RATES

THE WHY—CREDIT

WHY NOW

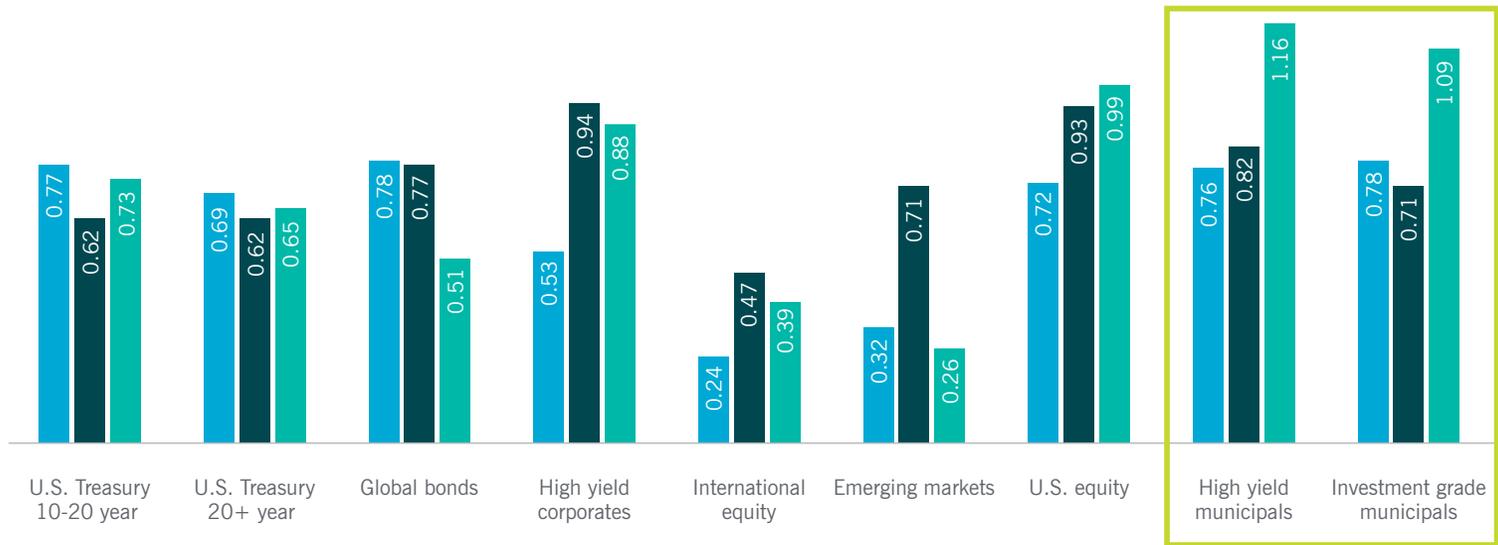
THE HOW

Municipal market overview

Risk-adjusted returns (Sharpe ratio)

■ 3 years ■ 5 years ■ 10 years

i *Municipals have been relatively attractive on a risk-adjusted basis*



Data source: Morningstar, period ending 31 Dec 2020. **Past performance is no guarantee of future results. Representative Indexes:** **Treasuries:** Bloomberg Barclays U.S. 10-20 Year Treasury Index and the Bloomberg Barclays U.S. 20+ Year Treasury Index; **Global Bonds:** Bloomberg Barclays Global Aggregate Unhedged Index; **High Yield Corporates:** Bloomberg Barclays High Yield Corporate Index; **International Equity:** MSCI EAFE Index; **Emerging Markets:** MSCI Emerging Markets Index; **U.S. Equity:** S&P 500 Index; **High Yield Municipals:** S&P Municipal High Yield Index and **Investment Grade Municipals:** Bloomberg Barclays Municipal Bond Index.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Municipals are attractive on an after-tax basis

THE WHAT

THE WHY—RATES

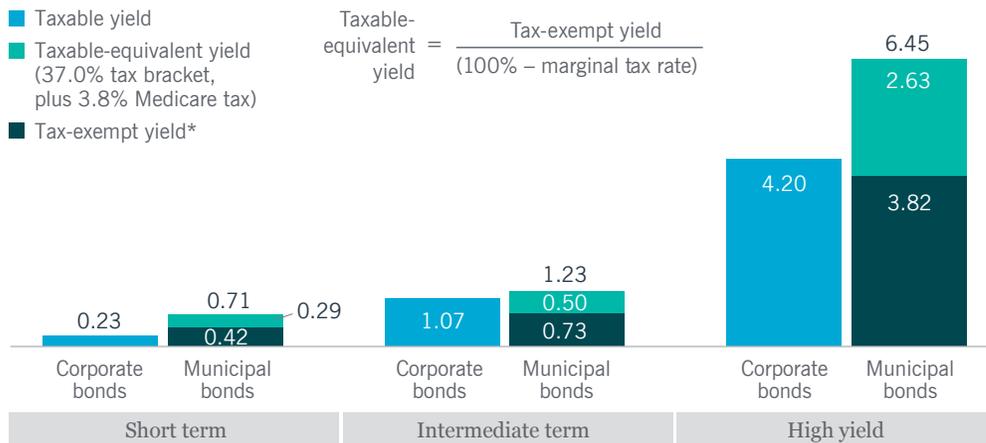
THE WHY—CREDIT

WHY NOW

THE HOW

Municipal market overview

Taxable and taxable-equivalent yields (%)



The tax advantages of municipal bonds can enable investors to keep more of what they earn

The taxable-equivalent yield is based on the highest individual marginal federal tax rate of 37.0%, plus the 3.8% Medicare tax on investment income (the Net Investment Income Tax). Individual tax rates may vary. *Some income may be subject to state and local taxes and the federal alternative minimum tax.

Data source: Bloomberg L.P., 31 Dec 2020. **Past performance is no guarantee of future results.** Yields are yield to worst. Yield to worst is the lowest potential yield that can be received on a bond without the issuer defaulting. Taxable-equivalent yield is the yield a taxable investment needs to possess (before taxes) for its yield to be equal to that of a tax-free municipal investment. The yields shown are based on the highest individual marginal federal tax rate of 37%, plus the 3.8% Medicare tax on investment income. Individual tax rates may vary. They do not take into account the effects of the federal alternative minimum tax (AMT) or capital gains taxes. Representative Indexes: **Short Term Corporate Bonds:** Bloomberg Barclays U.S. Government/Credit 1-3 Year Index; **Short Term Municipal Bonds:** Bloomberg Barclays Municipal Short Index; **Intermediate Term Corporate Bonds:** Bloomberg Barclays U.S. Government/Credit Intermediate Index; **Intermediate Term Municipal Bonds:** Bloomberg Barclays Municipal Intermediate Index; **High Yield Corporate Bonds:** Bloomberg Barclays Corporate High Yield 2% Issuer Capped Index; **High Yield Municipal Bonds:** Bloomberg Barclays High Yield Municipal Bond Index. Different benchmarks, economic periods, methodologies and market conditions will produce different results.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Municipal bonds may improve portfolio returns, while reducing risk

THE WHAT

THE WHY—RATES

THE WHY—CREDIT

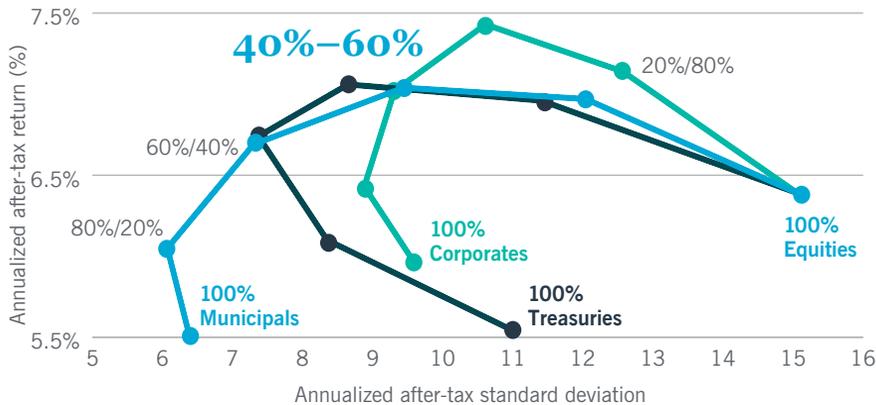
WHY NOW

THE HOW

Municipal market overview

Risk/return characteristics of diversified portfolios

● Municipal/equity blend ● Treasury/equity blend ● Corporate/equity blend



Annualized after-tax returns for hypothetical blended portfolios

Municipal/ Equity blend	Treasury/ Equity blend	Corporate/ Equity blend	Equity allocation
5.50%	5.54%	5.99%	0%
6.05%	6.10%	6.43%	20%
6.69%	6.74%	7.02%	40%
7.04%	7.06%	7.43%	60%
6.97%	6.96%	7.14%	80%
6.39%	6.39%	6.39%	100%

Data source: Bloomberg L.P., and Nuveen, 1 Jan 2001 – 31 Dec 2020. **Past performance is no guarantee of future results.** **Municipal Bonds:** Bloomberg Barclays Long Municipal Index | **Treasury Bonds:** Bloomberg Barclays Long Treasury Index | **Corporate Bonds:** Bloomberg Barclays Long Credit Index | **Equities:** S&P 500 Index.

These conclusions are derived from the following portfolio assumptions: All investment income generated by the portfolio is reinvested annually, along with the after-tax proceeds of an arbitrarily assumed 20% annualized turnover rate. The allocation between the two assets was allowed to roam within a 1% band around its target before rebalancing. No provision was made for investment fees or commissions. Investment income was taxed at the historically appropriate rate for an individual with \$100,000 in taxable income in year 2020 dollars; net capital gains taxes, if any, were deducted at the rate appropriate for the period. At the end of 2020, the portfolios were fully liquidated to recognize the existing tax liability. Different economic periods and different assumptions, such as tax rate, will have different results.

This study is based on historical data gathered from sources we consider to be reliable and consistent. The methodology applied and results produced by this study indicate past investment performance of market indexes over the 1 Jan 2001 – 31 Dec 2020 time period exclusively and in no way should be considered representative of the past performance of any investment product or predictive of future investment expectations and performance for the municipal market or investment products. All investments carry a certain degree of risk, including possible loss of principal, and there is no assurance that an investment will provide positive performance over any period of time. Diversification does not insure against market loss. Investors should consult with their professional advisors before making any tax or investment decisions.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Municipals have been resilient during uncertain environments

THE WHAT

THE WHY—RATES

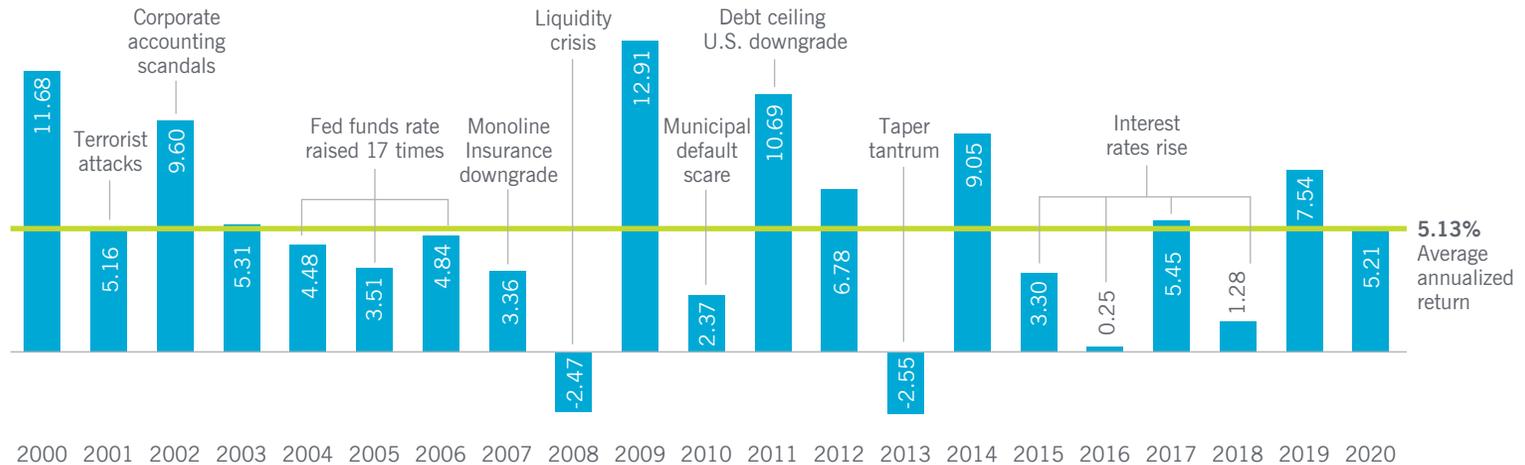
THE WHY—CREDIT

WHY NOW

THE HOW

Municipal market overview

Bloomberg Barclays Municipal Bond Index returns (%)



Data source: Bloomberg, L.P., 31 Dec 2020. **Past performance is no guarantee of future results.** All investments carry a certain degree of risk, including possible loss of principal, and there is no assurance that an investment will provide positive performance over any period of time. Index returns include reinvestment of income and do not reflect investment advisory and other fees that would reduce performance in an actual client account.



Volatility in the municipal market has increased since 2007

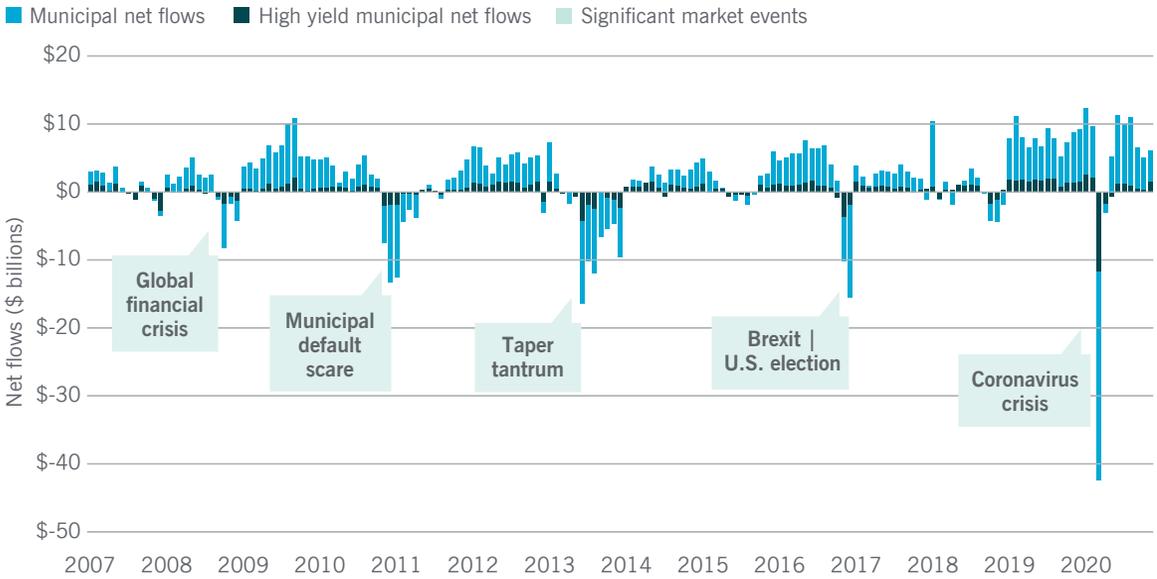
OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Municipal fund flows are recovering

THE WHAT	THE WHY—RATES	THE WHY—CREDIT	WHY NOW	THE HOW
----------	---------------	----------------	---------	---------

Municipal market overview

Municipal and high yield mutual fund net flows



Following record outflows, we are seeing a renewed interest in municipals

Source: Morningstar Direct, 1 Jan 2007 – 30 Nov 2020. Industry categories: **Municipals** represent the total of all municipal bond open-end funds, including high yield; **High yield municipals** represent all high yield municipal bond open-end funds. Shading represents significant market events.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Municipal-to-Treasury ratios have decreased after a sharp spike in March

THE WHAT

THE WHY—RATES

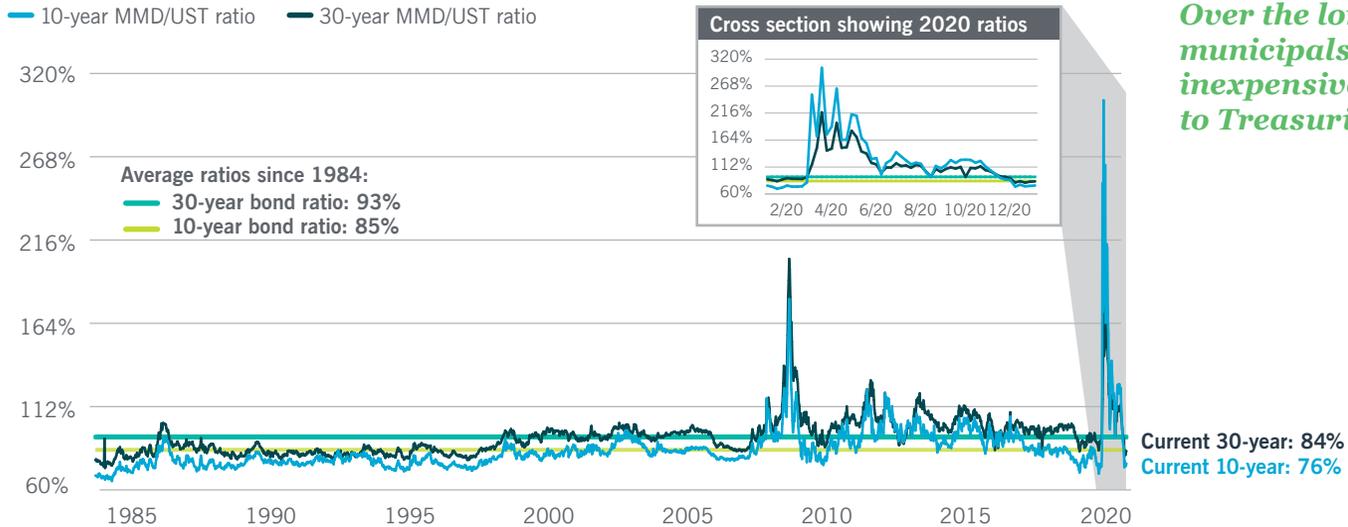
THE WHY—CREDIT

WHY NOW

THE HOW

Interest rate environment

AAA municipals' value relative to Treasuries



Over the long term, municipals appear inexpensive relative to Treasuries

Data source: Refinitiv MMD for fair value Municipal 10- and 30-Year Index AAA General Obligation bonds; Bloomberg for 10- and 30-year U.S. Treasury yields, 1 Jan 1984 – 31 Dec 2020. **Past performance is no guarantee of future results.** Represents the relative value of municipal yields to Treasury yields. All investments carry a certain degree of risk, including possible loss of principal, and there is no assurance that an investment will provide positive performance over any period of time. Individual tax rates may vary. Some income may be subject to the federal alternative minimum tax (AMT) or capital gains taxes.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Treasury yields have increased while AAA municipals have remained mostly stable

THE WHAT

THE WHY—RATES

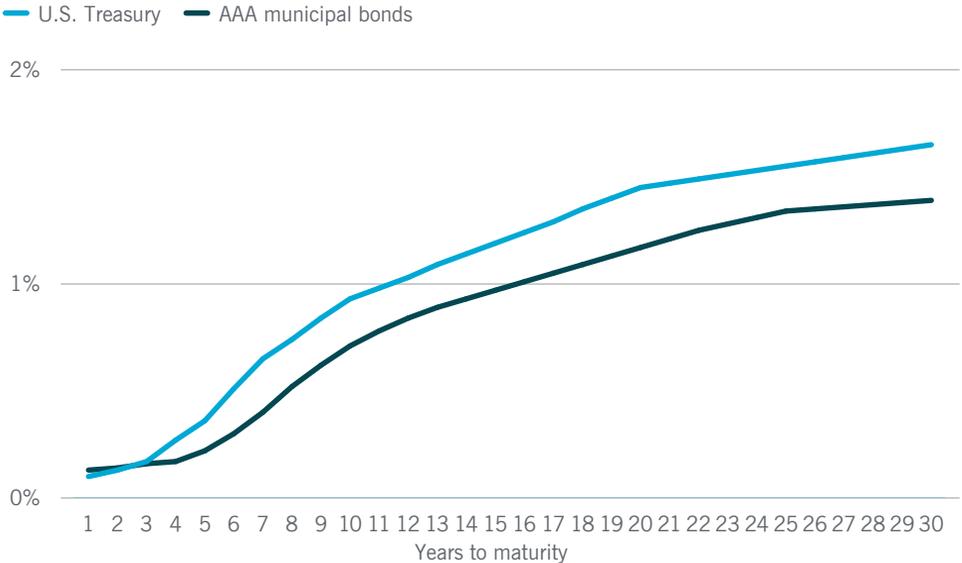
THE WHY—CREDIT

WHY NOW

THE HOW

Interest rate environment

U.S. Treasuries vs. AAA-rated municipal bonds



Historically, 10-year AAA municipals yield 85% and 30-year AAA municipals yield 93% of Treasuries. This relationship is currently mis-priced, providing opportunities for investors

Data source: Refinitiv MMD, 31 Dec 2020. Past performance is no guarantee of future results.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Staying the course in municipals has benefited investors

THE WHAT

THE WHY—RATES

THE WHY—CREDIT

WHY NOW

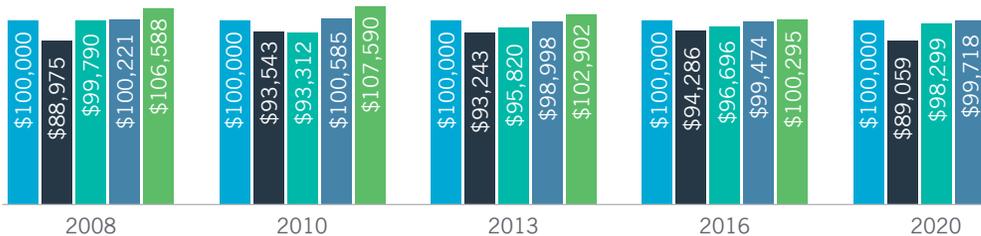
THE HOW

Interest rate environment

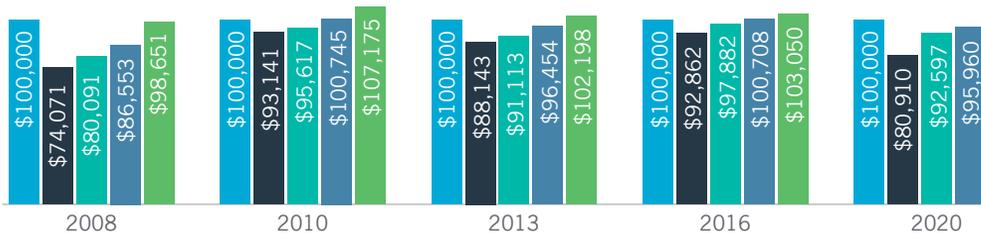
Value of a hypothetical \$100,000 portfolio

■ Initial investment ■ After yield spike ■ 3 months ■ 6 months ■ 12 months

Broad municipal market



High yield municipal market



When municipal yields increased by at least 100 basis points in less than one year, municipal bond prices typically recovered within 12 months

Data source: Bloomberg L.P. Based on returns of the Bloomberg Barclays Municipal Bond Index and the Bloomberg Barclays High Yield Municipal Bond Index. **Broad municipal market time periods:** 2008: 12 Sep 2008 – 15 Oct 2009; 2010: 12 Oct 2010 – 13 Jan 2012; 2013: 01 May 2013 – 05 Sep 2014; 2016: 06 Jul 2016 – 01 Dec 2017; 2020: 09 Mar 2020 – 23 Sep 2020. **High yield municipal market time periods:** 2008: 11 Sep 2008 – 19 Dec 2008; 2010: 25 Oct 2010 – 14 Jan 2011; 2013: 22 May 2013 – 09 Sep 2013; 2016: 09 Sep 2016 – 01 Dec 2016; 2020: 28 Feb 2020 – 20 Mar 2020. Time periods represent investment grade and high yield market highs/lows based on the respective index for each rising rate period. For the 2020 period, the 12 month data is not yet available. Different benchmarks and economic periods will produce different results. All investments carry a certain degree of risk, including possible loss of principal, and there is no assurance that an investment will provide positive performance over any period of time. High yield or lower-rated bonds and municipal bonds carry greater credit risk, and are subject to greater price volatility. Index returns include reinvestment of income and do not reflect investment advisory and/or other fees that would reduce performance in an actual client account. Hypothetical performance is no guarantee of future results.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Credit selection remains critically important and opportunities remain issuer-specific

THE WHAT

THE WHY—RATES

THE WHY—CREDIT

WHY NOW

THE HOW

Credit health

Coronavirus: potential impact on municipal bond sectors

High impact

CCRC / Senior living

Mixed impact

Health care
Industrial
Ports
Higher education

Temporary impact

Airports
Airlines
Dedicated tax bonds
Land secured
Toll roads
Mass transit

Low impact

Charter schools
General obligations
Public power
Essential services
Single-family housing

Defaults remain in line with historical trends

THE WHAT

THE WHY—RATES

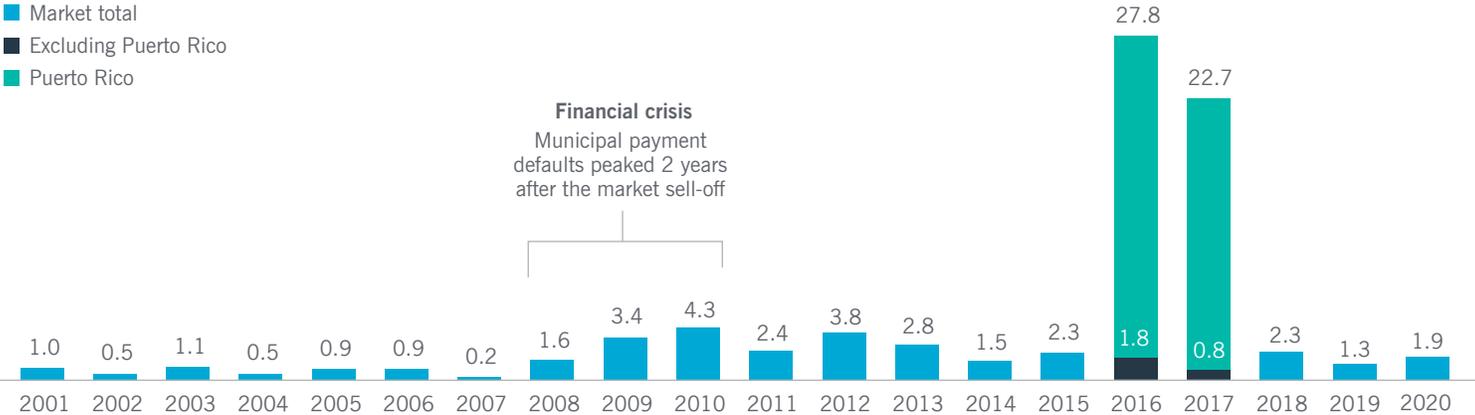
THE WHY—CREDIT

WHY NOW

THE HOW

Credit health

Municipal payment defaults (\$ billions)



Financial crisis
Municipal payment defaults peaked 2 years after the market sell-off



Nursing homes and industrial development bonds accounted for 68% of defaults in 2020

Data source: Bank of America/Merrill Lynch Research, 30 Nov 2020. Data represents defaults on the entire universe of bonds, both rated and unrated, and includes Puerto Rico defaults.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Municipal bonds have fared better than similarly rated corporates

THE WHAT

THE WHY—RATES

THE WHY—CREDIT

WHY NOW

THE HOW

Credit health

Moody's average cumulative default rates, 1970–2019 Municipals vs. corporates

Rating	5-year history			10-year history		
	Corporate	Municipal	Difference	Corporate	Municipal	Difference
Aaa	0.08%	0.00%	0.08%	0.36%	0.00%	0.36%
Aa	0.29%	0.01%	0.28%	0.79%	0.02%	0.77%
A	0.73%	0.03%	0.70%	2.11%	0.10%	2.01%
Baa	1.47%	0.47%	1.00%	3.58%	1.10%	2.48%
Ba	7.77%	1.98%	5.79%	15.40%	3.57%	11.83%
B	20.33%	12.20%	8.13%	33.70%	17.49%	16.21%
Caa-C	33.56%	20.26%	13.30%	47.89%	25.07%	22.82%



A-rated municipal bonds have historically had default rates close to those of Aaa corporate bonds

Data source: Special Comment: U.S. Municipal Bond Defaults and Recoveries, 1970–2019, Moody's Investors Service. **Past performance is no guarantee of future results.** The universe represents 16,000 bonds rated by Moody's in this study.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Wide municipal yield spreads underline the importance of credit research

THE WHAT

THE WHY—RATES

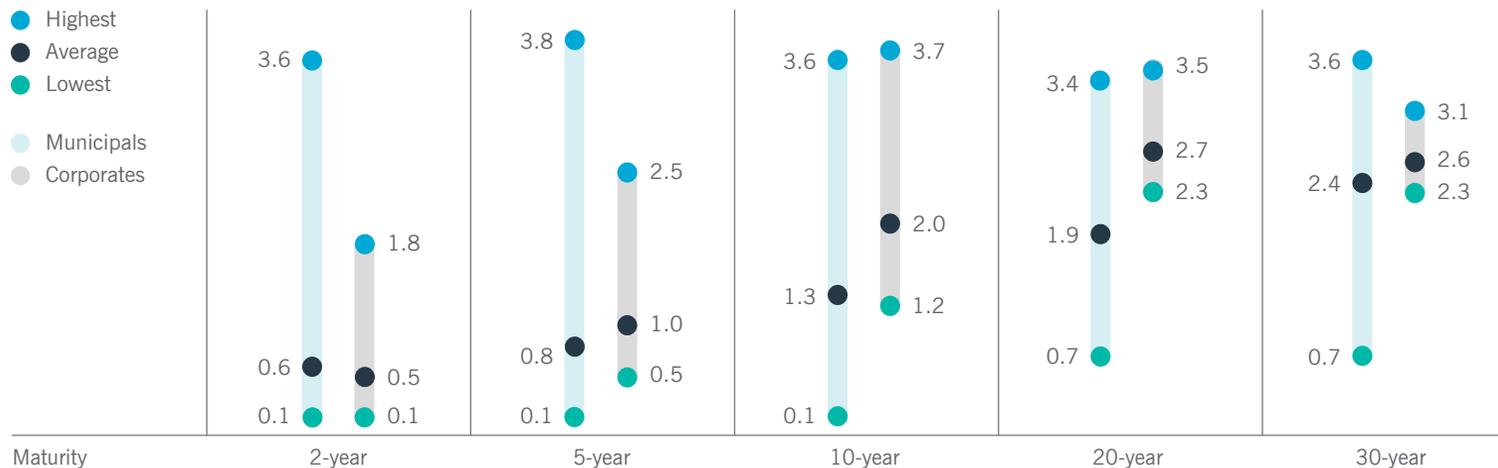
THE WHY—CREDIT

WHY NOW

THE HOW

Credit health

Range of yields for A-rated municipal and corporate bonds (%)



Data source: S&P/Investortools and ICE BofA Merrill Lynch, 31 Dec 2020. **Past performance is no guarantee of future results.** Universes are the A-rated bonds in the S&P Municipal Bond Index and the ICE BofA Merrill Lynch U.S. Corporate, Government & Mortgage Index. Any reference to municipal credit ratings refers to the highest rating given by one of the following national rating agencies: S&P, Moody's or Fitch. Credit ratings are subject to change. AAA, AA, A and BBB are investment grade ratings; BB, B, CCC, CC, C and D are below investment grade ratings. **Dispersion** describes the size of the range of values expected for a particular variable. **Yield** refers to the interest or dividends received from a security and is usually expressed annually as a percentage based on the investment's cost, its current market value or its face value.



Wide yield dispersions of similarly rated bonds make active and ongoing credit research critical to making risk/reward decisions

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Municipal supply remained strong in 2020

THE WHAT

THE WHY—RATES

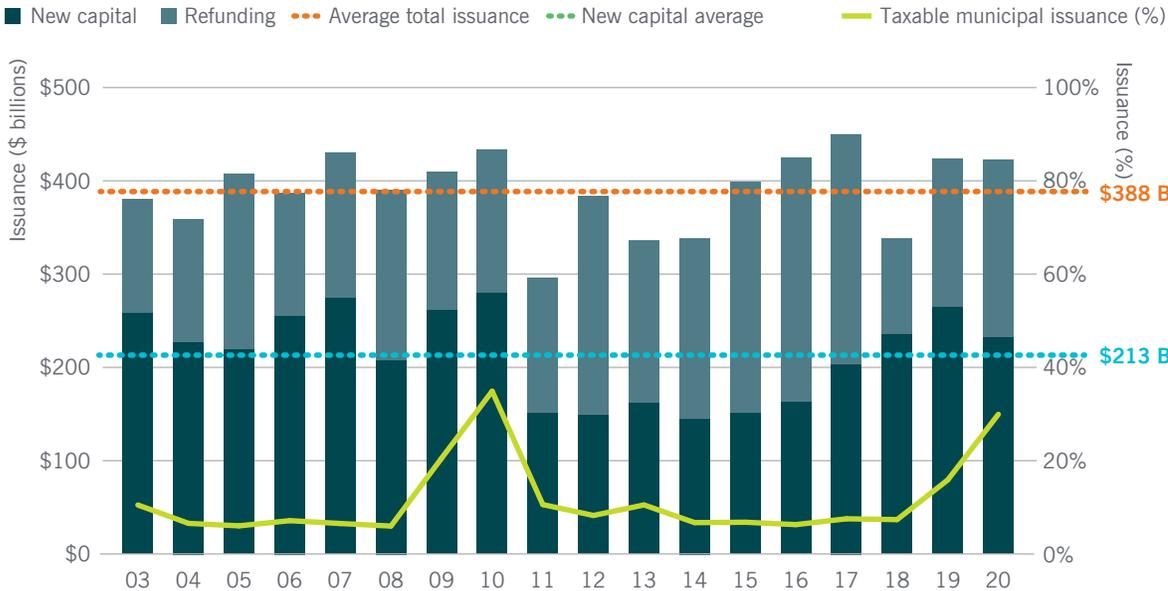
THE WHY—CREDIT

WHY NOW

THE HOW

State of the market

Overall municipal issuance



Net supply of tax-exempt municipals has been decreasing due to increase in taxable municipal bond issuance

Data source: Securities Industry and Financial Markets Association (SIFMA.org), U.S. Bond Market Issuance and Outstanding, 31 Dec 2020.

Building individual bond portfolios has become more difficult

THE WHAT

THE WHY—RATES

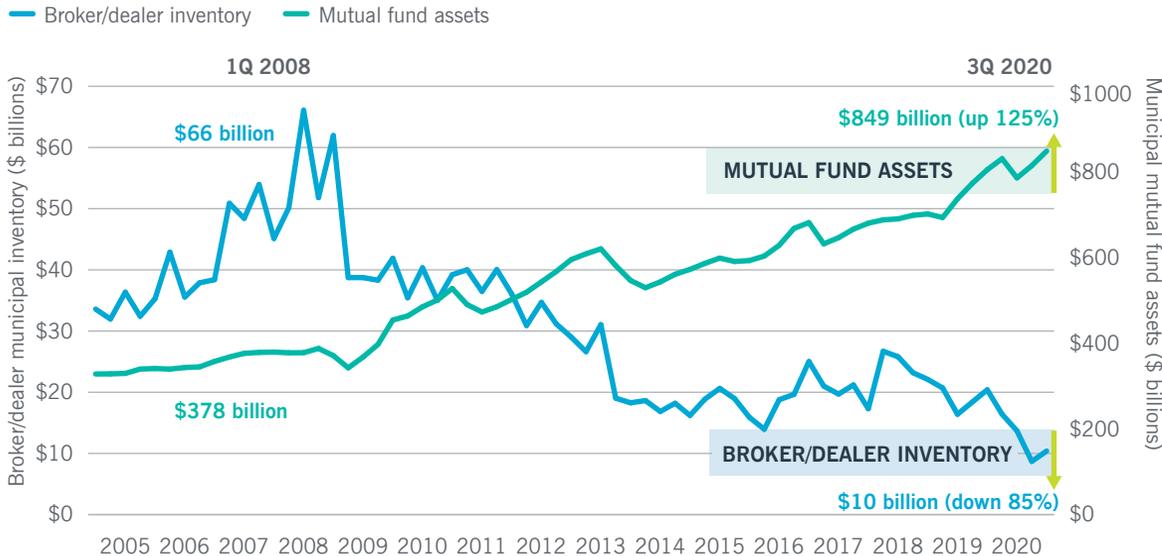
THE WHY—CREDIT

WHY NOW

THE HOW

State of the market

Municipal assets vs. available inventory



Professional managers can help in an environment of lower inventory

Data source: Issuance data from Bond Buyer as of 31 Dec 2020. Assets and inventory data from Federal Reserve Flow of Funds ending 10 Dec 2020.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

The relative size of the municipal bond market is shrinking

THE WHAT

THE WHY—RATES

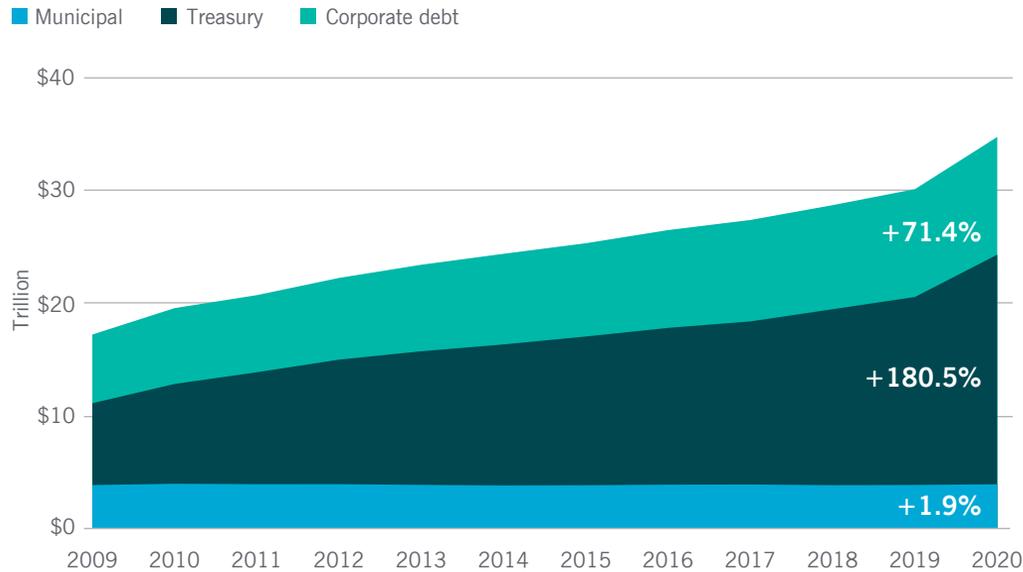
THE WHY—CREDIT

WHY NOW

THE HOW

State of the market

U.S. Treasury and corporate debt outstanding has increased



At the same time, the amount of outstanding municipal bonds has declined

Source: SIFMA, 30 Nov 2020

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

With the \$10,000 cap on State and Local Taxes (SALT), deductions apply to more than just the wealthiest taxpayers

THE WHAT

THE WHY—RATES

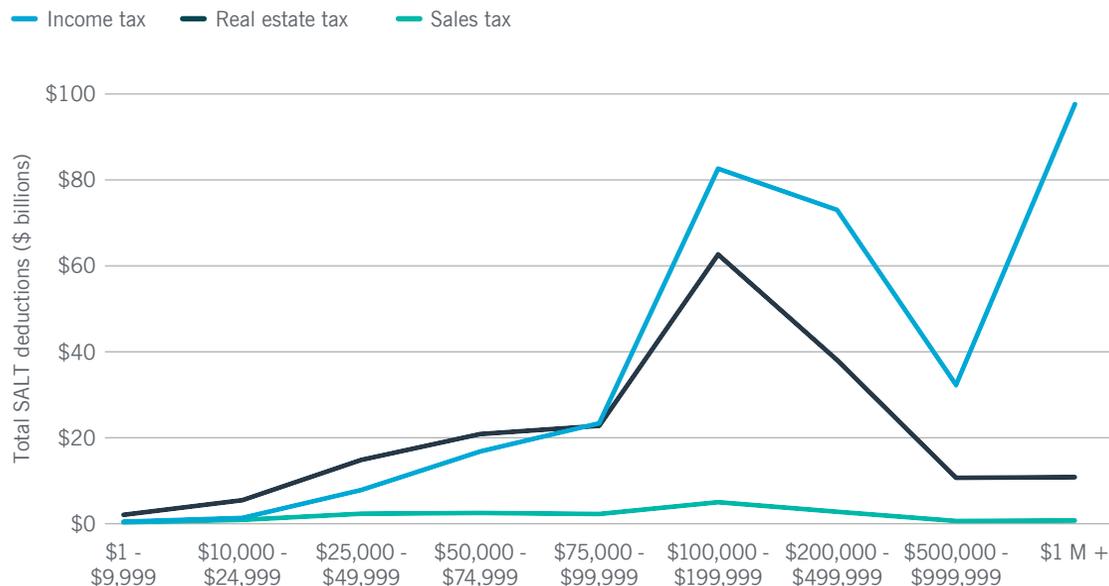
THE WHY—CREDIT

WHY NOW

THE HOW

State of the market

2015 total SALT deductions by category, for those taking deductions



With the cap on SALT deductions, we think municipal bonds will continue to appeal to investors in all tax brackets in higher-tax states

Data source: IRS tax data for 2015 returns.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Yield spreads have remained wide since the credit crisis

THE WHAT

THE WHY—RATES

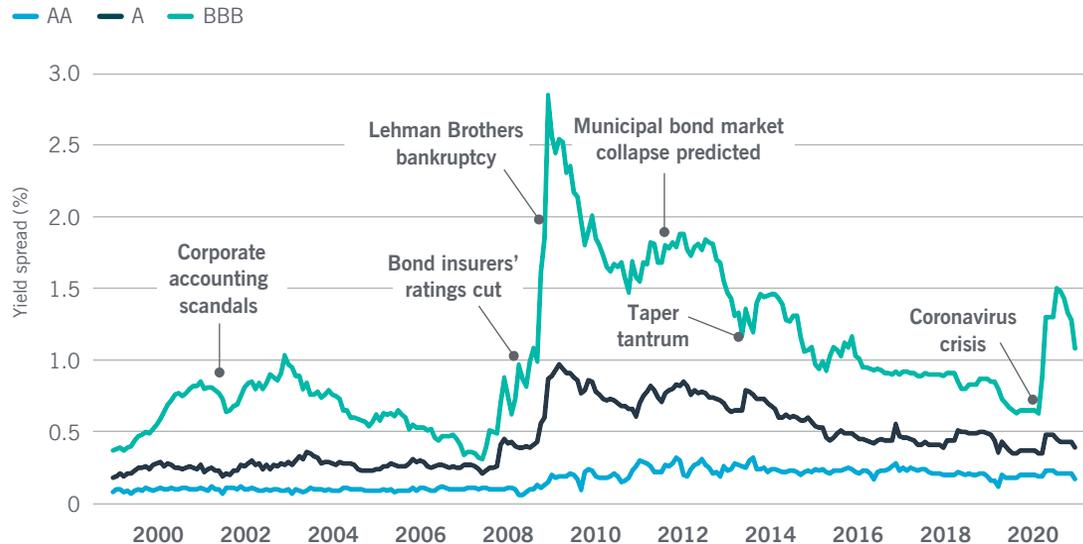
THE WHY—CREDIT

WHY NOW

THE HOW

State of the market

Credit spreads vs. AAA-rated municipal bonds



Opportunities exist for those who know how to assess risk in lower-rated segments of the market

Data source: S&P/InvestorTools from 1 Jan 1999 – 31 Dec 2020. Past performance is no guarantee of future results. Chart shows yield difference between the AAA-rated Municipal Bond Yield Curve and the AA-, A- and BBB-rated Municipal Bond Yield Curves.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

High yield credit spreads are tightening

THE WHAT

THE WHY—RATES

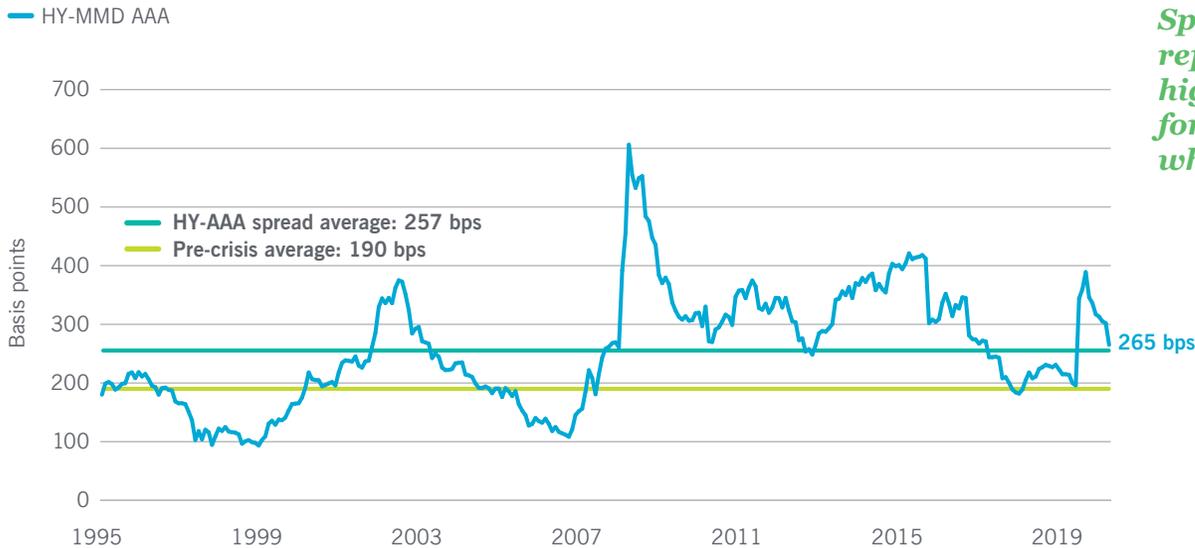
THE WHY—CREDIT

WHY NOW

THE HOW

State of the market

Bloomberg Barclays High Yield Municipal Index vs. AAA yields



Spreads may represent value in high yield municipals for those who know where to look

Data sources: Barclays, Refinitiv MMD, 31 Oct 1995 – 31 Dec 2020. Chart shows data to the earliest period available. Pre-crisis period is 31 Oct 1995 – 31 Dec 2007. **Past performance is no guarantee of future results.** High yield municipal yields represented by the Bloomberg Barclays High Yield Municipal Index; AAA municipal yields represented by Municipal Market Data (MMD) yields for AAA rated 20-year bonds. High yield or lower-rated bonds and municipal bonds carry greater credit risk, and are subject to greater price volatility. Ratings shown are from S&P and are subject to change. AAA, AA, A and BBB are investment grade ratings; BB, B, CCC/CC/C and D are below-investment grade ratings. Different benchmarks, economic periods, methodologies and market conditions will produce different results. Pre-crisis period is 31 Oct 1995 – 31 Dec 2007.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Ratio to high yield corporates is elevated

THE WHAT

THE WHY—RATES

THE WHY—CREDIT

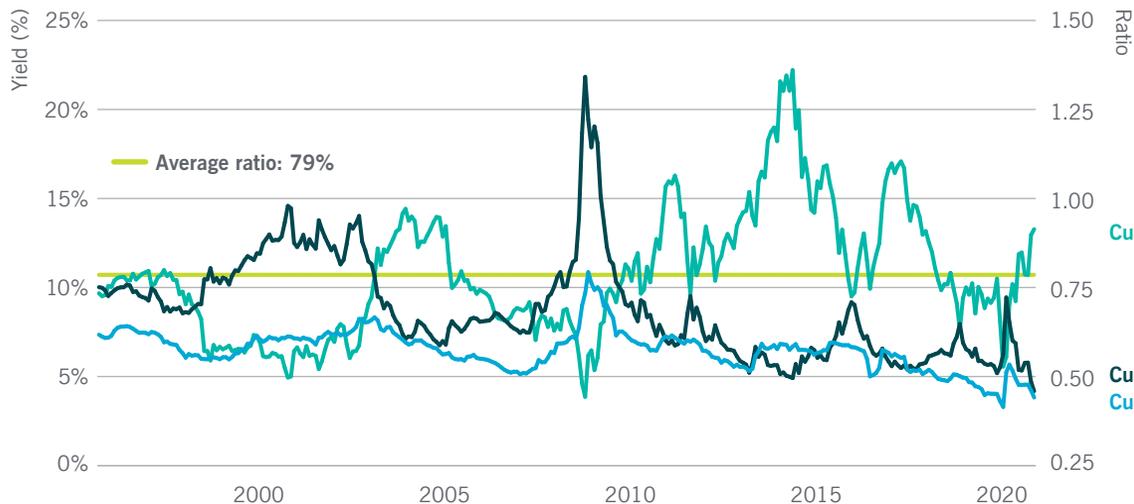
WHY NOW

THE HOW

State of the market

Bloomberg Barclays High Yield Municipal vs. Bloomberg Barclays High Yield Corporate

— Municipal high yield — Corporate high yield — Ratio



Recent selling pressure in high yield municipals may have created value

Current ratio: 91%

Current corporate yield: 4.18%
Current muni yield: 3.82%

Data source: Bloomberg L.P., 31 Oct 1995 – 31 Dec 2020. Past performance is no guarantee of future results. Representative Indexes: High Yield Municipal: Bloomberg Barclays High Yield Municipal Index; High Yield Corporate: Bloomberg Barclays U.S. High Yield Corporate Index. High yield or lower-rated bonds and municipal bonds carry greater credit risk, and are subject to greater price volatility. Indices are unmanaged and unavailable for direct investment.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Municipal bond investing with Nuveen

THE WHAT

THE WHY—RATES

THE WHY—CREDIT

WHY NOW

THE HOW

Nuveen leadership

Nuveen believes five key differentiators are important to creating portfolio growth.

Credit research

The experienced research team evaluates municipal bonds and sectors, seeking to find value in bonds that the general public may have overlooked.

Institutional access

Nuveen navigates the inefficient municipal bond market through established relationships with more than 100 national and regional dealers.

Institutional trade execution*

A large presence in the market provides greater access to inventory to find bonds in appropriate sizes and at institutional prices.

Tax-aware investing

The ability to trade at institutional prices allows the team to efficiently capture tax losses and use them to offset gains.

Active portfolio oversight

By actively trading bonds, the team seeks to sell appreciated bonds, capture gains and purchase bonds that have the potential to enhance overall portfolio returns.

*Institutional trade execution applies primarily to municipal bond trading as part of ongoing account management and generally does not include sales of legacy securities contributed to new or existing accounts or in connection with termination and liquidation instructions. Nuveen Asset Management, LLC ("NAM") seeks to expeditiously and efficiently effect sales of legacy securities contributed to new or existing accounts or in connection with termination and liquidation instructions, generally by directing the execution of sale to the relevant broker-dealer/custodian designated by the client's managed account program, subject to program limitations. Primarily due to the time constraints and lot sizes applicable to these transactions, and because the full range of trading techniques is generally not available (including aggregation), the prices received in these transactions may be less favorable than the prices that could be attained for sales of securities selected by NAM as part of ongoing management. Clients always reserve the right to fund accounts with cash as opposed to legacy securities and to keep any securities in their accounts upon termination of services.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

The evolving fixed income market environment

Key 2021 themes

Economic environment

- The U.S. economy continues to recover, and growth is expected to build through the year.
- Global growth is strong, but uneven and led by China.
- Central banks remain extraordinarily accommodative.
- Fiscal policy supports growth.

Portfolio positioning

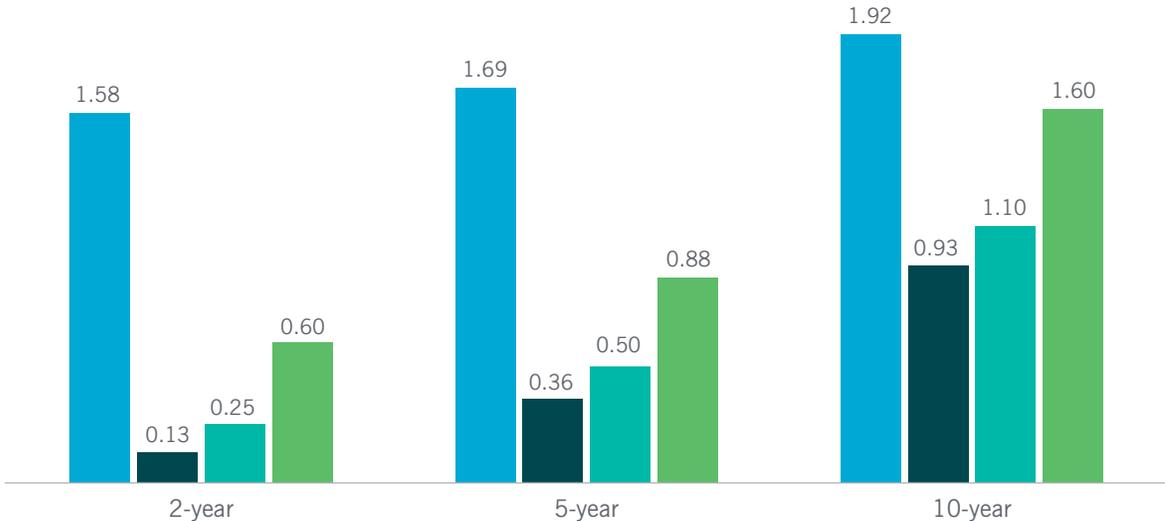
- We prefer diversified overweight to spread sectors with a focus on mid-quality credit assets.
- Given somewhat stretched valuations and a still-uncertain pandemic outlook, credit selection will be key.
- We advocate deep research and favor idiosyncratic stories with positive long-term growth prospects.
- Declining default forecasts and improving fundamentals should benefit credit sectors.
- Income should drive performance as valuations are unlikely to improve significantly.

Interest rates will rise, but remain low

Interest rate environment

Treasury yields (%)

■ 31 Dec 2019 ■ 30 Dec 2020 ■ 31 Mar 2021 est. ■ 30 Dec 2021 est.



Fed will remain at the zero lower bound until inflation is sustainably above 2%

Estimates as of 31 Dec 2020. Sources: www.treasury.gov, Nuveen.

Low rate environment persists

THE WHAT

THE WHY—RATES

THE WHY—INCOME

THE WHY—CREDIT

WHY NOW—SECTOR

THE HOW

Interest rate environment

We believe these factors will continue to keep rates low

FUNDAMENTAL FACTORS

- Economic growth**
- The U.S. economy continues to recover, and growth should build through the year
 - Global growth is strong, but uneven and led by China
 - The pace of vaccine delivery and virus spread are still the most critical factors for growth trajectory

- Inflation**
- Remains contained and expectations are rising modestly
 - Inflation will likely spike due to base effect in March and April
 - Despite higher risks, policymakers will not be forced to tighten prematurely

- Policy**
- Massively accommodative central bank policy anchors low rates
 - Global fiscal policy designed to minimize economic damage

TECHNICAL FACTORS

- Global capital flows**
- U.S. Treasury market is deep and liquid, and remains a safe haven
 - Increased government spending could pressure rates higher over longer term

- Investor positioning**
- Low yields and expected returns on high-quality assets drive investors out the risk spectrum
 - High cash balances and ample liquidity support fixed income demand despite paltry yields

- Global risks**
- Uncertainty persists around vaccine delivery, virus containment, pace of recovery and policy response, maintaining demand for fixed income assets

Rising index risks favor active management

THE WHAT

THE WHY—RATES

THE WHY—INCOME

THE WHY—CREDIT

WHY NOW—SECTOR

THE HOW

Interest rate environment

Treasuries now represent a larger portion of the Aggregate Index ...



Actively managed portfolios can manage interest rate risk by varying sector composition

... extending Aggregate Index duration over time



Source: Bloomberg Barclays. As of 31 Dec 2020.

Aggregate Index is represented by the Bloomberg Barclays Aggregate Index. Duration is expressed as a number of years and represents a measure of the sensitivity of the price – the value of principal – of a fixed-income investment to a change in interest rates.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

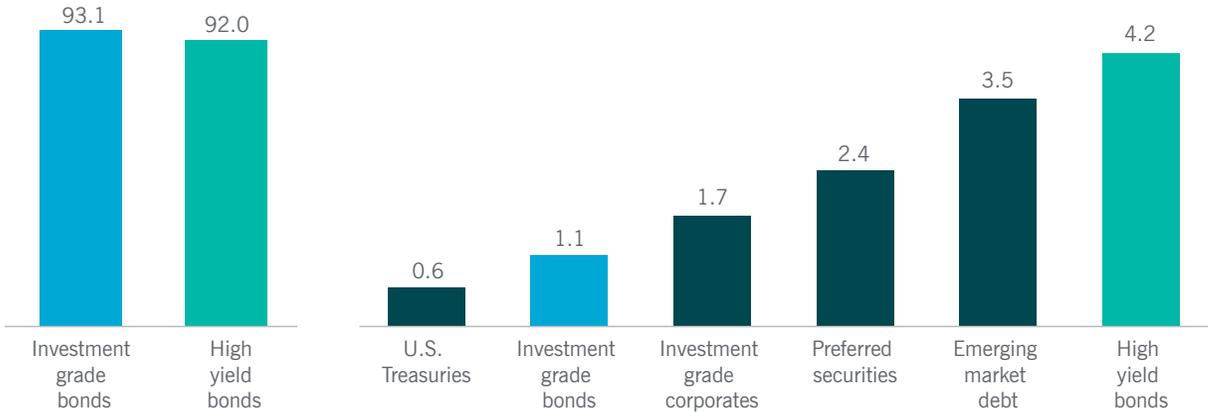
Income remains the primary contributor to total return

THE WHAT	THE WHY—RATES	THE WHY—INCOME	THE WHY—CREDIT	WHY NOW—SECTOR	THE HOW
----------	---------------	-----------------------	----------------	----------------	---------

Income generation

Income as a portion of total return (%)

Yields (%)



Income has dominated total return over time

As of 31 Dec 2020.

Source: Bloomberg Barclays. Chart shows the percent of annualized total return derived from coupon return (as opposed to price appreciation) since index inception. Investment Grade Bonds are represented by the Bloomberg Barclays Aggregate Bond Index, which has an inception date of 1 Jan 1976; returns from 31 Jan 1976 – 31 Dec 2020. High Yield Bonds are represented by the Bloomberg Barclays U.S. High Yield 2% Issuer Capped Index, which has an inception date of 1 Jan 1993; returns from 31 Jan 1993 – 31 Dec 2020. U.S. Treasuries are represented by the Bloomberg Barclays U.S. Treasury Index. The index return presented is for illustration purposes only and does not represent or predict performance of any Nuveen product. **Past performance is no guarantee of future results.**

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

The need for income diversifiers

THE WHAT	THE WHY—RATES	THE WHY—INCOME	THE WHY—CREDIT	WHY NOW—SECTOR	THE HOW
----------	---------------	----------------	----------------	----------------	---------

Income generation



No single fixed income asset class leads in all markets

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020									
Investment grade municipals	10.70	High yield municipals	18.14	High yield corporates	7.44	Preferred securities	15.44	Preferred securities	7.58	High yield corporates	17.13	Preferred securities	10.58	High yield municipals	4.76	Preferred securities	17.71	Investment grade corporates	9.89
US Treasuries	9.81	Emerging markets debt	17.44	Senior loans	6.15	High yield municipals	13.84	Investment grade municipals	3.30	Emerging markets debt	10.15	Emerging markets debt	10.26	Investment grade municipals	1.28	Emerging markets debt	15.04	US Treasuries	8.00
High yield municipals	9.25	High yield corporates	15.78	Investment grade corporates	-1.53	Investment grade municipals	9.05	High yield municipals	1.81	Senior loans	9.88	High yield municipals	9.69	Senior loans	1.14	Investment grade corporates	14.54	Broad bond market	7.51
Investment grade corporates	8.15	Preferred securities	13.59	Broad bond market	-2.02	Investment grade corporates	7.46	Emerging markets debt	1.18	Investment grade corporates	6.11	High yield corporates	7.50	US Treasuries	0.86	High yield corporates	14.32	Preferred securities	6.95
Broad bond market	7.84	Investment grade corporates	9.82	Investment grade municipals	-2.55	Emerging markets debt	7.43	US Treasuries	0.84	High yield municipals	2.99	Investment grade corporates	6.42	Broad bond market	0.01	High yield municipals	10.68	Emerging markets debt	5.26
Emerging markets debt	7.35	Senior loans	9.43	US Treasuries	-2.75	Broad bond market	5.97	Broad bond market	0.55	Broad bond market	2.65	Investment grade municipals	5.45	High yield corporates	-2.08	Broad bond market	8.72	Investment grade municipal	5.21
High yield corporates	4.96	Investment grade municipals	6.78	Preferred securities	-3.65	US Treasuries	5.05	Senior loans	-0.38	Preferred securities	2.32	Senior loans	4.25	Investment grade corporates	-2.51	Senior loans	8.17	High yield municipal	4.89
Preferred securities	4.11	Broad bond market	4.21	Emerging markets debt	-5.25	High yield corporates	2.46	Investment grade corporates	-0.68	US Treasuries	1.04	Broad bond market	3.54	Emerging markets debt	-4.26	Investment grade municipals	7.54	High yield corporates	4.68
Senior loans	1.82	US Treasuries	1.99	High yield municipals	-5.51	Senior loans	2.06	High yield corporates	-4.43	Investment grade municipals	0.25	US Treasuries	2.31	Preferred securities	-4.34	US Treasuries	6.86	Senior loans	2.78

Chart does not represent the past performance or yields of any Nuveen fund. For fund performance visit nuveen.com. Data source: Morningstar Direct, 1 Jan 2011 – 31 Dec 2020. **Past performance does not guarantee future results.** Performance of all cited indexes is calculated on a total return basis and includes income reinvestment but does not reflect taxes. Diversification does not assure a profit or protect against loss. **Broad Bond Market:** Bloomberg Barclays U.S. Aggregate Bond Index; **High Yield Corporate:** Bloomberg Barclays Corporate High Yield 2% Issuer Capped Index; **High Yield Municipal:** Bloomberg Barclays High Yield Municipal Bond Index; **Investment Grade Corporate:** Bloomberg Barclays U.S. Corporate Index; **Investment Grade Municipal:** Bloomberg Barclays Municipal Index; **Preferred Security:** ICE BofA Merrill Lynch Preferred Stock Fixed Rate Index; **Senior Loan:** Credit Suisse Leveraged Loan Index; **U.S. Treasury:** Bloomberg Barclays U.S. Treasuries Index; **Emerging Markets Debt:** JPMorgan Emerging Markets Bond Index (EMBI) Global. Different benchmarks, economic periods, methodologies and market conditions will produce different results. See Endnotes for important disclosures regarding asset-class-related risks and definitions of each representative asset class.

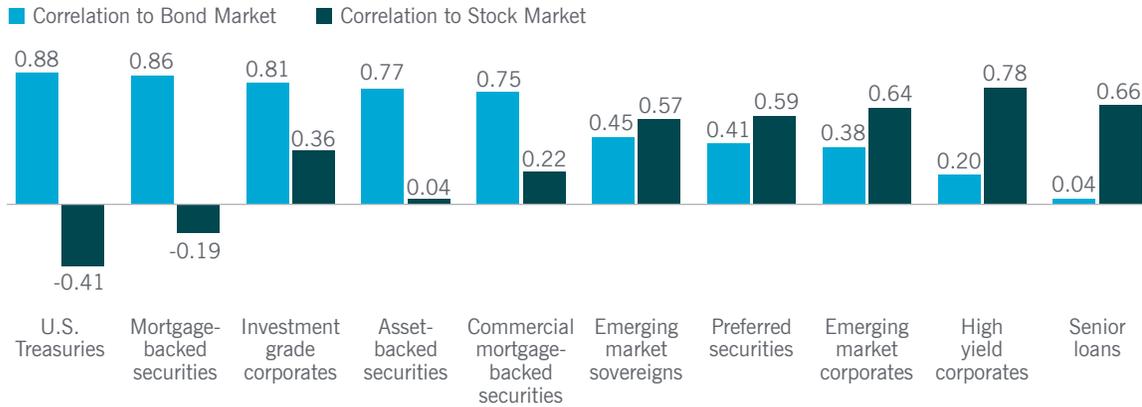
OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Traditional core sectors behave like bonds

THE WHAT	THE WHY—RATES	THE WHY—INCOME	THE WHY—CREDIT	WHY NOW—SECTOR	THE HOW
----------	---------------	----------------	----------------	----------------	---------

Income generation

Correlation to bond and stock market of selected sectors



Maintaining an allocation to traditional fixed income sectors helps balance equity risk



Sources: Bloomberg Barclays, JPMorgan, Morningstar Direct.

Yield to worst as of 31 Dec 2020. Bond market represented by Bloomberg Barclays U.S. Aggregate Index; stock market represented by S&P 500 Index; U.S. Treasury represented by Bloomberg Barclays U.S. Treasury Index; MBS represented by Bloomberg Barclays U.S. Mortgage-Backed Securities (MBS) Index; Investment Grade Corporates represented by Bloomberg Barclays U.S. Corporate Investment Grade Index; ABS represented by Bloomberg Barclays Asset-backed Securities Index; CMBS represented by Bloomberg Barclays Commercial Mortgage-backed Securities Index; Emerging market sovereigns represented by JPMorgan EMBI Global Diversified Index; Emerging market corporates represented by JPMorgan CEMBI Diversified Index; Preferred Securities represented by ICE BofAML U.S. Preferred Stock Fixed Rate Index; Bank loans represented by S&P/LSTA Leveraged Loan Index; High Yield represented by Bloomberg Barclays U.S. Corporate High Yield 2% Issuer Capped Index. **Past performance is no guarantee of future results.** Correlation is a statistical measure of how two securities move in relation to each other.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Spreads narrowed significantly over the course of 2020

THE WHAT	THE WHY—RATES	THE WHY—INCOME	THE WHY—CREDIT	WHY NOW—SECTOR	THE HOW
----------	---------------	----------------	----------------	----------------	---------

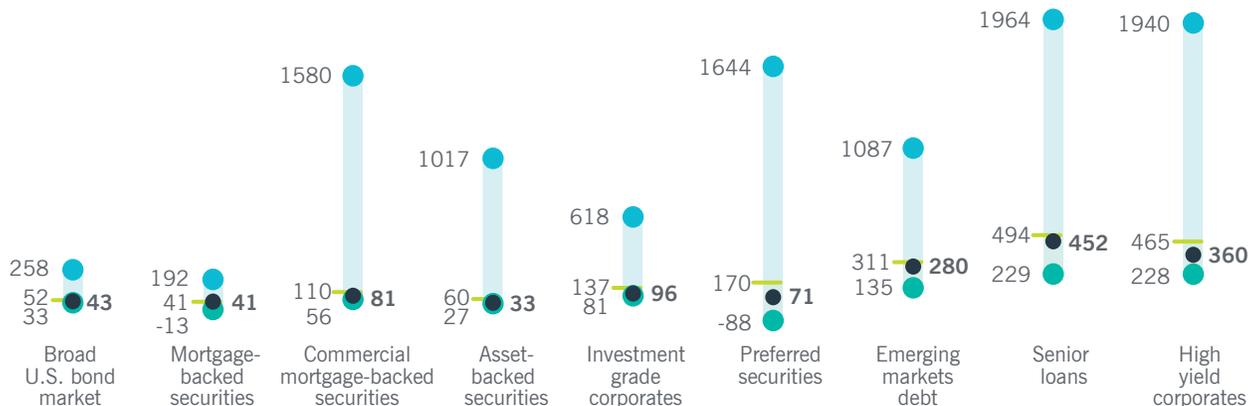
Income generation

Fixed income spread analysis



Most spreads are below average levels, but we believe improving fundamentals will support credit sectors

- Highest
- Current
- Lowest
- Median



Spread on 31 Dec 19	39	39	72	44	93	17	304	436	338
Max Spread Date	3 Dec 08	3 Dec 08	21 Nov 08	6 Jan 09	3 Dec 08	9 Mar 09	27 Oct 08	19 Dec 08	16 Dec 08
Min Spread Date	1 Feb 18	27 Jul 10	30 Jan 18	11 Feb 20	22 Feb 07	6 Dec 17	23 May 07	31 Mar 06	29 May 07

Spreads are measured in basis points. Basis point = One one-hundredth of one percentage point, or 0.01%. For example, 25 basis points equals 0.25%. Sources: Bloomberg Barclays, ICE BofA Merrill Lynch and Morningstar for the 15 years ending 31 Dec 2020. Broad U.S. bond market represented by Bloomberg Barclays U.S. Aggregate Bond Index; Mortgage-backed securities represented by Bloomberg Barclays U.S. Mortgage-backed Securities (MBS) Index; Commercial mortgage-backed securities represented by Bloomberg Barclays U.S. CMBS Investment Grade Index; Asset-backed securities represented by the Bloomberg Barclays Asset Backed Securities Index, Investment Grade Corporates represented by Bloomberg Barclays U.S. Corporate Investment Grade Index; Preferred Securities represented by: ICE BofA Merrill Lynch Preferred Stock Fixed Rate Index; Emerging Markets represented by Bloomberg Barclays Emerging Market USD Aggregate Index; High Yield Corporate represented by Bloomberg Barclays Corporate High Yield 2% Issuer Capped Index; Senior Loans represented by the S&P/LSTA Leveraged Loan Index. Different benchmarks, economic periods, methodologies and market conditions will produce different results. See Endnotes for important disclosures regarding asset class related risks and definitions of each representative asset class.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Credit cycle is in the recovery stage

THE WHAT

THE WHY—RATES

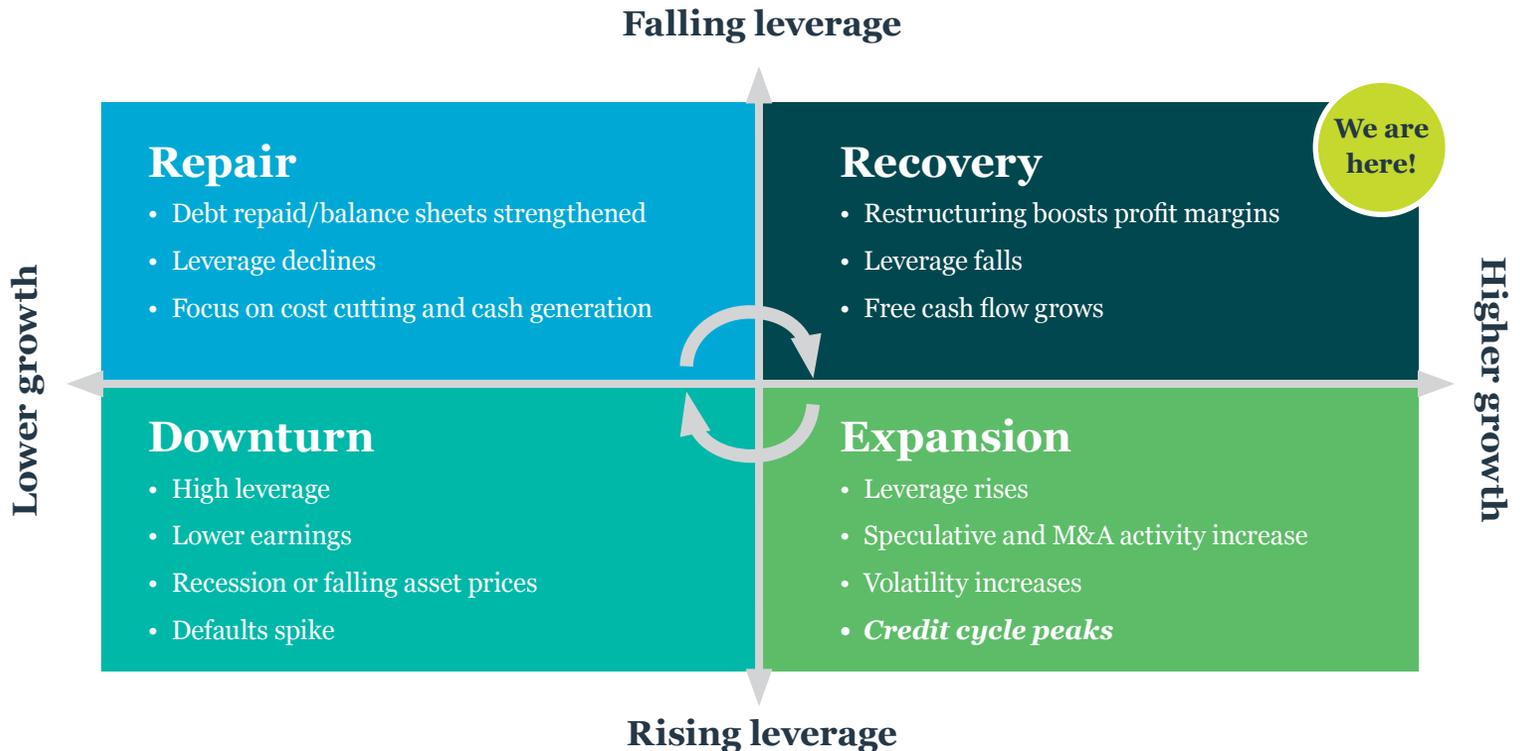
THE WHY—INCOME

THE WHY—CREDIT

WHY NOW—SECTOR

THE HOW

Credit health



All major sectors experienced solid, positive returns in 2020

THE WHAT

THE WHY—RATES

THE WHY—INCOME

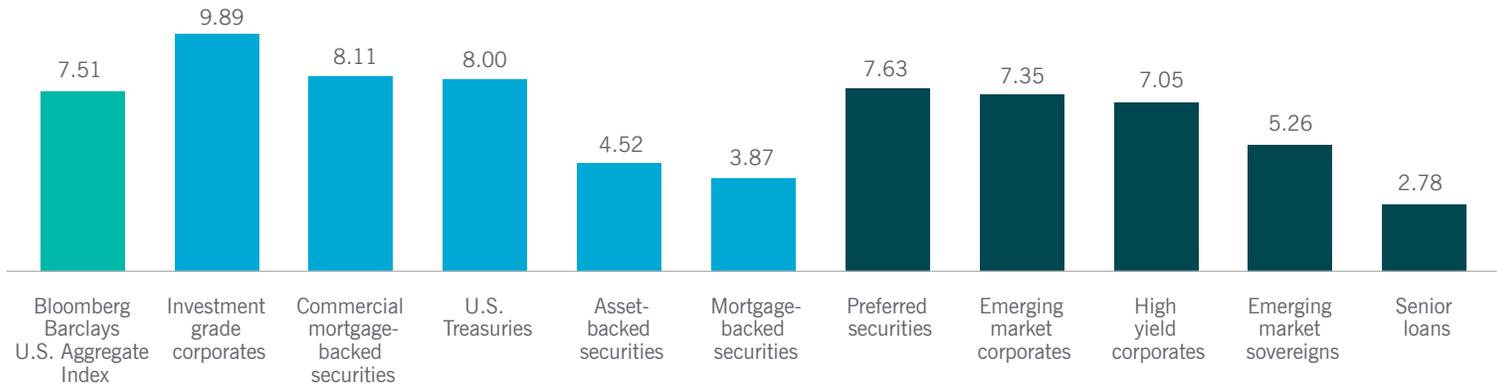
THE WHY—CREDIT

WHY NOW—SECTOR

THE HOW

Credit health

Year-to-date total return by fixed income sector (%)



Sectors in Bloomberg Barclays U.S. Aggregate Index



Despite a rocky start to 2020, fixed income markets finished the year strong

Source: Morningstar Direct. As of 31 Dec 2020. **Representative Indices:** U.S. Treasuries: Bloomberg Barclays U.S. Treasury Index; **MBS:** Bloomberg Barclays U.S. Mortgage-Backed Securities Index; **CMBS:** Bloomberg Barclays Commercial Mortgage-Backed Securities Index; **ABS:** Bloomberg Barclays Asset-Backed Securities Index; **Investment Grade Corporates:** Bloomberg Barclays U.S. Corporate Investment Grade Index; **Emerging market corporates:** JPMorgan CEMBI Diversified Index; **Preferred securities:** ICE BofA U.S. All Capital Securities Index; **Senior loans:** Credit Suisse Leveraged Loan Index; **High yield corporates:** Bloomberg Barclays U.S. Corporate High Yield 2% Issuer Capped Index; **Emerging market sovereigns:** JPMorgan EMBI Global Diversified Index. **Past performance is no guarantee of future results.** Indices are unmanaged and unavailable for direct investment.

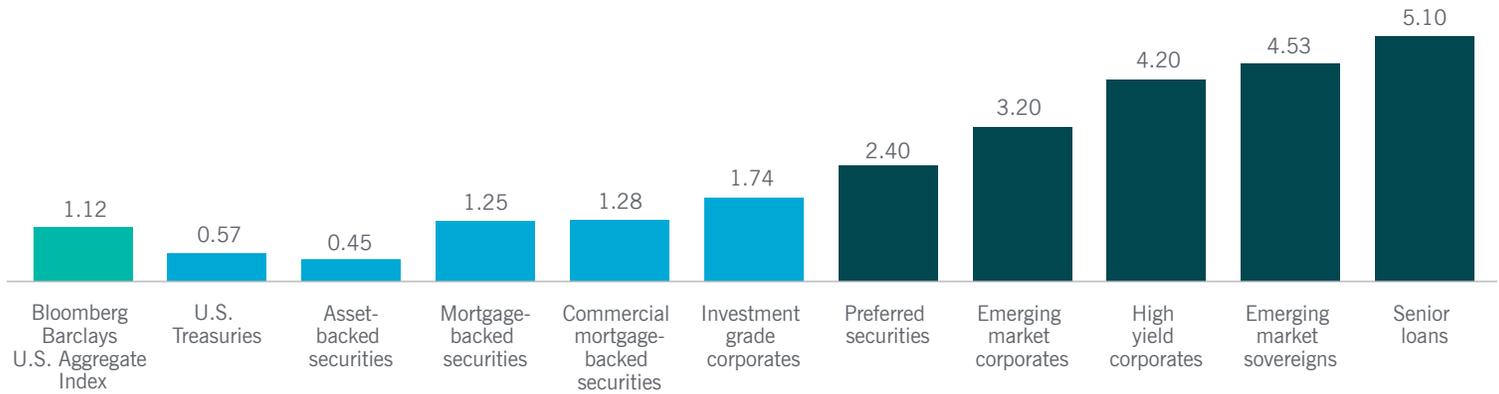
OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Credit sector yields near all-time lows

THE WHAT	THE WHY—RATES	THE WHY—INCOME	THE WHY—CREDIT	WHY NOW—SECTOR	THE HOW
----------	---------------	----------------	-----------------------	----------------	---------

Credit health

Yield-to-worst by fixed income sector (%)



While yields of lower quality sectors are more compelling, security selection is paramount, making active management important

Source: Bloomberg L.P.; Credit Suisse; JPMorgan. As of 31 Dec 2020. **Representative Indexes:** **U.S. Treasuries:** Bloomberg Barclays U.S. Treasury Index; **MBS:** Bloomberg Barclays U.S. Mortgage-Backed Securities Index; **CMBS:** Bloomberg Barclays Commercial Mortgage-Backed Securities Index; **ABS:** Bloomberg Barclays Asset-Backed Securities Index; **Investment Grade Corporates:** Bloomberg Barclays U.S. Corporate Investment Grade Index; **Emerging market corporates:** JPMorgan CEMBI Diversified Index; **Preferred securities:** ICE BofA U.S. All Capital Securities Index; **Senior loans:** Credit Suisse Leveraged Loan Index; **High yield corporates:** Bloomberg Barclays U.S. Corporate High Yield 2% Issuer Capped Index; **Emerging market sovereigns:** JPMorgan EMBI Global Diversified Index. **Past performance is no guarantee of future results.** Indices are unmanaged and unavailable for direct investment.

Investment grade corporates still offer value

THE WHAT

THE WHY—RATES

THE WHY—INCOME

THE WHY—CREDIT

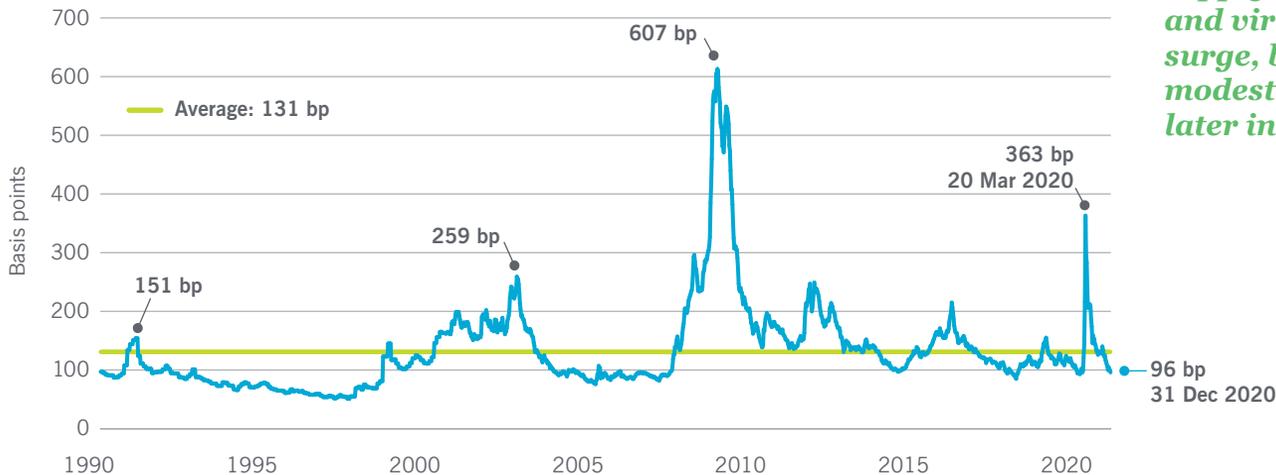
WHY NOW—SECTOR

THE HOW

Investment grade corporates

Spread levels have narrowed to below historical averages

— Bloomberg Barclays U.S. Aggregate Corporate Option-adjusted spread (OAS)



Spreads may widen in the near term as supply accelerates and virus cases surge, but we expect modest tightening later in 2021

Source: Bloomberg. As of 31 Dec 2020. **Representative Indexes:** U.S. Treasuries: Bloomberg Barclays U.S. Treasury Index; MBS: Bloomberg Barclays U.S. Mortgage-Backed Securities Index; CMBS: Bloomberg Barclays Commercial Mortgage-Backed Securities Index; ABS: Bloomberg Barclays Asset-Backed Securities Index; **Investment Grade Corporates:** Bloomberg Barclays U.S. Corporate Investment Grade Index; **Emerging market corporates:** JPMorgan CEMBI Diversified Index; **Preferred securities:** ICE BofA U.S. All Capital Securities Index; **Senior loans:** Credit Suisse Leveraged Loan Index; **High yield corporates:** Bloomberg Barclays U.S. Corporate High Yield 2% Issuer Capped Index; **Emerging market sovereigns:** JPMorgan EMBI Global Diversified Index. **Past performance is no guarantee of future results.** Indices are unmanaged and unavailable for direct investment.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

High yield remains relatively attractive, but economic trajectory is still uncertain

THE WHAT

THE WHY—RATES

THE WHY—INCOME

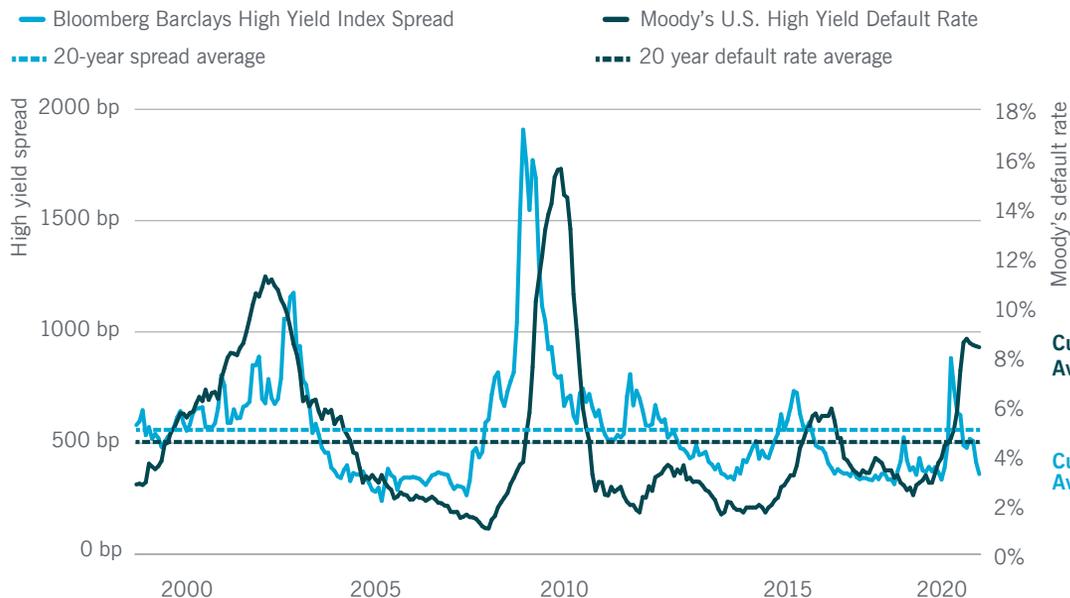
THE WHY—CREDIT

WHY NOW—SECTOR

THE HOW

High yield corporate

Spreads narrowed dramatically, but offer relatively attractive income



Strong demand for yield and relatively lower duration risk, coupled with open capital markets, provide a tailwind for high yield

Current default rate: 8.4%
Average default rate: 4.6%

Current spread: 361 bp
Average spread: 556 bp

Sources: Bloomberg Barclays, Moody's. As of 31 Dec 2020.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Defaults forecasts have moderated

THE WHAT

THE WHY—RATES

THE WHY—INCOME

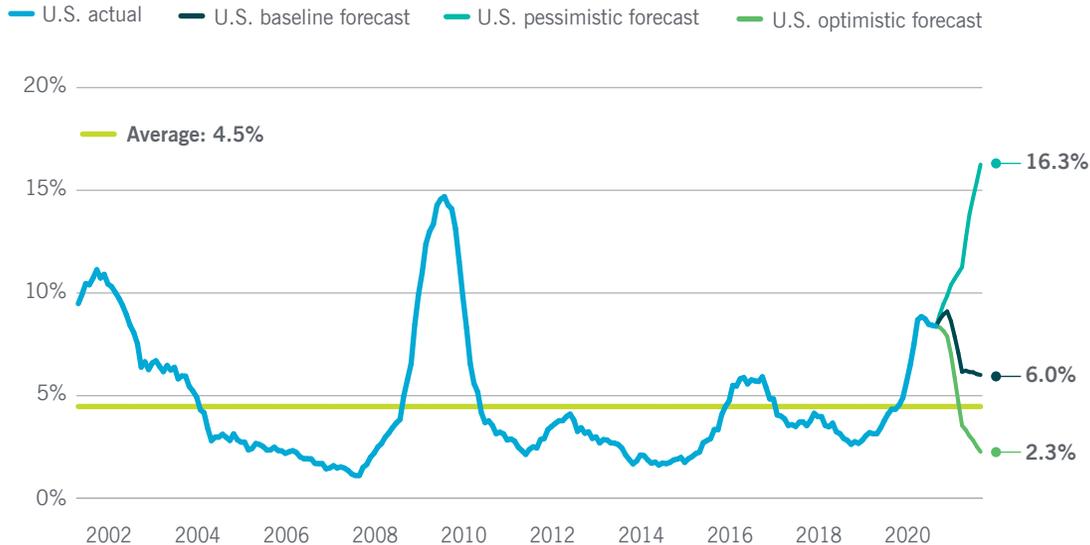
THE WHY—CREDIT

WHY NOW—SECTOR

THE HOW

High yield corporate

Forecasted default-rate scenarios



Default activity has declined from levels reached earlier in the year

Source: Moody's Investors Service. As of 31 Dec 2020.

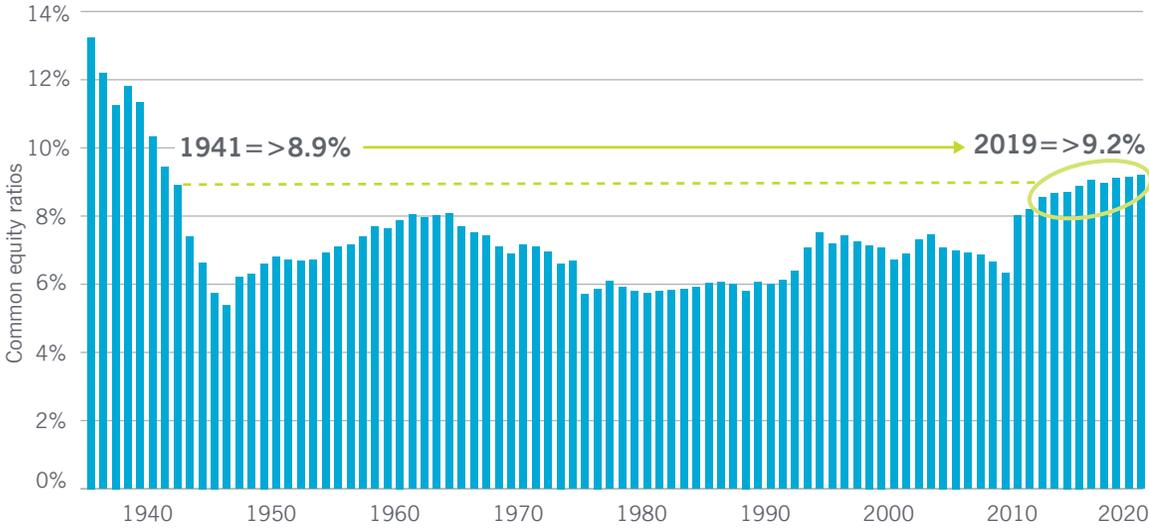
OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Improving bank fundamentals support preferred securities

THE WHAT	THE WHY—RATES	THE WHY—INCOME	THE WHY—CREDIT	WHY NOW—SECTOR	THE HOW
----------	---------------	----------------	----------------	-----------------------	---------

Preferred securities

U.S. bank common equity ratios are at the highest levels since the 1940s



Regulatory changes requiring banks to hold more capital support preferred securities

Sources: Federal Deposit Insurance Corporation, New York Federal Reserve Bank and Barclays Research from 1934–2019.

Valuations among preferred market segments have significantly changed

THE WHAT

THE WHY—RATES

THE WHY—INCOME

THE WHY—CREDIT

WHY NOW—SECTOR

THE HOW

Preferred securities

Relative value metrics of preferred market segments

■ 31 Dec 2019 ■ 31 Mar 2020 ■ 31 Dec 2020

Yield-to-worst (%)



Option-adjusted spread to Treasuries (bp)



\$25 par securities have nicely recovered, but remain rich to \$1,000 par and contingent capital securities

As of 31 Dec 2020. Source: Bloomberg L.P. **Representative indexes: \$1,000 par preferred:** market capitalization-weighted blend of the ICE BofA U.S. Investment Grade Institutional Capital Securities Index and the ICE BofA U.S. High Yield Institutional Capital Securities Index; **Contingent Capital (CoCo):** ICE BofA Contingent Capital Index; **\$25 par preferred:** ICE BofA Core Plus Fixed Rate Preferred Index.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Senior loans remain attractive in the low-yield environment

THE WHAT	THE WHY—RATES	THE WHY—INCOME	THE WHY—CREDIT	WHY NOW—SECTOR	THE HOW
----------	---------------	----------------	----------------	-----------------------	---------

Senior loans

Spreads have normalized, but remain fairly healthy



With floating rate coupons, loans offer benefits should rates continue to head higher

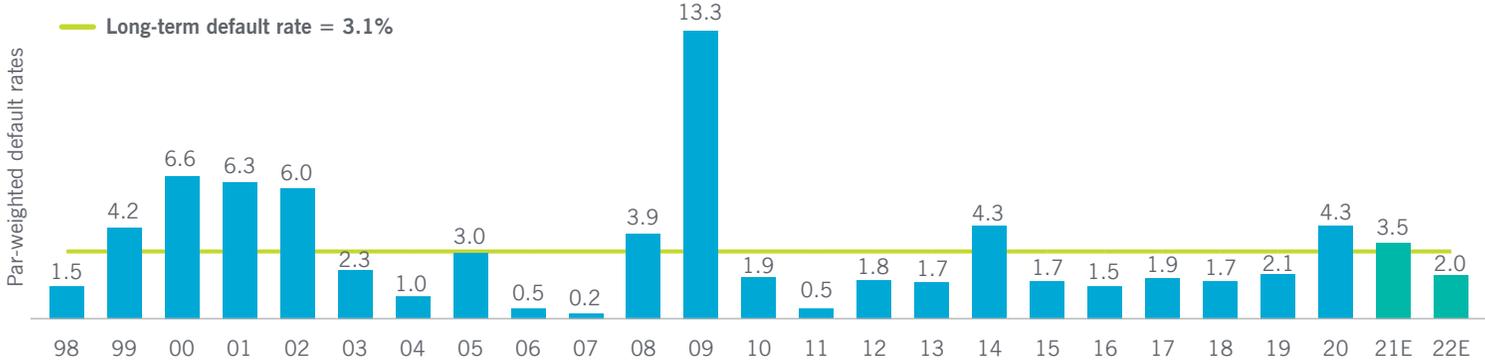
Source: Credit Suisse. As of 31 Dec 2020. Spreads based on 3-year life discount margin of Credit Suisse Leveraged Loan Index. Past performance is no guarantee of future results.

Loan defaults are expected to remain low

THE WHAT	THE WHY—RATES	THE WHY—INCOME	THE WHY—CREDIT	WHY NOW—SECTOR	THE HOW
----------	---------------	----------------	----------------	-----------------------	---------

Senior loans

Loan default rates over time (%)



i *Following a period of elevated levels, loan defaults are expected to be low for the foreseeable future as capital markets remain open and issuers have termed out existing debt*

Source: JP Morgan. As of 31 Dec 2020. Past performance is no guarantee of future results.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Emerging markets are increasingly important to the world's economy

THE WHAT

THE WHY—RATES

THE WHY—INCOME

THE WHY—CREDIT

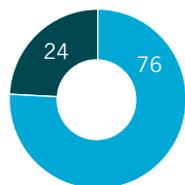
WHY NOW—SECTOR

THE HOW

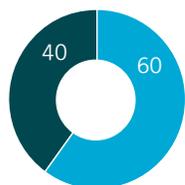
Emerging markets

Increasing percentage of global GDP

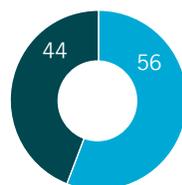
● Advanced economies ● Emerging markets and developing economies



1980



2019 projected



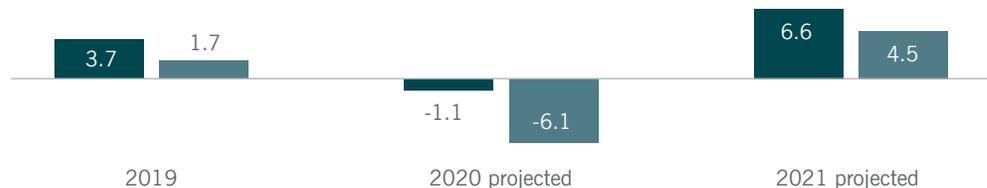
2024 projected



Emerging markets are a large and growing share of the global economy

Expectations for a shallower contraction and faster recovery

■ Emerging markets ■ Developed markets



Source: IMF as of Oct 2019. Percent of global gross domestic product (GDP) is based on purchasing power parity (PPP). As of 30 Apr 2020.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Emerging market debt offers attractive yields

THE WHAT

THE WHY—RATES

THE WHY—INCOME

THE WHY—CREDIT

WHY NOW—SECTOR

THE HOW

Emerging markets

Emerging market debt remains cheap relative to U.S. credit



*Spread of emerging market debt to U.S. credit (ratings adjusted) is the credit spread of the JPMorgan Emerging Markets Bond Index - Global Diversified (EMBI-GD) less the blended credit spread of a 50-50 mix of the Bloomberg Barclays U.S. High Yield Index and the Bloomberg Barclays U.S. Investment Grade Corporate Index.

Source: Bloomberg, JP Morgan, Nuveen. As of 31 Dec 2020.



A vaccine-led recovery, central bank liquidity and attractive valuations relative to other sectors should support emerging markets assets

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

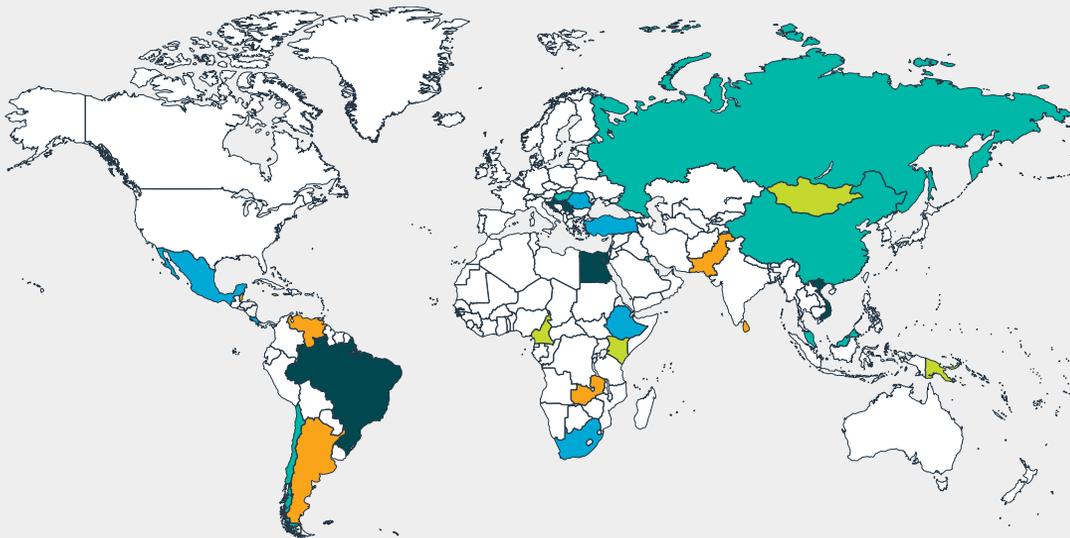
Emerging markets are not a monolithic asset class

THE WHAT	THE WHY—RATES	THE WHY—INCOME	THE WHY—CREDIT	WHY NOW—SECTOR	THE HOW
----------	---------------	----------------	----------------	-----------------------	---------

Emerging markets

Nuveen emerging markets country cohorts

Laggards	<ul style="list-style-type: none"> • Downward ratings trajectory • In need of structural reform • In need of better policy coherence
Reformers	<ul style="list-style-type: none"> • Improving outlook • Addressing key structural reforms • Potential for improved GDP and investment climate
Steady as you go	<ul style="list-style-type: none"> • Sound economics framework • Strong buffers in place • Relatively low financing needs
Frontier	<ul style="list-style-type: none"> • Up-and-coming markets • Good growth stories • Lower correlation
Crisis-laden	<ul style="list-style-type: none"> • Significant event risk • Political, economic, structural instability • Prognosis remains poor/highly uncertain



Heterogeneous risks and opportunities require rigorous analysis and active management

Source: Nuveen. As of 31 Dec 2020. Map may not represent current views and only reflects samples of our cohort classifications.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Our investment philosophy

THE WHAT

THE WHY—RATES

THE WHY—INCOME

THE WHY—CREDIT

WHY NOW—SECTOR

THE HOW

Nuveen leadership

We believe we can achieve solid risk-adjusted returns over time by combining deep sector expertise, an active approach and risk management

Fundamental tenets of our investment philosophy

Leverage
sector
specialists

Exploit market
inefficiencies
through active
management

Consider risk
at every
decision point

Take a
long-term
view



This philosophy, and the process that supports it, enables us to serve our clients and helps achieve their objectives

Delivering income for more than 120 years

THE WHAT

THE WHY—RATES

THE WHY—INCOME

THE WHY—CREDIT

WHY NOW—SECTOR

THE HOW

Nuveen leadership

The ability to find yield changes as markets change. Nuveen believes by maximizing diversification, we can help our clients achieve higher yields and lower portfolio volatility.

Our clients' goals:

Different sources of durable income

Yield with minimum levels of risk

Constructing portfolios to meet long-term needs

How we deliver:

Diversification

Diversifying risk and return by harnessing a full breadth of income capabilities

Stewardship

Benefiting from our heritage of generating lifetime income and creating better outcomes

Expertise

Persistently innovating and leveraging deep sector expertise across public and private markets

Our experience:

2020 Refinitiv Lipper Fund Awards Best Fixed Income Large Fund Group¹

65+ years of navigating equity market cycles²

Top 5 real estate manager globally³

40+ years as an active private capital investor

Nuveen traces its history back to 1898, and TIAA was founded in 1918.

1 The Refinitiv Lipper Fund Awards are based on the Lipper Leader for Consistent Return rating, which is a risk-adjusted performance measure calculated over 36, 60 and 120 months. Lipper Leaders fund ratings do not constitute and are not intended to constitute investment advice or an offer to sell or the solicitation of an offer to buy any security of any entity in any jurisdiction. For more information, see lipperfundawards.com. Lipper Fund Awards from Refinitiv, ©2020 Refinitiv. All rights reserved. Used under license. Certain funds have fee waivers in effect. Without such waivers ratings could be lower. Past performance does not guarantee future results. The Fixed Income Large Fund award is based on a review of risk-adjusted performance of 33 companies for 2020. The award pertains only to the Nuveen Family of Funds in the income category.

2 Nuveen has been investing in equities since 1952 with the inception of the CREF Stock Account.

3 ANREV/INREV/NCREIF Fund Manager Survey 2020. Survey illustrated rankings of 140 fund managers globally by AUM as at 31 Dec 2019.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Endnotes

This material is not intended to be a recommendation or investment advice, does not constitute a solicitation to buy, sell or hold a security or an investment strategy, and is not provided in a fiduciary capacity. The information provided does not take into account the specific objectives or circumstances of any particular investor, or suggest any specific course of action. Investment decisions should be made based on an investor's objectives and circumstances and in consultation with his or her professionals.

The views and opinions expressed are for informational and educational purposes only as of the date of production/writing and may change without notice at any time based on numerous factors, such as market or other conditions, legal and regulatory developments, additional risks and uncertainties and may not come to pass. This material may contain "forward-looking" information that is not purely historical in nature. Such information may include, among other things, projections, forecasts, estimates of market returns, and proposed or expected portfolio composition. Any changes to assumptions that may have been made in preparing this material could have a material impact on the information presented herein by way of example.

Past performance is no guarantee of future results. Investing involves risk; principal loss is possible.

All information has been obtained from sources believed to be reliable, but its accuracy is not guaranteed. There is no representation or warranty as to the current accuracy, reliability or completeness of, nor liability for, decisions based on such information and it should not be relied on as such. For term definitions and index descriptions, please access the glossary on nuveen.com. Please note, it is not possible to invest directly in an index.

This information does not constitute investment research as defined under MiFID. In Europe this document is issued by the offices and branches of Nuveen Real Estate Management Limited (reg. no. 2137726) or Nuveen UK Limited (reg. no. 08921833); (incorporated and registered in England and Wales with registered office at 201 Bishopsgate, London EC2M 3BN), both of which entities are authorized and regulated by the Financial Conduct Authority to provide investment products and services. Please note that branches of Nuveen Real Estate Management Limited or Nuveen UK Limited are subject to limited regulatory supervision by the responsible financial regulator in the country of the branch.

Glossary

The **Alternative Minimum Tax (AMT)** was originally enacted to ensure that all taxpayers pay their fair share of the costs of government. Determining if a taxpayer is subject to AMT requires tax liability be calculated twice: first using the regular tax rules and then a second time using the AMT rules. Only if the AMT calculation produces a higher tax liability than the regular tax rules, is a taxpayer subject to the Alternative Minimum Tax. **Sharpe Ratio (Risk-Adjusted Return)** is a risk-adjusted return measure calculated using standard deviation and excess return to determine reward versus unit of risk. The higher the Sharpe Ratio, the better the historical risk-adjusted performance. **Standard Deviation (Risk)** is a statistical measure of the historical volatility of a mutual fund or portfolio; the higher the number, the greater the risk. **Senior Loan** is a loan that takes priority over other debts of the issuer.

Additional disclosures

This material is not intended to be a recommendation or investment advice, does not constitute a solicitation to buy or sell securities, and is not provided in a fiduciary capacity. The information provided does not take into account the specific objectives or circumstances of any particular investor, or suggest any specific course of action. Investment decisions should be made based on an investor's objectives and circumstances and in consultation with his or her advisors.

The comments and statements made are based solely upon the opinions of Nuveen Asset Management and the data available at the time of publication, which may change without notice. There is no assurance that any predicted results will actually occur. This brochure is provided for informational purposes only and should not be construed as a recommendation to buy or sell any specific securities and should not be considered investment advice of any kind. Certain information was obtained from third-party sources, which we believe to be reliable, but is not guaranteed. Nuveen Asset Management, LLC ("NAM") seeks to expeditiously and efficiently effect sales of legacy securities contributed to new or existing accounts or in connection with termination and liquidation instructions, generally by directing the execution of sale to the relevant broker-dealer/custodian designated by the client's managed account program, subject to program limitations.

Primarily due to the time constraints and lot sizes applicable to these transactions, and because the full range of trading techniques is generally not available (including aggregation), the prices received in these transactions may be less favorable than the prices that could be attained for sales of securities selected by NAM as part of ongoing management. Clients always reserve the right to fund accounts with cash as opposed to legacy securities and to keep any securities in their accounts upon termination of services.

A word on risk

All investments carry a certain degree of risk, including possible loss of principal, and there is no assurance that an investment will provide positive performance over any period of time. Investing in municipal bonds and a municipal bond investment vehicle involves risks such as interest rate risk, credit risk and market risk, including the possible loss of principal. The value of the portfolio will fluctuate based on the value of the underlying securities. In addition, the callability of bonds may increase interest rate risk exposure in the Laddered portfolios. Upon call, a client may be confronted with a less favorable interest rate environment than the one that existed when the original bond was purchased. Investors should contact a tax professional regarding the appropriateness of tax-exempt investments in their portfolio. If sold prior to maturity, municipal securities are subject to gain/losses based on the level of interest rates, market conditions and the credit quality of the issuer. Income may be subject to the alternative minimum tax (AMT) and/or state and local taxes, based on the state of residence. Income from municipal bonds held by a portfolio could be declared taxable because of unfavorable changes in tax laws, adverse interpretations by the Internal Revenue Service or state tax authorities, or noncompliant conduct of a bond issuer. Nuveen Asset Management is not a tax advisor. Consult your professional advisors before making any tax or investment decisions. This information should not replace a client's consultation with a professional advisor regarding their tax situation. High yield or lower-rated bonds and municipal bonds carry greater credit risk, and are subject to greater price volatility. Preferred securities are subordinate to bonds and other debt instruments in a company's capital structure and therefore are subject to greater credit risk. Certain types of preferred, hybrid or debt securities with special loss absorption provisions, such as contingent capital securities (CoCos), may be or become so subordinated that they present risks equivalent to, or in some cases even greater than, the same company's common stock. There are specific risks associated with international investing, which include but are not limited to foreign company risk, adverse political risk, market risk, currency risk and correlation risk. In addition, investing in securities of developing countries involves greater risk than, or in addition to, investing in developed foreign countries.

Nuveen Asset Management, LLC is a registered investment adviser and an affiliate of Nuveen, LLC. Nuveen provides investment advisory solutions through its investment specialists.

nuveen

A TIAA Company

For more information, visit [nuveen.com](https://www.nuveen.com).

800.752.8700 | [nuveen.com](https://www.nuveen.com)

26450 GPP-1502545PR-Q0221D