# THE CASE FOR Customized Municipal Bond Solutions

**B** Brown ADVISORY Thoughtful Investing.

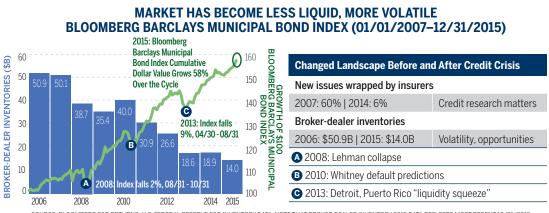
Market shifts have created a less liquid, more volatile municipal bond market that is fertile hunting ground for active managers. Coupled with outperformance in previous rate-hiking cycles, current yield spreads, comparatively low default risk and distinct diversification benefits, we believe municipal bonds offer appeal today. In a separately managed account format, investors can also enjoy the benefits of customization, liquidity and flexibility which are not always available in a mutual fund format.

- 1. Customization: Access to state-specific, customized bond portfolios based on fundamental credit research that seek to maximize after-tax returns.
- 2. Liquidity: A meaningful allocation to stable, high-quality general obligation and revenue issues can provide a high level of liquidity along with the benefits of institutional pricing.
- 3. Flexibility: A portfolio constructed to target appropriate duration, quality and yield parameters that seeks to provide stable, predictable cash flows.

### WHY INVEST IN MUNI BONDS TODAY?

### **Market Shifts Have Created Risks and Opportunities**

Compared with taxable fixed income securities, municipal bonds today are especially attractive, in our view. Rising state and local income taxes have increased the value of tax-exempt income, and demand for municipal bonds is growing from non-traditional, institutional buyers. As a result, the market has become less liquid and more volatile, but also more attractive to active managers using fundamental credit research to uncover opportunity.

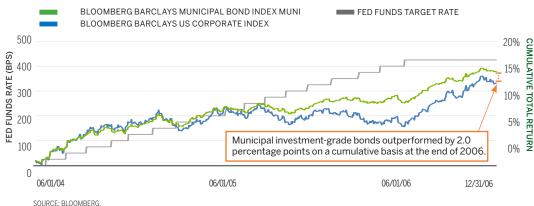


SOURCE: BLOOMBERG FOR RETURNS; U.S. FEDERAL RESERVE FOR INVENTORY DATA. NOTE THAT BROKER DEALER INVENTORY 2015 DATA REFLECTS MOST RECENT 12/31/2015. INFO AVAILABLE. GROWTH OF \$100 DATA AS OF 12/31/2015.

## Muni Bonds Outperformed During the Last Rate-Hiking Cycle

Due to the cyclical nature of municipal bonds, the securities tend to outperform in rising interest-rate environments. During the last rate-hiking cycle, investment-grade municipal bonds outperformed investment-grade corporate bonds by an average of 4.2 percentage points on a cumulative basis.

### MUNICIPAL INVESTMENT-GRADE BOND INDEX BEATS CORPORATE INVESTMENT-GRADE BONDS (06/01/2004–12/31/2006)



### WHY BROWN ADVISORY?

Brown Advisory is a leading independent investment firm that offers a wide range of investment solutions to institutions, corporations, nonprofits, families and individuals. We manage approximately \$65.5 billion in client assets as of 03/31/18.<sup>1</sup>

#### PRIVATE & INDEPENDENT SINCE 1998

Every one of our colleagues owns equity in the firm, which aligns colleagues' interests with long-term client success.

#### ADD ALPHA AND CONTROL RISK

We have a fixed income investment process that incorporates bottom-up, fundamental research to drive security selection and mitigate risk. We seek price appreciation potential, not just current yield, and focus attention to actively managing maturity.

### EXPERIENCE

Our fixed income team has an average of 16 years of investment experience.

<sup>1</sup> As of June 30, 2018, Brown Advisory had approximately \$65.5 billion in client assets for the following entities: Brown Advisory, LLC, Brown Investment Advisory & Trust Company, Brown Advisory Securities, LLC, Brown Advisory Ltd., Brown Advisory Trust Company of Delaware, LLC and Brown Advisory Investment Solutions Group LLC

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### **Municipal Bond Spreads Look More Attractive Than Duration**

As fundamental investors, we seek to uncover market opportunities at compelling yields. We are finding attractive opportunities with lower-rated bonds in the current environment, as similar yields to higher-rated bonds can be achieved with less interest-rate risk.

### MUNICIPAL INVESTMENT-GRADE BOND YIELD CURVES BY CREDIT RATING (12/31/2017)





Source: MMD®/TM3 Thomson Reuters. Past performance is not indicative of future results.

### **Municipal Default Rates Are Low, Recovery Rates Are High**

BBB-rated municipal bonds have historically exhibited lower default rates than the highest-rated AAArated corporate bonds, on average, as depicted in the historical study below. And when defaults do occur, the ultimate recovery rate for municipal bonds has been better than corporate bonds.

### CUMULATIVE HISTORICAL DEFAULT RATES, % (01/01/1970-12/31/2016)

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	Moody	/'S	S&P		
	Municipal	Corporate	Municipal	Corporate	
Aaa/AAA	0.00	0.38	0.00	0.72	
Aa/AA	0.02	0.78	0.02	0.77	
A/A	0.07	2.22	0.10	1.41	
Baa/BBB	0.40	3.93	0.62	3.76	
Investment Grade	0.09	2.38	0.17	2.11	
Non-Investment Grade	8.17	29.70	9.23	21.67	

Source: Moody's Investor Services and S&P Global Ratings. Past performance is not indicative of future results

### HISTORICAL RECOVERY RATES, % (01/01/1970–12/31/2016)

	Municipal	Corporate
Recovery Rate	66%	53%

Source: Moody's Investor Services, Special Comment Study, U.S. Municipal Bond Defaults and Recovery Rates, 1970-2016

### **Municipal Bonds Offer Diversification Benefits**

Municipal bonds generally have low correlations with other asset classes, which can buffer against inflation and interest-rate risk.

### CORRELATIONS FOR 10-YEAR RETURNS MUNICIPAL REVENUE BOND INDEX VS. OTHER ASSET CLASSES (01/01/2007–12/31/2017)

	Bloomberg Barclays Municipa Revenue Bond Index	I S&P 500 Index	Bloomberg Barclays US Aggregate Bond Index	Bloomberg Barclays US Treasury Index	Bloomberg Barclays US TIPS Index	
Bloomberg Barclays Municipal Revenue Bond Index	1.00					
S&P 500® Index	-0.22	1.00				
Bloomberg Barclays US Aggregate Bond Index	0.43	-0.32	1.00			
Bloomberg Barclays US Treasury Index	0.40	-0.42	0.94	1.00		
Bloomberg Barclays US TIPS Index	0.37	-0.22	0.79	0.76	1.00	

Examining default data from both Moody's and S&P ratings agencies, even the lowest investment-grade rating category of municipal bonds exhibited a default rate comparable to or lower to the highest rating category of corporate bonds during the 46-year period of the study.

When municipal bonds default, historically, the ultimate recovery rate has been much higher than the average rate for corporate senior unsecured bonds, according to a Moody's study.

As demonstrated by the correlation matrix, the Bloomberg Barclays Municipal Revenue Bond Index has low correlation to the traditional equity and taxable bond markets as of 12/31/17.

Source: Bloomberg for Bloomberg Barclays Index data and S&P 500 Index data. Past performance is not indicative of future results.

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### **Brown Advisory Fixed Income Approach**

We believe that actively managed fixed income strategies based on fundamental research, concentrated on our highest-conviction ideas and reflecting an understanding of an array of market probabilities have the potential to offer core stability and add alpha. We build highly customized solutions for our clients.

UNIVERSE & IDEA GENERATION > DUE DILIGENCE	> [	DECISION PROCESS >	PORTFOLIO MANAGEMENT	> SELL DISCIPLINE
<ul> <li>Broad universe of municipal and federal government- backed securities</li> <li>Portfolio construction aims to maximize after-tax returns by identifying stability vs. alpha-</li> <li>Fundamental researce analysis incorporates documents, sector dy and credit surveillance</li> </ul>	public expect namics allow e poten	rocess projects eted outcomes that us to assess the upside itial of an investment vs. ownside risk	We maintain a consistent balance of stability allocations, focused on principal stability, and alpha allocations, focused on upside potential	<ul> <li>Underlying investment thesis is violated</li> <li>Thesis is realized</li> <li>Alternative opportunities offer more compelling opportunity</li> </ul>
generating opportunities <b>EXPERIENCE AND EXPERTISE</b> The Brown Advisory Fixed Income team has an average of 16 years of experience working with a variety of institutional and private clients. We manage approximately \$3.6 billion in fixed income client assets as of June 30, 2018.	TY ANDREWS Portfolio Analyst TOM BANDUROWSK Credit Analyst PAUL CORBIN Portfolio Manager JAMES DAVIE, CFA Credit Analyst	THOMAS D.D. GRAF Head of Fixed Incon Portfolio Manager AMY HAUTER, CFA Associate Portfolio ESG Research Analy JOHN HENRY IUCK Associate Portfolio Securitized Product KATHERINE LEE Credit Analyst	ne, Portfolio Analyst JOSHUA PERRY, CFA, CAI. FRM Associate Portfolio Manager credit Analyst ER STEPHEN SHUTZ, CFA Manager Portfolio Manager	Portfolio Manager

As of June 30, 2018, Brown Advisory managed approximately \$3.6 billion in fixed income client assets for the following entities: Brown Advisory, LLC, Brown Investment Advisory & Trust Company, Brown Advisory Securities, LLC, Brown Advisory Ltd., Brown Advisory Trust Company of Delaware, LLC and Brown Advisory Investment Solutions Group LLC.

### **INTERMEDIATE-TERM FOCUSED Brown Advisory National Municipal Bond Strategy** As Of 06/30/2018

STRATEGY INCEPTION: 05/31/1993 | TYPICAL DURATION RANGE: 1-10 YEARS | PORTFOLIO MANAGER: STEVE SHUTZ, CFA

The Brown Advisory National Municipal Bond strategy invests in a portfolio comprised of primarily tax-exempt fixed income securities identified through fundamental analysis—that seeks to provide current income, principal preservation and stable total returns over time.

SECTOR COMPOSITION	REP. ACCOUNT	BLOOMBERG BARCLAYS MUNI BOND 1–10 YEAR BLEND INDEX	
Cash & Equivalents	2.4		
Municipal Revenue Bonds	85.8	54.5	
Pre-Refunded Municipal Bonds		12.7	
General Obligation Municipals	11.8	32.7	
Source: FactSet®, Data shown are as of 06/30/2018			

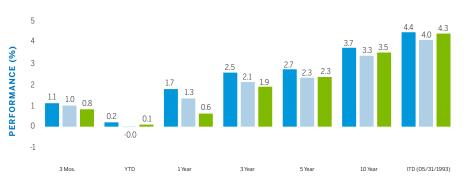
A Glimpse at Current Positioning: Meaningful overweight in revenue-backed bonds vs. benchmark. Health care/Senior Living was our single largest increase in the first quarter of 2016, although we have become increasingly selective during 2016 in this space. We still think there is good value in select credits, as the Affordable Care Act (ACA) will continue to create winners and losers among hospitals. This was highlighted by United Health threatening to exit the ACA's exchange marketplaces in November. Even now, two years after the ACA implementation began, its impact continues to be an evolving story. Today, the bond market is not making much of a distinction between hospital credits with similar ratings. To uncover compelling value, we heavily scrutinize the business conditions of each hospital.

### BROWN ADVISORY NATIONAL MUNICIPAL COMPOSITE PERFORMANCE AS OF 06/30/2018

NATIONAL MUNICIPAL BOND (GROSS OF FEES) BLOOMBERG BARCLAYS MUNI BOND 1–10 YR

NATIONAL MUNICIPAL BOND (NET OF FEES)

**BLEND INDEX** 



Source: FactSet®. Returns shown are through 06/30/2018 for each period. All returns greater than one year are annualized. Past performance is not indicative of future results. The composite performance shown above reflects the National Municipal Bond composite, managed by Brown Advisory Institutional. Brown Advisory Institutional is a GIPS compliant firm and is a division of Brown Advisory LLC. Please see the end of this presentation for a GIPS compliant presentation.

PORTFOLIO ATTRIBUTES <sup>1</sup>	REP. ACCOUNT	BLOOMBERG BARCLAYS MUNI BOND 1–10 YEAR BLEND INDEX
Avg. Credit Quality	A2	AA2/AA3
Effective Duration (yrs)	4.3	4.0
Yield to Worst (%)	3.1	2.2
Avg. Life (yrs)	8.0	5.8
CREDIT QUALITY <sup>1</sup>		
AAA/Aaa	7.2	24.3
AA/Aa	38.3	53.2
A	23.2	17.3
BBB/Baa	21.5	3.9
High Yield	1.3	
Other	8.5	1.3
DURATION DISTRIBUTION <sup>1</sup>	^ 	
Less than 1 Year	38.6	6.5
1 to 3 Years	4.4	30.2
3 to 5 Years	9.3	28.7
5 to 7 Years	20.5	24.0
7 to 10 Years	19.0	10.2
Greater than 10 Years	8.2	0.4

<sup>1</sup>Source: FactSet<sup>®</sup>. Data shown are as of 06/30/2018. The portfolio information above is based on a representative National Municipal Bond account and is provided as supplemental information. Portfolio level information includes cash and cash equivalents. Fixed income sectors, quality distribution and duration distribution may not total 100% due to rounding. Please see the Brown Advisory National Municipal Bond Composite performance disclosure on the last page for additional information and a complete list of terms and definitions

## About Brown Advisory

Brown Advisory is a leading independent investment firm that offers a wide range of solutions to institutions, corporations, nonprofits, families and individuals. Our mission is to make a material and positive difference in the lives of our clients by providing them first-rate investment performance, customized strategic advice and the highest level of personalized service.

We follow a philosophy that low-turnover, concentrated portfolios derived from sound bottom-up fundamental research provide an opportunity for attractive performance results over time. We have a culture and firm equity ownership structure that help us attract and retain professionals who share those beliefs. and we follow a repeatable investment process that helps us stay true to our philosophy.

### INSTITUTIONAL AND INVESTMENT CONSULTANTS

Brown ADVISORY Thoughtful Investing.

Christopher "Topher" Fearey cfearey@brownadvisory.com | (410) 537-5549

#### **FINANCIAL INTERMEDIARIES**

Matt Pedicino mpedicino@brownadvisory.com | (443) 873-5252

#### ENDOWMENTS AND FOUNDATIONS

Doug Godine, CFA dgodine@brownadvisory.com | (410) 537-5585

## Brown Advisory National Municipal Bond

Year									GIPS Firm Assets (\$USD Millions)
2017	4.4	4.0	3.5	2.4	2.5	142	0.3	993	33,155
2016	0.7	0.3	-0.1	2.5	2.4	134	0.3	875	30,417
2015	1.9	1.6	2.5	2.3	2.1	123	0.3	729	43,746
2014	5.7	5.4	4.7	2.4	2.2	45	0.5	415	44,772
2013	-1.1	-1.4	-0.3	2.5	2.5	24	0.4	283	40,739
2012	3.5	3.1	3.6	2.3	2.5	20	0.9	293	26,794
2011	6.8	6.5	7.6	3.4	3.2	9	0.8	48	19,962
2010	3.7	3.3	3.1	4.5	4.2	12	0.6	25	16,859
2009	8.6	8.3	7.2	4.4	3.9	12	0.7	31	N/A
2008	3.6	3.2	4.2	3.5	3.3	11	0.7	38	N/A
2007	4.5	4.2	4.8	1.9	1.8	8	0.2	25	N/A

Brown Advisory Institutional claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Brown Advisory Institutional has been independently verified for the periods from January 1, 1993 through December 31, 2017. The Verification reports are available upon request. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. Verification does not ensure the accuracy of any specific composite presentation. GIPS® is a registered trademark owned by CFA Institute

\*For the purpose of complying with the GIPS standards, the firm is defined as Brown Advisory Institutional, the Institutional and Balanced Institutional asset management divisions of Brown Advisory. As of July 1, 2016, the firm was redefined to exclude the Brown Advisory Private Client division, due to an evolution of the three distinct business lines.

- The National Municipal Bond Composite is comprised of all discretionary accounts with no material investmen restrictions, which invest in tax-exempt fixed income securities of an intermediate target duration, and flexibility to invest in bonds from multiple states. At least 80% of the securities in each portfolio in this composite will have credit quality an borson multiple states. A reason of or one section is a reaching by toxin and composite immediate the duality ratings of A or better at the time of purchase. The minimum account market value required for composite inclusion is \$2 million. Prior to October 2012 the name of this composite was Intermediate Municipal Bond (AMT-Free) Composite. The strategy remains the same except the maximum federal tax bracket requirement is relaxed. Prior to October 2012 the minimum account market value required for composite inclusion was \$1 million. This composite was defined and initially created on March 1, 2006.
- The current benchmark is the Bloomberg Barclays Municipal Bond 1-10 Year Blend (1-12) Index. The Bloomberg Barclays Municipal Bond 1-10 Year Blend (1-12) Index consists of a broad selection of investment-grade general obligation bonds, revenue bonds, insured bonds (including all insured bonds with a Aaa/AAA rating), and prerefunded bonds with maturities of at least 1 year and less than 12 years. It is an unmanaged index representative of the tax-exempt bond market. Bloomberg Barclays Indices are trademarks of Bloomberg or its licensors, including Barclays Bank PLC. An investor cannot invest directly into an index. Benchmark returns are not covered by the report of the independent

verifiers

- The composite dispersion presented is an equal-weighted standard deviation of portfolio returns calculated for the accounts in the composite for the entire calendar year period.
- 6. Gross-of-fees performance returns are presented before management fees but after all trading commissions, and gross of foreign withholding taxes (if applicable). Net-of-fee performance returns reflect the deduction of actual management fees and all trading commissions. Other expenses can reduce returns to investors. The standard management fee schedule is as follows: 0.375% on the first \$10 million; 0.25% on the next \$15 million and 0.20% on the balance over \$25 million. Further information regarding investment advisory fees is described in Part II A of the firm's form ADV. Actual fees paid by accounts in the composite may differ from the current fee schedule
- The three-year annualized ex-post standard deviation measures the variability of the composite (using gross returns) and the benchmark for the 36-month period ended on December 31.
- 8 Valuations and performance returns are computed and stated in U.S. Dollars. All returns reflect the reinvestment of income and other earnings.
- A complete list of composite descriptions, policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request. 9.
- Past performance does not indicate future results.
- This piece is provided for informational purposes only and should not be construed as a research report, a recommendation or suggestion to engage in or refrain from a particular course of action or to make or hold a particular 11 investment or pursue a particular investment strategy, including whether or not to buy, sell or hold any of the securities mentioned, including any mutual fund managed by Brown Advisory.
- 12. Some portfolios may utilize derivative securities. To date, any derivatives used have been CMOs and range accrual notes. Any CMO at the time of purchase must pass the FFIEC volatility tests.
- 13 Duration is a measure of interest rate risk

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Inc. MMD®/TM3 Thomson Reuters are trademarks and service marks of Thomson Reuters. Effective Duration is a time measure of a bond's interest-rate sensitivity, based on the weighted average of the time periods over which a bond's cash flows accrue to the bondholder. Yield to Worst is calculated by making worst-case scenario assumptions on the issue by calculating the returns that would be received if provisions, including prepayment, call or sinking fund, are used by the issuer. Average Life is the period of time for all principal dollars to be returned to investors. Alpha takes the volatility (price risk) of an investment and compares its risk-adjusted performance to a benchmark index. The Bloomberg Barclays Municipal Revenue Bond Index is a rules-based, market-value-weighted index engineered for the long-term tax-exempt bond market. The Bloomberg Barclays U.S. TFPS Index is an unmanaged index that consists of inflation-protected securities issued by the U.S. Treasury. The Bloomberg Barclays U.S. Treasury Index is an unmanaged index that consists of inflation-protected securities issued by the U.S. Treasury. The Bloomberg Barclays U.S. Treasury index is an unmanaged index of public obligations of the U.S. Treasury. The Bloomberg Barclays U.S. Treasury index is an unmanaged index that consists of inflation-protected securities issued by the U.S. Treasury. The Bloomberg Barclays U.S. Treasury index is an unmanaged index the rules effect are to components for government and corporate securities, mortgage pass-through securities, and asset-backed securities. The Bloomberg Barclays U.S. Treasury index is an unstance of the diverted to index which covers the short and intermediate components of the Bloomberg Barclays Hunicipal Bond Index and exercise the every the used market, with index components of the Bloomberg Barclays Bond Index and exercise the every the used and exercise the every the used the every index is a market value-weighted index which covers the U.S. Investment rgrade tax-exempt bond market. The 10 tracks tax-sempt municipal General Obligation, Revenue, Insured, and Prerefunded bonds with a minimum \$5 million par amount outstanding, issued as part of a transaction of at least \$50 million, and with a remaining maturity from 1 up to (but not including) 12 years. The index includes reinvestment of income. Bloomberg Barclays Municipal Bond Index is a broad-based benchmark that measures the investment grade. US dollar-denominated, fixed tax exempt bond market. Bloomberg Barclays Bloomberg Barclays functionated with a minimum \$5 million paramount outstanding, issued as part of a transaction of at least \$50 million, and with a remaining maturity from 1 up to (but not including) 12 years. The index includes reinvestment of income. Bloomberg Barclays functionated benchmark that measures the investment grade. US dollar-denominated fixed tax exempt bond market. Hi includes USD denominated securities publicly issued by US and non-US industrial, utility and financial issuers. Bloomberg Barclays functionated used to the use the securities publicly issued by US and non-US industrial, utility and financial issuers. Bloomberg Barclays functionated used to the U.S. equity markets and consists of approximately 500 leading companies in leading industries of the U.S. economy. Criteria evaluated include: market capitalization, financial viability, liquidity, public float, sector representation, and corporate structure. An index constituent must also be considered a U.S. company. Standard & Poor's, S&P, and S&P 500 are registered trademarks of Standard & Poor's Financial Services LLC ("S&P"), a subsidiary of S&P Global Inc. An investor cannot invest directly into an index.

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