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R **RIEGER**
B **REPORT**

STATE OF RHODE ISLAND PLANTATIONS

Municipal Bond ETFs: Current State

February 13, 2019

JR Rieger

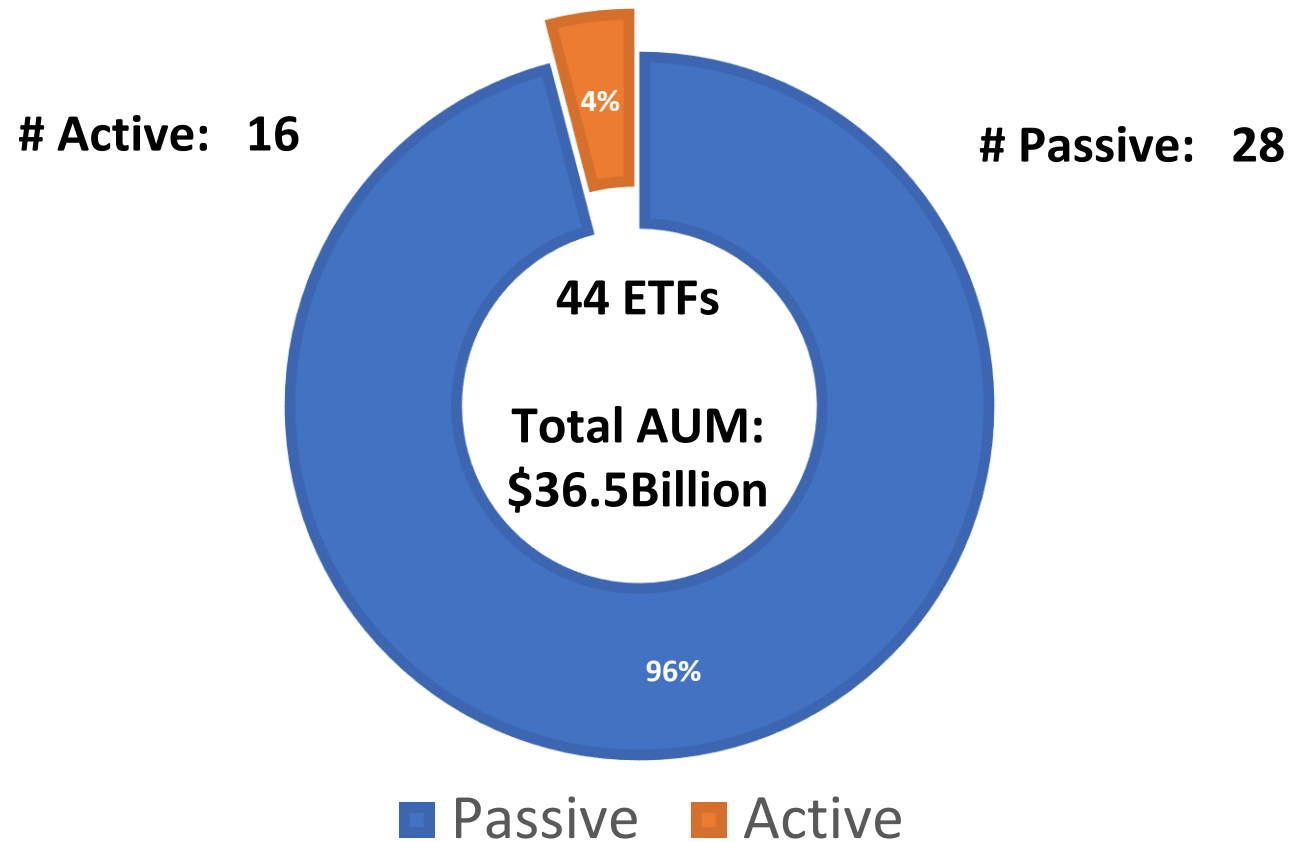
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Municipal Bond ETFs: Current State

- **\$36.5 Billion:** Amount invested in municipal bond Exchange Traded Funds (ETFs)
- **44:** Number of municipal bond ETFs. 28 funds are passively managed to an index and 16 funds are actively managed
- **50%:** passively managed Municipal ETFs have fees that are more than half those of actively managed municipal bond ETFs:
 - **18 bps:** Average passive management fee by number of funds
 - **16.75 bps:** Average passive management fee by Assets Under Management (AUM)
 - **36.375 bps:** Average active management fee by number of funds
 - **39 bps:** Average active management fee by AUM
- **\$7.8 Billion:** Amount invested in short term municipal bond ETFs (\$21% of the assets in municipal ETFs are invested in short term municipal bonds illustrating defensive use)

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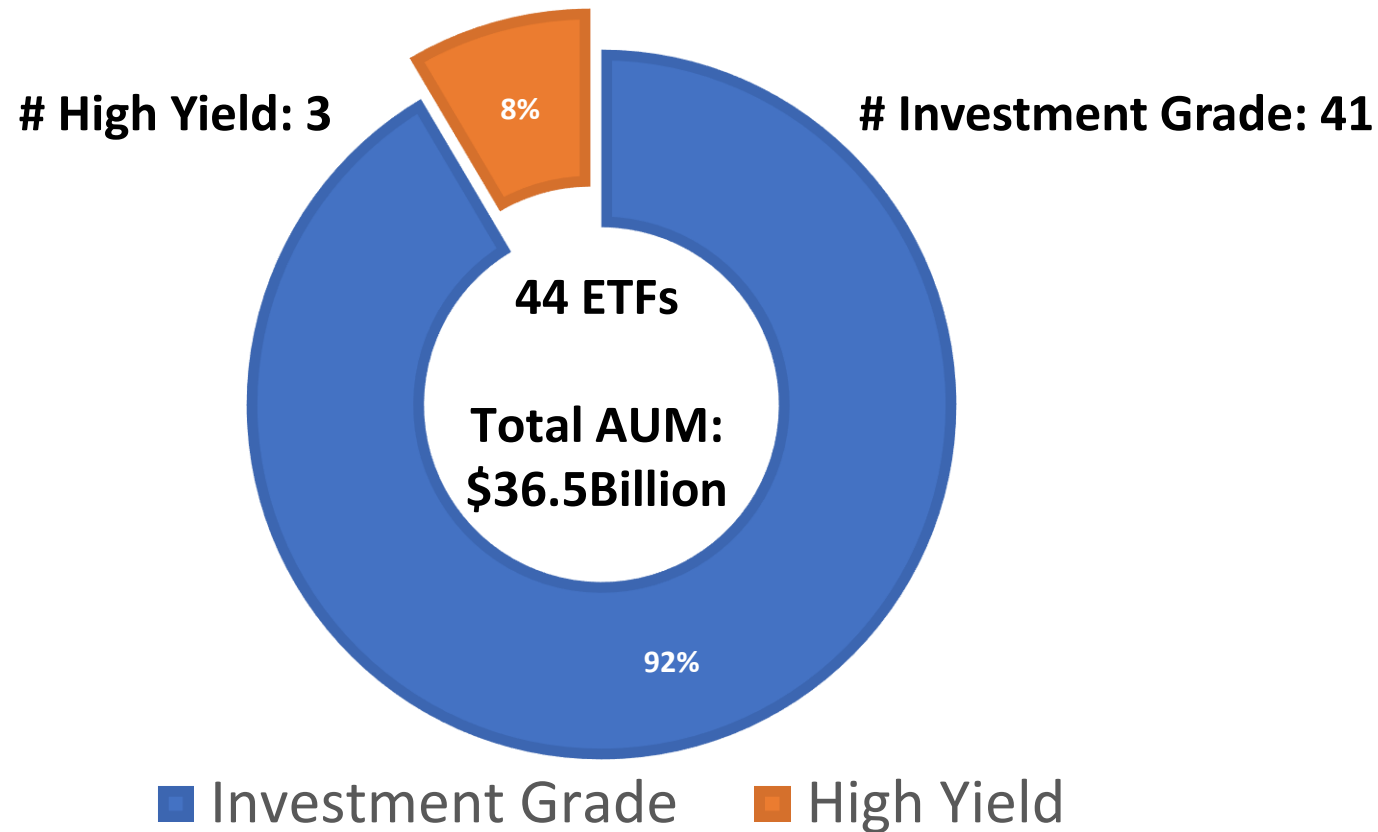
Municipal Bond ETFs Assets Under Management



Sources: ETF sponsor websites. Chart is provided for illustrative purposes only. Past performance is not a guarantee of future results. Data as 2/8/2019.

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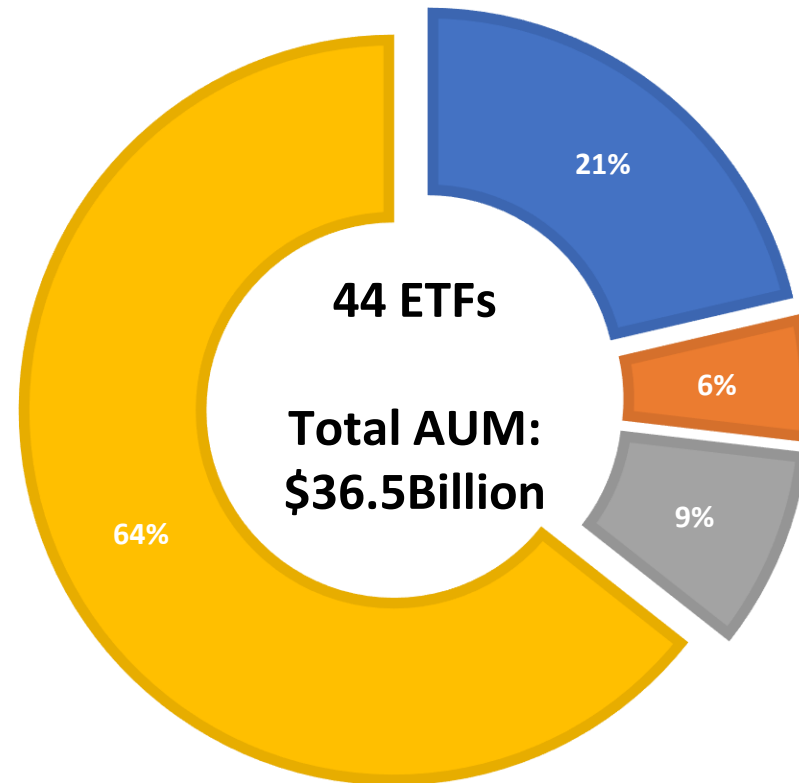
Municipal Bond ETFs Assets Under Management



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Municipal Bond ETFs Assets Under Management

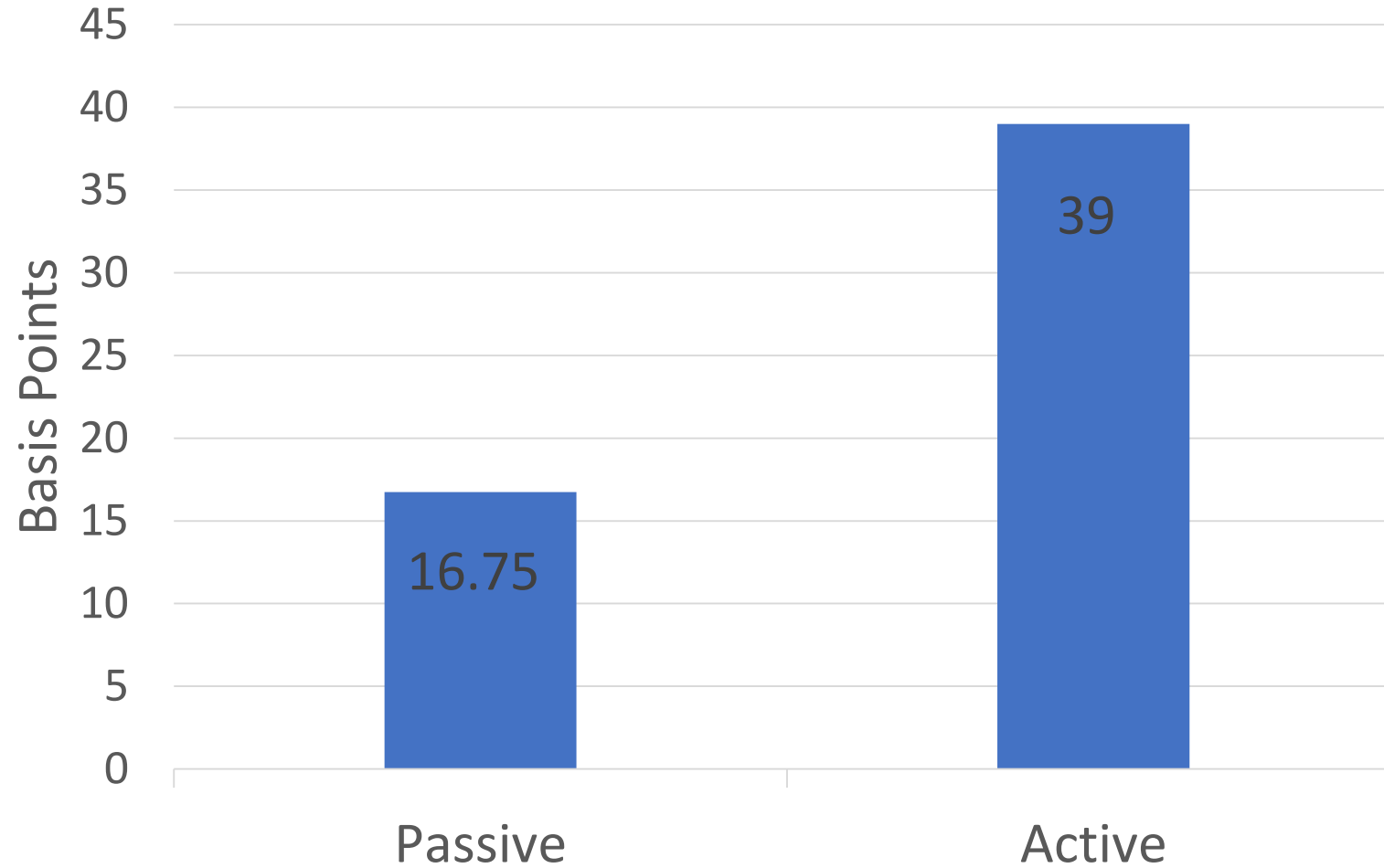


■ Short Term ■ Intermediate ■ Long Term ■ No Specific Maturity

Sources: ETF sponsor websites. Chart is provided for illustrative purposes only. Past performance is not a guarantee of future results. Data as 2/8/2019.

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Municipal Bond ETFs Management Fees in Bps (Weighted by AUM)



Sources: ETF sponsor websites. Chart is provided for illustrative purposes only. Past performance is not a guarantee of future results. Data as 2/8/2019.

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Largest Municipal Bond ETFs by AUM

SYMBOL	ETF	Inception	Sector	Mgt Fee	Active or Passive	Options Available?	AUM (Millions)	30 Day SEC Yield	Effective Duration	YTD Return
MUB	iShares National Municipal Bond	9/7/2007	National	7	Passive	Yes	\$11,290	2.46%	6.41	0.69%
VTEB	Vanguard Tax-Exempt Bond	8/31/2015	National	9	Passive	Yes	\$4,200	2.52%	5.8	0.74%
SHM	SPDR Nuveen Bloomberg Short Term Municipal Bond	10/10/2007	National Short	20	Passive	Yes	\$3,662	1.58%	2.79	1.39%
TFI	SPDR Nuveen Bloomberg Barclays Municipal Bond	9/11/2007	National	23	Passive	Yes	\$2,800	2.29%	6.8	0.43%
HYD	VanEck Vectors High-Yield Municipal	2/4/2009	High Yield	35	Passive	Yes	\$2,300	4.28%	7.62	2.10%
SUB	iShares Short-Term Municipal Bond	11/5/2008	National Short	7	Passive	No	\$2,150	1.74%	2.01	0.51%
ITM	VanEck Vectors AMT-Free Intermediate Municipal	12/4/2007	National Intermediate	24	Passive	Yes	\$1,700	2.35%	6.84	0.63%
PZA	Invesco National Municipal Bond	10/11/2007	National	28	Passive	Yes	\$1,500	2.84%	8.17	0.50%
CMF	iShares California Municipal Bond	10/4/2007	California	25	Passive	No	\$1,066	2.13%	6.46	0.50%
BAB	Invesco Taxable Municipal Bond	11/17/2009	Taxable National	28	Passive	No	\$876	3.80%	8.09	0.57%
HYMB	SPDR Nuveen S&P High Yield Municipal Bond	4/13/2011	High Yield	35	Passive	Yes	\$675	4.20%	8.84	3.80%
FMB	First Trust Managed Municipal Bond	5/13/2014	National	50	Active	No	\$553	2.76%	6.13	0.89%
IBMI	iShares iBonds Sept 2020 Municipal Bond	8/12/2014	National Short	18	Passive	No	\$341	1.56%	1.39	0.36%
NYF	iShares New York Municipal Bond	10/4/2007	New York	25	Passive	No	\$337	2.29%	6.26	0.71%
PWZ	Invesco California AMT-Free	10/11/2007	California	28	Passive	No	\$313	2.58%	8.36	0.43%
MUNI	PIMCO Intermediate Municipal Bond	11/30/2009	National Intermediate	35	Active	No	\$308	2.14%	5.57	1.11%
IBMH	iShares iBonds Sept 2019 Municipal Bond	2/4/2014	National Short	18	Passive	No	\$302	1.58%	0.43	0.21%
IBMJ	iShares iBonds Dec 2021 Municipal Bond	9/1/2015	National Short	18	Passive	No	\$256	1.62%	2.29	0.54%
IBMK	iShares iBonds Dec 2022 Municipal Bond	9/1/2015	National Short	18	Passive	No	\$252	1.68%	3.17	0.76%
SMB	VanEck Vectors AMT-Free Short Municipal	2/22/2008	National Short	20	Passive	No	\$197	1.76%	3.24	1.42%

Sources: ETF sponsor websites. Table is provided for illustrative purposes only. Past performance is not a guarantee of future results. Data as 2/8/2019.

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National Municipal Bond ETFs (Alphabetical Order)

SYMBOL	ETF	Inception	Sector	Mgt Fee	Active/Passive	Options Available?	AUM (Millions)	30 Day SEC Yield	Effective Duration	YTD Return
MUST	Columbia Multi-Sector Municipal Bond	10/10/2018	National	28	Passive	No	\$18	2.62%	not indicated	0.98%
FMB	First Trust Managed Municipal Bond	5/13/2014	National	50	Active	No	\$553	2.76%	6.13	0.89%
FMHI	First Trust Municipal High Income	11/1/2017	National	55	Active	No	\$35	3.43%	5.76	2.04%
FLMB	Franklin Liberty Municipal Bond	8/31/2017	National	30	Active	No	\$7	2.63%	7.72	0.83%
HMOP	Hartford Municipal Opportunities	12/13/2017	National	30	Active	No	\$108	2.61%	5.1	1.36%
PZA	Invesco National Municipal Bond	10/11/2007	National	28	Passive	Yes	\$1,500	2.84%	8.17	0.50%
MMIN	IQ MacKay Municipal Insured	10/18/2017	National Insured	30	Active	No	\$18	3.31%	6.4	0.58%
MUB	iShares National Municipal Bond	9/7/2007	National	7	Passive	Yes	\$11,290	2.46%	6.41	0.69%
JMUB	JPMorgan Municipal Bond	10/29/2018	National	24	Active	No	\$31	2.35%	6.17	1.09%
TFI	SPDR Nuveen Bloomberg Barclays Municipal Bond	9/11/2007	National	23	Passive	Yes	\$2,800	2.29%	6.8	0.43%
MLN	VanEck Vectors AMT-Free Long Municipal	1/2/2008	National Long	24	Passive	No	\$135	3.23%	not indicated	-0.73%
PRB	VanEck Vectors Pre-Refunded Municipal	2/2/2009	National Pre-Refunded	24	Passive	No	\$14	1.63%	2.92	1.47%
VTEB	Vanguard Tax-Exempt Bond	8/31/2015	National	9	Passive	No	\$4,200	2.52%	5.8	0.74%
CUMB	Virtus Cumberland Municipal Bond	1/17/2017	National	59	Active	No	\$11	2.19%	not indicated	-0.02%
RVNU	Xtrackers Municipal Infrastructure	6/4/2013	National	15	Passive	No	\$57	not indicated	6.48	0.40%

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National Intermediate Municipal Bond ETFs (Alphabetical Order)

SYMBOL	ETF	Inception	Sector	Mgt Fee	Active/Passive	Options Available?	AUM (Millions)	30 Day SEC Yield	Effective Duration	YTD Return
FMLI	Franklin Liberty Intermediate Municipal Opportunities	8/31/2017	National Intermediate	30	Active	No	\$7	2.81%	6.43	0.62%
MMIT	IQ MacKay Municipal Intermediate	10/18/2017	National Intermediate	31	Active	No	\$32	3.97%	not indicated	0.80%
MUNI	PIMCO Intermediate Municipal Bond	11/30/2009	National Intermediate	35	Active	No	\$308	2.14%	5.57	1.11%
ITM	VanEck Vectors AMT-Free Intermediate Municipal	12/4/2007	National Intermediate	24	Passive	Yes	\$1,700	2.35%	6.84	0.63%

Sources: ETF sponsor websites. Table is provided for illustrative purposes only. Past performance is not a guarantee of future results. Data as 2/8/2019.

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National Short Term Municipal Bond ETFs (Alphabetical Order)

SYMBOL	ETF	Inception	Sector	Mgt Fee	Active/Passive	Options Available?	AUM (Millions)	30 Day SEC Yield	Effective Duration	YTD Return
FSMB	First Trust Short Duration Municipal	11/1/2018	National Short	45	Active	No	\$20	1.90%	2	N/A
FUMB	First Trust Ultra Short Duration Municipal	11/1/2018	National Short	35	Active	No	\$20	1.64%	0.52	N/A
PVI	Invesco VDRO Tax-Free Weekly Municipal	11/15/2007	National Short	25	Passive	No	\$61	1.04%	(7-day reset)	1.31%
IBMJ	iShares iBonds Dec 2021 Municipal Bond	9/1/2015	National Short	18	Passive	No	\$256	1.62%	2.29	0.54%
IBMK	iShares iBonds Dec 2022 Municipal Bond	9/1/2015	National Short	18	Passive	No	\$252	1.68%	3.17	0.76%
IBML	iShares iBonds Dec 2023 Municipal Bond	4/11/2017	National Short	18	Passive	No	\$138	1.75%	3.96	0.93%
IBMM	iShares iBonds Dec 2024 Municipal Bond	3/20/2018	National Short	18	Passive	No	\$41	1.81%	4.8	1.20%
IBMH	iShares iBonds Sept 2019 Municipal Bond	2/4/2014	National Short	18	Passive	No	\$302	1.58%	0.43	0.21%
IBMI	iShares iBonds Sept 2020 Municipal Bond	8/12/2014	National Short	18	Passive	No	\$341	1.56%	1.39	0.36%

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National Short Term Municipal Bond ETFs (Alphabetical Order Continued)

SYMBOL	ETF	Inception	Sector	Mgt Fee	Active/Passive	Options Available?	AUM (Millions)	30 Day SEC Yield	Effective Duration	YTD Return
MEAR	iShares Short Maturity Municipal Bond	3/3/2015	National Short	25	Active	No	\$177	1.53%	0.55	0.26%
SUB	iShares Short-Term Municipal Bond	11/5/2008	National Short	7	Passive	No	\$2,150	1.74%	2.01	0.51%
JMST	JPMorgan Ultra-Short Municipal Income	10/16/2018	National Short	18	Active	No	\$52	1.90%	0.79	0.30%
SMMU	PIMCO Short Term Municipal Bond	2/1/2010	National Short	35	Active	No	\$82	1.76%	1.91	1.38%
SHM	SPDR Nuveen Bloomberg Short Term Municipal Bond	10/10/2007	National Short	20	Passive	Yes	\$3,662	1.58%	2.79	1.39%
SMB	VanEck Vectors AMT-Free Short Municipal	2/22/2008	National Short	20	Passive	No	\$197	1.76%	3.24	1.42%

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High Yield Municipal Bond ETFs (Alphabetical Order)

SYMBOL	ETF	Inception	Sector	Mgt Fee	Active/Passive	Options Available?	AUM (Millions)	30 Day SEC Yield	Effective Duration	YTD Return
HYMB	SPDR Nuveen S&P High Yield Municipal Bond	4/13/2011	High Yield	35	Passive	Yes	\$675	4.20%	8.84	3.80%
HYD	VanEck Vectors High-Yield Municipal	2/4/2009	High Yield	35	Passive	Yes	\$2,300	4.28%	7.62	2.10%
SHYD	VanEck Vectors Short High-Yield Municipal	1/13/2014	High Yield	35	Passive	No	\$176	3.28%	4.73	2.43%

Sources: ETF sponsor websites. Table is provided for illustrative purposes only. Past performance is not a guarantee of future results. Data as 2/8/2019.

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State Based Municipal Bond ETFs (Alphabetical Order)

SYMBOL	ETF	Inception	Sector	Mgt Fee	Active/Passive	Options Available?	AUM (Millions)	30 Day SEC Yield	Effective Duration	YTD Return
FCAL	First Trust California Municipal High Income	6/20/2017	California	50	Active	No	\$22	2.81%	6.66	1.10%
PWZ	Invesco California AMT-Free	10/11/2007	California	28	Passive	No	\$313	2.58%	8.36	0.43%
PZT	Invesco New York AMT-Free Municipal Bond	10/11/2007	New York	28	Passive	No	\$61	2.89%	7.74	0.25%
CMF	iShares California Municipal Bond	10/4/2007	California	25	Passive	No	\$1,066	2.13%	6.46	0.50%
NYF	iShares New York Municipal Bond	10/4/2007	New York	25	Passive	No	\$337	2.29%	6.26	0.71%

Sources: ETF sponsor websites. Table is provided for illustrative purposes only. Past performance is not a guarantee of future results. Data as 2/8/2019.

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Taxable Municipal Bond ETF (Only one at this time)

SYMBOL	ETF	Inception	Sector	Mgt Fee	Active/Passive	Options Available?	AUM (Millions)	30 Day SEC Yield	Effective Duration	YTD Return
BAB	Invesco Taxable Municipal Bond	11/17/2009	Taxable National	28	Passive	No	\$876	3.80%	8.09	0.57%

Sources: [Invesco Funds](#). Table is provided for illustrative purposes only. Past performance is not a guarantee of future results. Data as 2/8/2019.

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Data Resources Used in this Report

- The data used in this report came from the ETF sponsor websites.
- Not all the ETF sponsor websites report the same information and may do so in different time frames.
- ETF “Sector” classifications can be subjective. The sector designation is my opinion based on the stated objective of the ETF.
- The data in spreadsheet form is available by contacting the Rieger Report.
- I do my best to make this an accurate report. In the event of data errors or omissions please contact JR@RiegerReport.com .

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