



ETF Category Report

Fixed Income: Government

As of 12/29/2023

The ETF Action Category Reports present category averages, category breakdown, and ETF level data using the ETF Action Classification System. For more information, please reach out to team@etfaction.com. Category reports include data relating to:

Flows & Product Growth

Structure

Performance

Risk

Composition

Fundamentals

This report is currently in beta so if you have any questions or see any issues, please send a message to team@etfaction.com.

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Flows & Category Growth

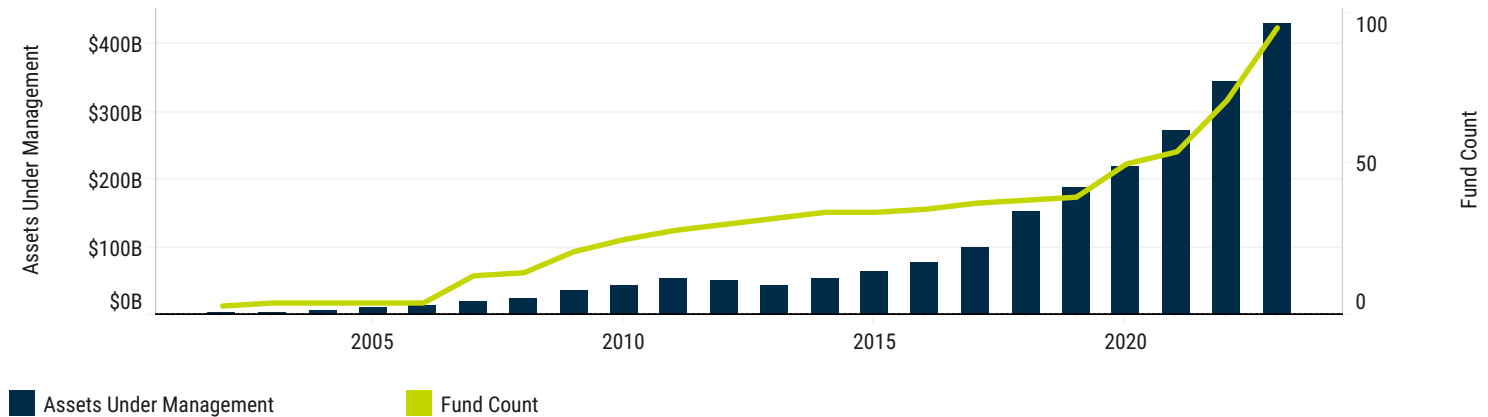


Category: Fixed Income: Government

As of 12/29/2023

Fund Count	Assets Under Management	1 Month Flows	3 Month Flows	Year To Date Flows	1 Year Flows	3 Year Flows	5 Year Flows
95	\$430.6B	(\$7.82B)	\$8.99B	\$0.00B	\$83.73B	\$252.43B	\$302.64B

Category Growth



Top 10 Funds by 1 Month Flows

Ticker	Name	Inception	AUM	1 Month	3 Month	Year To Date	1 Year	3 Year	5 Year
TLT	iShares 20+ Year Treasury Bond ETF	7/22/2002	\$52,130.57M	\$2,191.4M	\$7,506.3M	\$0.0M	\$24,827.5M	\$42,080.8M	\$48,751.4M
VGLT	Vanguard Long-Term Treasury ETF	11/19/2009	\$10,778.03M	\$1,191.5M	\$2,746.1M	\$0.0M	\$6,583.7M	\$9,735.0M	\$10,908.8M
SPTL	SPDR Portfolio Long Term Treasury ETF	5/23/2007	\$8,573.56M	\$382.7M	\$896.5M	\$0.0M	\$2,687.3M	\$7,746.7M	\$8,534.2M
IBTH	iShares iBonds Dec 2027 Term Treasury ETF	2/25/2020	\$639.45M	\$277.4M	\$383.2M	\$0.0M	\$477.5M	\$623.3M	\$635.2M
VGIT	Vanguard Intermediate-Term Treasury ETF	11/19/2009	\$21,779.41M	\$229.6M	\$3,022.9M	\$0.0M	\$7,842.2M	\$16,199.3M	\$19,147.8M
SGOV	iShares 0-3 Month Treasury Bond ETF	5/26/2020	\$17,460.86M	\$180.5M	\$1,921.5M	\$0.0M	\$11,138.1M	\$16,598.1M	\$17,458.2M
IBTG	iShares iBonds Dec 2026 Term Treasury ETF	2/25/2020	\$747.36M	\$169.4M	\$344.7M	\$0.0M	\$567.0M	\$729.6M	\$749.0M
EDV	Vanguard Extended Duration Treasury ETF	12/6/2007	\$3,323.97M	\$164.0M	\$689.8M	\$0.0M	\$1,823.1M	\$2,725.0M	\$3,047.9M
IBTF	iShares iBonds Dec 2025 Term Treasury ETF	2/25/2020	\$1,829.11M	\$133.4M	\$267.1M	\$0.0M	\$968.1M	\$1,821.8M	\$1,834.6M
SCHR	Schwab Intermediate-Term US Treasury ETF	8/5/2010	\$7,866.38M	\$102.2M	\$201.4M	\$0.0M	\$241.4M	\$4,741.9M	\$4,816.9M

Bottom 10 Funds by 1 Month Flows

Ticker	Name	Inception	AUM	1 Month	3 Month	Year To Date	1 Year	3 Year	5 Year
BIL	SPDR Bloomberg 1-3 Month T-Bill ETF	5/25/2007	\$33,358.14M	(\$2,319.2M)	\$2,373.3M	\$0.0M	\$7,014.7M	\$20,661.8M	\$24,977.0M
SHY	iShares 1-3 Year Treasury Bond ETF	7/22/2002	\$25,641.15M	(\$1,722.0M)	(\$946.7M)	\$0.0M	(\$2,116.5M)	\$7,156.4M	\$5,591.8M
SHV	iShares Short Treasury Bond ETF	1/5/2007	\$18,606.31M	(\$1,470.7M)	(\$1,638.4M)	\$0.0M	(\$1,777.7M)	\$609.6M	(\$1,729.2M)
TIP	iShares TIPS Bond ETF	12/4/2003	\$18,634.93M	(\$1,371.3M)	(\$2,601.6M)	\$0.0M	(\$4,540.6M)	(\$2,091.2M)	(\$293.2M)
IEF	iShares 7-10 Year Treasury Bond ETF	7/22/2002	\$27,697.42M	(\$1,315.0M)	(\$1,226.8M)	\$0.0M	\$4,677.0M	\$17,024.0M	\$19,046.3M
GOVT	iShares U.S. Treasury Bond ETF	2/14/2012	\$22,684.91M	(\$1,122.6M)	(\$1,531.3M)	\$0.0M	\$293.5M	\$11,241.1M	\$17,576.8M
USFR	WisdomTree Floating Rate Treasury Fund	2/4/2014	\$17,587.72M	(\$864.9M)	(\$715.9M)	\$0.0M	\$4,805.2M	\$16,404.5M	\$16,431.4M
VTIP	Vanguard Short-Term Inflation-Protected Securit..	10/12/2012	\$12,097.77M	(\$766.7M)	(\$1,754.8M)	\$0.0M	(\$4,295.4M)	\$3,774.0M	\$7,536.6M
STIP	iShares 0-5 Year TIPS Bond ETF	12/1/2010	\$8,418.76M	(\$575.9M)	(\$1,123.4M)	\$0.0M	(\$4,904.9M)	\$6,369.4M	\$7,002.5M
SCHP	Schwab US TIPS ETF	8/5/2010	\$11,501.05M	(\$406.2M)	(\$402.5M)	\$0.0M	(\$2,380.8M)	\$369.1M	\$7,317.2M

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Overview & Structure



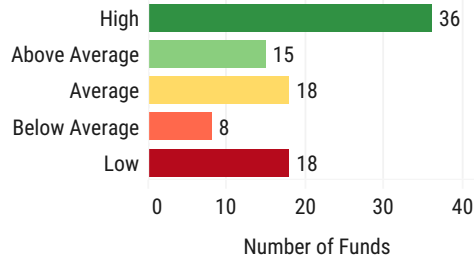
Category: Fixed Income: Government

As of 12/29/2023

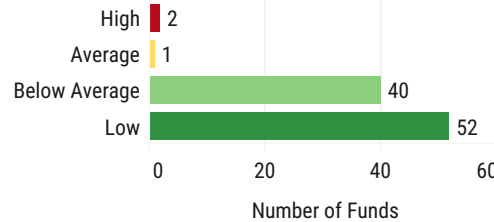
Fund Count	Assets Under Management	Average Expense Ratio	Average Lifespan	Average TTM Yield	Average Spread (%)	Average ADV (\$)
95	\$430.6B	0.13%	6.03 Years	2.42%	0.06%	\$108.52M

Breakdown of Category Universe Ratings

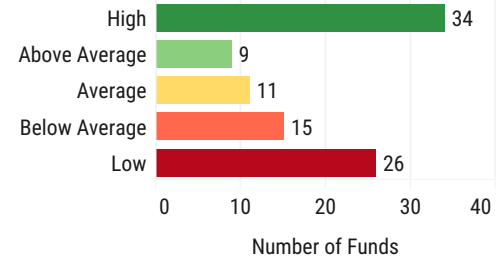
Assets Under Management



Expense Ratio



Liquidity



Top 10 Funds by Greatest Assets Under Management

Ticker	Name	Inception	AUM	Expense Ratio	Distribution Yield (TTM)	Average Spread	ADV
TLT	iShares 20+ Year Treasury Bond ETF	7/22/2002	\$52,130.57M	0.15%	3.02%	0.01%	\$4,214.30M
BIL	SPDR Bloomberg 1-3 Month T-Bill ETF	5/25/2007	\$33,358.14M	0.14%	4.93%	0.01%	\$900.97M
IEF	iShares 7-10 Year Treasury Bond ETF	7/22/2002	\$27,697.42M	0.15%	2.61%	0.01%	\$1,153.16M
SHY	iShares 1-3 Year Treasury Bond ETF	7/22/2002	\$25,641.15M	0.15%	2.67%	0.01%	\$417.34M
GOVT	iShares U.S. Treasury Bond ETF	2/14/2012	\$22,684.91M	0.05%	2.38%	0.05%	\$250.62M
VGSH	Vanguard Short-Term Treasury ETF	11/19/2009	\$22,154.75M	0.04%	3.32%	0.02%	\$200.05M
VGIT	Vanguard Intermediate-Term Treasury ETF	11/19/2009	\$21,779.41M	0.04%	2.72%	0.02%	\$169.40M
TIP	iShares TIPS Bond ETF	12/4/2003	\$18,634.93M	0.19%	2.72%	0.01%	\$291.43M
SHV	iShares Short Treasury Bond ETF	1/5/2007	\$18,606.31M	0.15%	4.28%	0.01%	\$301.36M
USFR	WisdomTree Floating Rate Treasury Fund	2/4/2014	\$17,587.72M	0.15%	5.12%	0.02%	\$260.66M

Top 10 Funds by Lowest Expense Ratio

Ticker	Name	Inception	AUM	Expense Ratio	Distribution Yield (TTM)	Average Spread	ADV
SCHO	Schwab Short-Term US Treasury ETF	8/5/2010	\$11,882.16M	0.03%	3.76%	0.02%	\$76.66M
SCHP	Schwab US TIPS ETF	8/5/2010	\$11,501.05M	0.03%	3.01%	0.02%	\$80.06M
SCHQ	Schwab Long-Term U.S. Treasury ETF	10/10/2019	\$621.81M	0.03%	3.74%	0.03%	\$9.04M
SCHR	Schwab Intermediate-Term US Treasury ETF	8/5/2010	\$7,866.38M	0.03%	3.15%	0.02%	\$59.73M
SPTI	SPDR Portfolio Intermediate Term Treasury ETF	5/23/2007	\$4,475.16M	0.03%	2.98%	0.04%	\$70.48M
SPTL	SPDR Portfolio Long Term Treasury ETF	5/23/2007	\$8,573.56M	0.03%	3.20%	0.04%	\$127.33M
SPTS	SPDR Portfolio Short Term Treasury ETF	11/30/2011	\$5,576.08M	0.03%	3.61%	0.03%	\$57.75M
STIP	iShares 0-5 Year TIPS Bond ETF	12/1/2010	\$8,418.76M	0.03%	2.84%	0.01%	\$64.48M
XHLF	BondBloxx Bloomberg Six Month Target Duration US Treas..	9/13/2022	\$1,048.46M	0.03%	4.38%	0.02%	\$12.17M
XONE	BondBloxx Bloomberg One Year Target Duration US Treas..	9/13/2022	\$605.56M	0.03%	4.36%	0.02%	\$3.75M

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Category Performance



Category: Fixed Income: Government

As of 12/29/2023

Fund Count	Average 1 Month Return	Average 3 Month Return	Average YTD Return	Average 1 Year Return	Average 3 Year Return**	Average 5 Year Return**	Average 10 Year Return**
95	2.23%	5.05%	0.00%	2.78%	-1.59%	0.51%	0.59%

*Annualized

Breakdown of Category Performance

1 Month Returns



Advancers*

Top 1 Month Return

95

10.44%

Decliners*

Bottom 1 Month Return

0.11%

Top 10 Performers: 1 Month

Ticker	Name	Inception	AUM	1 Month	3 Month	YTD	1 Year	3 Year*	5 Year*
ZROZ	PIMCO 25+ Year Zero Coupon US Treasury Index ETF	10/30/2009	\$1,306.44M	10.44%	19.58%	0.00%	1.23%	-17.44%	-3.19%
GOVZ	iShares 25+ Year Treasury STRIPS Bond ETF	9/22/2020	\$202.74M	10.18%	19.47%	0.00%	0.90%	-17.30%	
EDV	Vanguard Extended Duration Treasury ETF	12/6/2007	\$3,323.97M	9.64%	18.04%	0.00%	1.39%	-16.68%	-3.22%
XTWY	BondBloxx Bloomberg Twenty Year Target Duration US Tre..	9/13/2022	\$28.05M	8.16%	15.53%	0.00%	2.74%		
BBLB	JPMorgan BetaBuilders U.S. Treasury Bond 20+ Year ETF	4/19/2023	\$62.16M	6.98%	13.09%				
TLT	iShares 20+ Year Treasury Bond ETF	7/22/2002	\$52,130.57M	6.67%	12.93%	0.00%	2.77%	-12.33%	-1.89%
UTHY	US Treasury 30 Year Bond ETF	3/28/2023	\$6.68M	6.61%	12.44%				
SPTL	SPDR Portfolio Long Term Treasury ETF	5/23/2007	\$8,573.56M	6.49%	12.34%	0.00%	3.31%	-11.54%	-1.44%
SCHQ	Schwab Long-Term U.S. Treasury ETF	10/10/2019	\$621.81M	6.48%	12.31%	0.00%	3.43%	-11.46%	
VGLT	Vanguard Long-Term Treasury ETF	11/19/2009	\$10,778.03M	6.43%	12.27%	0.00%	3.28%	-11.50%	-1.40%

Bottom 10 Performers: 1 Month

Ticker	Name	Inception	AUM	1 Month	3 Month	YTD	1 Year	3 Year*	5 Year*
FLTN	Rareview Inflation/Deflation ETF	1/5/2022	\$21.69M	0.11%	2.84%	0.00%	-6.86%		
USFR	WisdomTree Floating Rate Treasury Fund	2/4/2014	\$17,587.72M	0.31%	1.22%	0.00%	5.18%	2.36%	1.93%
TFLO	iShares Treasury Floating Rate Bond ETF	2/3/2014	\$10,336.92M	0.36%	1.24%	0.00%	5.12%	2.34%	1.90%
FIAX	Nicholas Fixed Income Alternative ETF	11/29/2022	\$53.20M	0.39%	2.32%	0.00%	3.44%		
IBIA	iShares iBonds Oct 2024 Term TIPS ETF	9/13/2023	\$7.51M	0.40%	1.50%				
SGOV	iShares 0-3 Month Treasury Bond ETF	5/26/2020	\$17,460.86M	0.40%	1.34%	0.00%	5.12%	2.23%	
BIL	SPDR Bloomberg 1-3 Month T-Bill ETF	5/25/2007	\$33,358.14M	0.41%	1.33%	0.00%	4.94%	2.05%	1.72%
TBIL	US Treasury 3 Month Bill ETF	8/9/2022	\$2,737.61M	0.42%	1.36%	0.00%	5.12%		
CLIP	Global X 1-3 Month T-Bill ETF	6/21/2023	\$125.44M	0.43%	1.34%				
GBIL	Goldman Sachs Access Treasury 0-1 Year ETF	9/6/2016	\$5,471.88M	0.43%	1.43%	0.00%	4.91%	1.94%	1.78%

*Funds must have at least one month track record to be included in performance statistics.

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3 Year Risk Metrics Vs. S&P 500 (SPY)



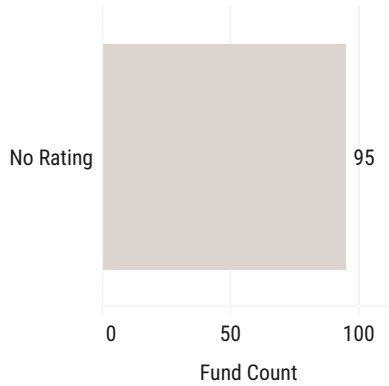
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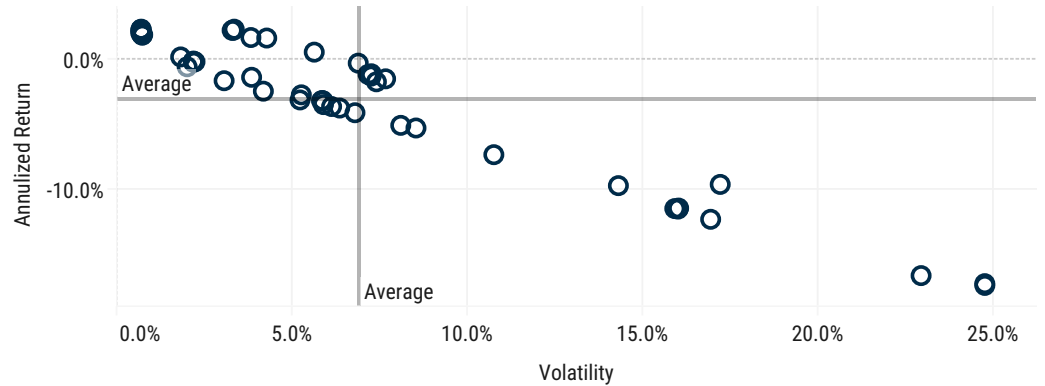
Fund Count	Average Return	Average Volatility	Average Correlation	Average Sharpe Ratio	Average Sortino Ratio	Average Beta	Average Alpha	Average Up Capture	Average Down Capture
95	-3.02%	6.90%	0.53	0.21	11.58	0.24	-5.45%	12.10%	33.20%

Breakdown of Category Risk

Category Breakdown: Volatility Ratings



3 Year Risk-Return Scatterplot



Top 10 Funds by Sharpe Ratio (3 Year)

Ticker	Name	AUM	Annualized Return	Volatility	Correlation (SPY)	Sharpe Ratio	Beta	Alpha	Up Capture	Down Capture	Volatility Rating (0-5)
TFLO	iShares Treasury Floating Rate Bond ETF	\$10,336.9M	2.3%	0.7%	2.3%	3.46	0.00	2.3%	4.2%	-4.7%	
USFR	WisdomTree Floating Rate Treasury Fund	\$17,587.7M	2.4%	0.7%	-4.6%	3.43	0.00	2.4%	4.2%	-4.9%	
SGOV	iShares 0-3 Month Treasury Bond ETF	\$17,460.9M	2.2%	0.7%	5.4%	3.31	0.00	2.2%	4.2%	-4.3%	
BIL	SPDR Bloomberg 1-3 Month T-Bill ETF	\$33,358.1M	2.1%	0.7%	6.6%	3.05	0.00	2.0%	3.9%	-4.0%	
TBILL	Invesco Short Term Treasury ETF	\$1,546.8M	2.0%	0.7%	15.7%	2.89	0.01	1.9%	4.0%	-3.5%	
GBIL	Goldman Sachs Access Treasury 0-1 Year..	\$5,471.9M	1.9%	0.7%	16.3%	2.74	0.01	1.9%	3.9%	-3.4%	
SHV	iShares Short Treasury Bond ETF	\$18,606.3M	1.9%	0.7%	22.2%	2.66	0.01	1.8%	4.1%	-3.0%	
BILS	SPDR Bloomberg 3-12 Month T-Bill ETF	\$2,931.6M	1.9%	0.7%	14.7%	2.65	0.01	1.8%	3.8%	-3.3%	
STIP	iShares 0-5 Year TIPS Bond ETF	\$8,418.8M	2.4%	3.3%	68.1%	0.70	0.13	1.0%	13.6%	9.2%	
PBTP	Invesco 0-5 Yr US TIPS ETF	\$74.6M	2.3%	3.3%	66.5%	0.69	0.12	0.9%	12.8%	8.4%	

Least Volatile 10 Funds by Volatility Rating

Ticker	Name	AUM	Annualized Return	Volatility	Correlation (SPY)	Sharpe Ratio	Beta	Alpha	Up Capture	Down Capture	Volatility Rating (0-5)
AGZ	iShares Agency Bond ETF	\$677.1M	-1.4%	3.8%	58.8%	-0.36	0.13	-2.7%	7.2%	17.4%	
BIL	SPDR Bloomberg 1-3 Month T-Bill ETF	\$33,358.1M	2.1%	0.7%	6.6%	3.05	0.00	2.0%	3.9%	-4.0%	
BILS	SPDR Bloomberg 3-12 Month T-Bill ETF	\$2,931.6M	1.9%	0.7%	14.7%	2.65	0.01	1.8%	3.8%	-3.3%	
EDV	Vanguard Extended Duration Treasury ETF	\$3,324.0M	-16.7%	22.9%	58.6%	-0.79	0.76	-24.0%	25.3%	122.1%	
FLGV	Franklin U.S. Treasury Bond ETF	\$477.2M	-3.5%	5.9%	62.0%	-0.60	0.21	-5.6%	9.9%	31.6%	
FTSD	Franklin Short Duration U.S. Government E..	\$157.5M	0.2%	1.8%	44.2%	0.12	0.05	-0.3%	3.8%	4.6%	
GBIL	Goldman Sachs Access Treasury 0-1 Year ..	\$5,471.9M	1.9%	0.7%	16.3%	2.74	0.01	1.9%	3.9%	-3.4%	
GOVI	Invesco Equal Weight 0-30 Year Treasury E..	\$790.7M	-7.3%	10.7%	61.5%	-0.71	0.38	-11.2%	15.1%	58.5%	
GOVT	iShares U.S. Treasury Bond ETF	\$22,684.9M	-3.7%	6.3%	62.6%	-0.60	0.23	-6.1%	10.5%	33.9%	
GOVZ	iShares 25+ Year Treasury STRIPS Bond ETF	\$202.7M	-17.3%	24.7%	57.5%	-0.76	0.81	-24.8%	27.4%	128.6%	

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Fixed Income Composition

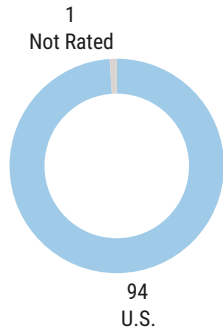


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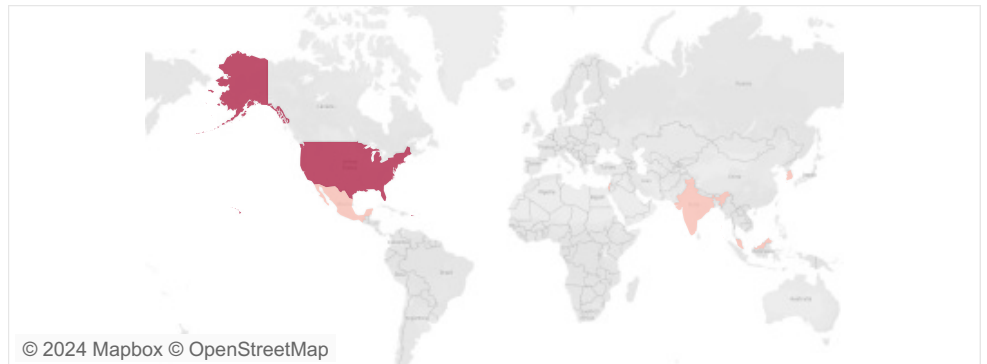
As of 12/29/2023

Fund Count*	Assets Under Management	Average FI Holdings	Average Credit Rating	Average Yield Rating	Average Duration Rating	Average Convexity Rating
94	\$430.6B	155.3	Above Average	Average	Below Average	Below Average

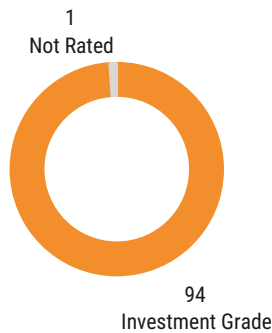
Category Breakdown: Market



Average Fixed Income Geographic Exposure



Category Breakdown: Credit



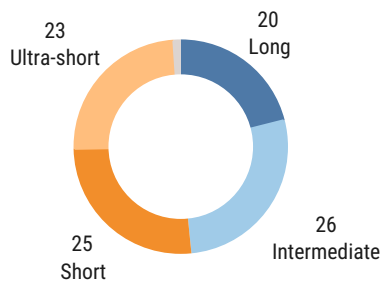
Average FI Market Development

U.S.	97.61%
Developed ex-U.S.	0.01%
Emerging	0.01%
Frontier	0.00%
Unassigned	0.27%

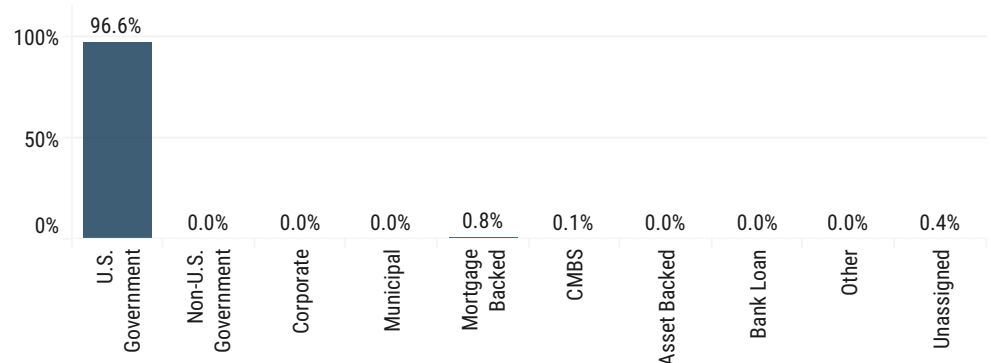
Average FI Regional Exposure

North America	97.61%
Europe	0.00%
Asia Pacific	0.01%
Latin America	0.00%
Africa	0.01%
Unassigned	0.27%

Category Breakdown: Duration



Average Issue Type Exposure



*Fund count for composition and fundamentals excludes funds with no recent holdings date (ie: ETNs)

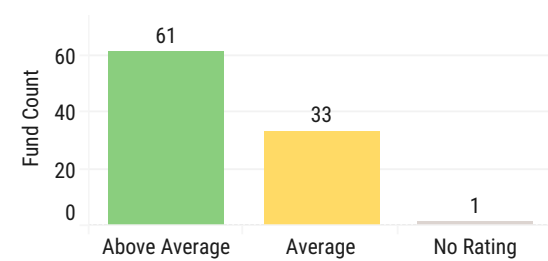
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Category: Fixed Income: Government

As of 12/29/2023

Fund Count*	Average Weighted Coupon	Average Yield To Maturity	Average Yield To Worst	Average Option Adjusted Spread	Average Effective Maturity (Years)	Average Effective Duration	Average Effective Convexity
94	2.07%	4.23%	4.23%	-0.12%	6.64	5.22	0.75

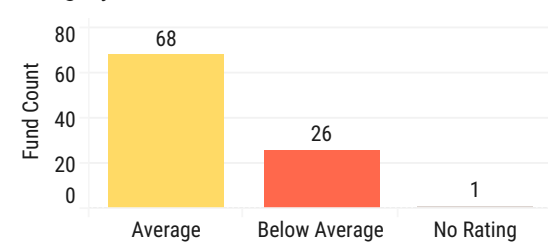
Category Breakdown: Credit



Top 10 Funds by Credit Score

Ticker	Name	AUM	Credit Rating (0-5) (Lower=Better)
SGOV	iShares 0-3 Month Treasury Bond ETF	\$17,460.86M	1.06
BIL	SPDR Bloomberg 1-3 Month T-Bill ETF	\$33,358.14M	1.25
GBIL	Goldman Sachs Access Treasury 0-1 Year ETF	\$5,471.88M	1.44
CLIP	Global X 1-3 Month T-Bill ETF	\$125.44M	1.50
SHV	iShares Short Treasury Bond ETF	\$18,606.31M	1.67
Null	Null		1.69
BUCK	Simplify Stable Income ETF	\$40.51M	1.78
TBILL	Invesco Short Term Treasury ETF	\$1,546.76M	1.78
TYA	Simplify Intermediate Term Treasury Futures Strategy ETF	\$53.44M	1.80
TUA	Simplify Short Term Treasury Futures Strategy ETF	\$818.77M	1.81

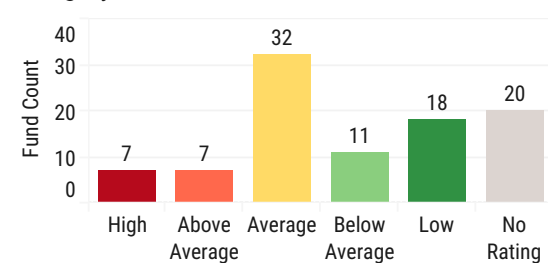
Category Breakdown: Yield



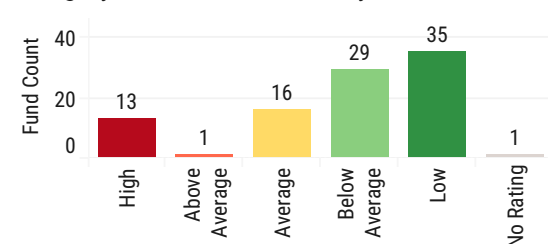
Top 10 Funds by Yield Score

Ticker	Name	AUM	FI Yield Rating (0-5)
IBIA	iShares iBonds Oct 2024 Term TIPS ETF	\$7.51M	2.79
FTSD	Franklin Short Duration U.S. Government ETF	\$157.52M	2.58
IBIB	iShares iBonds Oct 2025 Term TIPS ETF	\$6.28M	2.39
IBTE	iShares iBonds Dec 2024 Term Treasury ETF	\$2,735.48M	2.36
XONE	BondBloxx Bloomberg One Year Target Duration US Treas..	\$605.56M	2.34
OBIL	US Treasury 12 Month Bill ETF	\$239.97M	2.31
XBIL	US Treasury 6 Month Bill ETF	\$528.16M	2.31
PBTP	Invesco 0-5 Yr US TIPS ETF	\$74.61M	2.30
VTIP	Vanguard Short-Term Inflation-Protected Securities ETF	\$12,097.77M	2.30
STIP	iShares 0-5 Year TIPS Bond ETF	\$8,418.76M	2.30

Category Breakdown: Duration



Category Breakdown: Convexity



*Fund count for composition and fundamentals excludes funds with no recent holdings date (ie: ETNs)

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Appendix: Category Funds



Appendix: Category Funds 1-50

Ticker	Name	Inception	AUM	1 Month	3 Month	YTD	1 Year	3 Year*	5 Year*
AGZ	iShares Agency Bond ETF	11/5/2008	\$677M	1.41%	3.66%	0.00%	5.18%	-1.36%	1.39%
BBIB	JPMorgan BetaBuilders U.S. Treasury Bond 3-10 Year ETF	4/19/2023	\$7M	1.98%	4.97%				
BBIP	JPMorgan BetaBuilders U.S. TIPS 0-5 Year ETF	5/10/2023	\$8M	0.77%	2.46%				
BBLB	JPMorgan BetaBuilders U.S. Treasury Bond 20+ Year ETF	4/19/2023	\$62M	6.98%	13.09%				
BBSB	JPMorgan BetaBuilders U.S. Treasury Bond 1-3 Year ETF	4/19/2023	\$4M	0.84%	2.50%				
BIL	SPDR Bloomberg 1-3 Month T-Bill ETF	5/25/2007	\$33,358M	0.41%	1.33%	0.00%	4.94%	2.05%	1.72%
BILS	SPDR Bloomberg 3-12 Month T-Bill ETF	9/23/2020	\$2,932M	0.44%	1.45%	0.00%	4.92%	1.89%	
BILZ	PIMCO Ultra Short Government Active Exchange-Traded Fund	6/22/2023	\$178M	0.45%	1.39%				
BOXX	Alpha Architect 1-3 Month Box ETF	12/28/2022	\$690M	0.45%	1.42%	0.00%	5.04%		
BUCK	Simplify Stable Income ETF	10/27/2022	\$41M	0.78%	0.76%	0.00%	4.63%		
CLIP	Global X 1-3 Month T-Bill ETF	6/21/2023	\$125M	0.43%	1.34%				
DFIP	Dimensional Inflation-Protected Securities ETF	11/15/2021	\$468M	2.04%	4.86%	0.00%	4.07%		
EDV	Vanguard Extended Duration Treasury ETF	12/6/2007	\$3,324M	9.64%	18.04%	0.00%	1.39%	-16.68%	-3.22%
FIAX	Nicholas Fixed Income Alternative ETF	11/29/2022	\$53M	0.39%	2.32%	0.00%	3.44%		
FLGV	Franklin U.S. Treasury Bond ETF	6/9/2020	\$477M	2.48%	5.47%	0.00%	4.18%	-3.47%	
FLTN	Rareview Inflation/Deflation ETF	1/5/2022	\$22M	0.11%	2.84%	0.00%	-6.86%		
FTSD	Franklin Short Duration U.S. Government ETF	11/4/2013	\$158M	0.73%	2.35%	0.00%	4.84%	0.22%	1.23%
GBIL	Goldman Sachs Access Treasury 0-1 Year ETF	9/6/2016	\$5,472M	0.43%	1.43%	0.00%	4.91%	1.94%	1.78%
GOVI	Invesco Equal Weight 0-30 Year Treasury ETF	10/11/2007	\$791M	4.35%	8.57%	0.00%	3.32%	-7.34%	-0.30%
GOVT	iShares U.S. Treasury Bond ETF	2/14/2012	\$22,685M	2.44%	5.57%	0.00%	4.17%	-3.73%	0.55%
GOVZ	iShares 25+ Year Treasury STRIPS Bond ETF	9/22/2020	\$203M	10.18%	19.47%	0.00%	0.90%	-17.30%	
GTIP	Goldman Sachs Access Inflation Protected USD Bond ETF	10/2/2018	\$97M	1.79%	4.41%	0.00%	3.89%	-1.14%	3.02%
IBIA	iShares iBonds Oct 2024 Term TIPS ETF	9/13/2023	\$8M	0.40%	1.50%				
IBIB	iShares iBonds Oct 2025 Term TIPS ETF	9/13/2023	\$6M	0.45%	1.86%				
IBIC	iShares iBonds Oct 2026 Term TIPS ETF	9/13/2023	\$9M	0.63%	2.52%				
IBID	iShares iBonds Oct 2027 Term TIPS ETF	9/13/2023	\$8M	0.97%	3.10%				
IBIE	iShares iBonds Oct 2028 Term TIPS ETF	9/13/2023	\$8M	1.34%	3.60%				
IBIF	iShares iBonds Oct 2029 Term TIPS ETF	9/19/2023	\$6M	1.67%	4.21%				
IBIG	iShares iBonds Oct 2030 Term TIPS ETF	9/19/2023	\$5M	2.03%	4.87%				
IBIH	iShares iBonds Oct 2031 Term TIPS ETF	9/19/2023	\$5M	2.35%	5.37%				
IBII	iShares iBonds Oct 2032 Term TIPS ETF	9/19/2023	\$5M	2.54%	5.68%				
IBIJ	iShares iBonds Oct 2033 Term TIPS ETF	9/19/2023	\$9M	2.71%	5.96%				
IBTE	iShares iBonds Dec 2024 Term Treasury ETF	2/25/2020	\$2,735M	0.55%	1.57%	0.00%	4.36%	-0.55%	
IBTF	iShares iBonds Dec 2025 Term Treasury ETF	2/25/2020	\$1,829M	0.80%	2.29%	0.00%	4.12%	-1.62%	
IBTG	iShares iBonds Dec 2026 Term Treasury ETF	2/25/2020	\$747M	1.01%	2.99%	0.00%	4.34%	-2.43%	
IBTH	iShares iBonds Dec 2027 Term Treasury ETF	2/25/2020	\$639M	1.39%	3.72%	0.00%	4.38%	-3.11%	
IBTI	iShares iBonds Dec 2028 Term Treasury ETF	2/25/2020	\$356M	1.68%	4.35%	0.00%	4.65%	-3.61%	
IBTJ	iShares iBonds Dec 2029 Term Treasury ETF	2/25/2020	\$170M	1.99%	4.99%	0.00%	4.49%	-4.10%	
IBTK	iShares iBonds Dec 2030 Term Treasury ETF	7/14/2020	\$189M	2.38%	5.56%	0.00%	4.05%	-5.07%	
IBTL	iShares iBonds Dec 2031 Term Treasury ETF	7/13/2021	\$164M	2.64%	6.17%	0.00%	3.60%		
IBTM	iShares iBonds Dec 2032 Term Treasury ETF	7/6/2022	\$171M	2.92%	6.44%	0.00%	3.48%		
IBTO	iShares iBonds Dec 2033 Term Treasury ETF	6/27/2023	\$128M	3.09%	6.69%				
IEF	iShares 7-10 Year Treasury Bond ETF	7/22/2002	\$27,697M	2.80%	6.40%	0.00%	3.64%	-5.28%	0.20%
IEI	iShares 3-7 Year Treasury Bond ETF	1/5/2007	\$12,970M	1.71%	4.49%	0.00%	4.42%	-2.71%	0.81%
LTPZ	PIMCO 15+ Year US TIPS Index ETF	9/3/2009	\$773M	4.65%	9.07%	0.00%	0.97%	-9.63%	1.60%
OBIL	US Treasury 12 Month Bill ETF	11/15/2022	\$240M	0.60%	1.82%	0.00%	4.69%		
PBTP	Invesco 0-5 Yr US TIPS ETF	9/22/2017	\$75M	0.77%	2.48%	0.00%	4.53%	2.27%	3.28%
SCHO	Schwab Short-Term US Treasury ETF	8/5/2010	\$11,882M	0.87%	2.58%	0.00%	4.31%	-0.13%	1.23%
SCHP	Schwab US TIPS ETF	8/5/2010	\$11,501M	1.94%	4.62%	0.00%	3.91%	-1.09%	3.09%
SCHQ	Schwab Long-Term U.S. Treasury ETF	10/10/2019	\$622M	6.48%	12.31%	0.00%	3.43%	-11.46%	

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Appendix: Category Funds



Appendix: Category Funds 51-100

Ticker	Name	Inception	AUM	1 Month	3 Month	YTD	1 Year	3 Year*	5 Year*
SCHR	Schwab Intermediate-Term US Treasury ETF	8/5/2010	\$7,866M	1.95%	4.93%	0.00%	4.27%	-3.17%	0.76%
SGOV	iShares 0-3 Month Treasury Bond ETF	5/26/2020	\$17,461M	0.40%	1.34%	0.00%	5.12%	2.23%	
SHV	iShares Short Treasury Bond ETF	1/5/2007	\$18,606M	0.45%	1.45%	0.00%	5.04%	1.94%	1.79%
SHY	iShares 1-3 Year Treasury Bond ETF	7/22/2002	\$25,641M	0.81%	2.51%	0.00%	4.16%	-0.20%	1.15%
SOF	Amplify Samsung SOFR ETF	11/15/2023	\$150M	0.45%					
SPIP	SPDR Portfolio TIPS ETF	5/25/2007	\$1,441M	1.27%	3.87%	0.00%	2.98%	-1.71%	2.85%
SPTI	SPDR Portfolio Intermediate Term Treasury ETF	5/23/2007	\$4,475M	1.98%	4.96%	0.00%	4.24%	-3.18%	0.72%
SPTL	SPDR Portfolio Long Term Treasury ETF	5/23/2007	\$8,574M	6.49%	12.34%	0.00%	3.31%	-11.54%	-1.44%
SPTS	SPDR Portfolio Short Term Treasury ETF	11/30/2011	\$5,576M	0.82%	2.56%	0.00%	4.27%	-0.16%	1.25%
STIP	iShares 0-5 Year TIPS Bond ETF	12/1/2010	\$8,419M	0.79%	2.54%	0.00%	4.63%	2.36%	3.42%
STPZ	PIMCO 1-5 Year US TIPS Index ETF	8/20/2009	\$581M	0.81%	2.74%	0.00%	4.28%	1.71%	3.07%
TBIL	US Treasury 3 Month Bill ETF	8/9/2022	\$2,738M	0.42%	1.36%	0.00%	5.12%		
TBLL	Invesco Short Term Treasury ETF	1/12/2017	\$1,547M	0.46%	1.45%	0.00%	5.01%	2.01%	1.86%
TDTF	FlexShares iBoxx 5 Year Target Duration TIPS Index Fund	9/19/2011	\$836M	1.70%	4.30%	0.00%	4.10%	-0.27%	3.33%
TDTT	FlexShares iBoxx 3 Year Target Duration TIPS Index Fund	9/19/2011	\$1,839M	0.98%	3.07%	0.00%	4.40%	1.67%	3.50%
TFLO	iShares Treasury Floating Rate Bond ETF	2/3/2014	\$10,337M	0.36%	1.24%	0.00%	5.12%	2.34%	1.90%
TIP	iShares TIPS Bond ETF	12/4/2003	\$18,635M	1.92%	4.51%	0.00%	3.81%	-1.26%	2.94%
TIPX	SPDR Bloomberg 1-10 Year TIPS ETF	5/29/2013	\$1,333M	1.50%	3.80%	0.00%	4.43%	0.59%	3.32%
TIPZ	PIMCO Broad US TIPS Index ETF	9/3/2009	\$114M	1.88%	4.46%	0.00%	3.37%	-1.48%	2.89%
TLH	iShares 10-20 Year Treasury Bond ETF	1/5/2007	\$7,858M	5.94%	11.49%	0.00%	4.03%	-9.73%	-1.61%
TLT	iShares 20+ Year Treasury Bond ETF	7/22/2002	\$52,131M	6.67%	12.93%	0.00%	2.77%	-12.33%	-1.89%
TUA	Simplify Short Term Treasury Futures Strategy ETF	11/14/2022	\$819M	2.46%	7.52%	0.00%	-2.04%		
TYA	Simplify Intermediate Term Treasury Futures Strategy ETF	9/27/2021	\$53M	5.96%	13.56%	0.00%	-2.23%		
UFIV	US Treasury 5 Year Note ETF	3/28/2023	\$10M	1.70%	4.40%				
USFR	WisdomTree Floating Rate Treasury Fund	2/4/2014	\$17,588M	0.31%	1.22%	0.00%	5.18%	2.36%	1.93%
USVN	US Treasury 7 Year Note ETF	3/28/2023	\$3M	2.29%	5.48%				
UTEN	US Treasury 10 Year Note ETF	8/9/2022	\$127M	2.96%	6.55%	0.00%	3.18%		
UTHY	US Treasury 30 Year Bond ETF	3/28/2023	\$7M	6.61%	12.44%				
UTRE	US Treasury 3 Year Note ETF	3/28/2023	\$11M	1.08%	3.16%				
UTWO	US Treasury 2 Year Note ETF	8/9/2022	\$381M	0.84%	2.45%	0.00%	3.80%		
UTWY	US Treasury 20 Year Bond ETF	3/28/2023	\$3M	5.33%	10.18%				
VGIT	Vanguard Intermediate-Term Treasury ETF	11/19/2009	\$21,779M	1.95%	4.90%	0.00%	4.28%	-3.16%	0.77%
VGLT	Vanguard Long-Term Treasury ETF	11/19/2009	\$10,778M	6.43%	12.27%	0.00%	3.28%	-11.50%	-1.40%
VGSH	Vanguard Short-Term Treasury ETF	11/19/2009	\$22,155M	0.87%	2.58%	0.00%	4.31%	-0.11%	1.23%
VTIP	Vanguard Short-Term Inflation-Protected Securities ETF	10/12/2012	\$12,098M	0.79%	2.54%	0.00%	4.62%	2.27%	3.32%
XBIL	US Treasury 6 Month Bill ETF	3/7/2023	\$528M	0.44%	1.44%				
XFIV	BondBloxx Bloomberg Five Year Target Duration US Treasury ETF	9/13/2022	\$44M	1.94%	4.96%	0.00%	4.40%		
XHLF	BondBloxx Bloomberg Six Month Target Duration US Treasury E..	9/13/2022	\$1,048M	0.50%	1.57%	0.00%	4.90%		
XONE	BondBloxx Bloomberg One Year Target Duration US Treasury ETF	9/13/2022	\$606M	0.63%	1.89%	0.00%	4.74%		
XSVN	BondBloxx Bloomberg Seven Year Target Duration US Treasury ..	9/13/2022	\$73M	2.70%	6.22%	0.00%	3.92%		
XTEN	BondBloxx Bloomberg Ten Year Target Duration US Treasury ETF	9/13/2022	\$65M	4.30%	8.75%	0.00%	4.01%		
XTRE	BondBloxx Bloomberg Three Year Target Duration US Treasury ..	9/13/2022	\$34M	1.21%	3.50%	0.00%	4.44%		
XTWO	BondBloxx Bloomberg Two Year Target Duration US Treasury ETF	9/13/2022	\$101M	0.86%	2.65%	0.00%	4.15%		
XTWY	BondBloxx Bloomberg Twenty Year Target Duration US Treasury..	9/13/2022	\$28M	8.16%	15.53%	0.00%	2.74%		
ZROZ	PIMCO 25+ Year Zero Coupon US Treasury Index ETF	10/30/2009	\$1,306M	10.44%	19.58%	0.00%	1.23%	-17.44%	-3.19%

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Emerging market equities are large cap and mid cap equities in emerging market countries. Emerging market countries are countries with economies that are considered rapidly expanding and engaging aggressively in global markets. In addition to the risks associated with all international investing, inflation and rapid fluctuations in inflation rates have had, and may continue to have, negative effects on the economies and securities markets of certain emerging market countries.

Investment grade fixed income securities include broad fixed income, corporate securities, municipal bonds, treasuries, and mortgage backed securities (MBS). Investment grade securities are believed to be at less risk of default and rated higher by the credit rating agencies. In general, the bond market is volatile, and fixed income securities carry interest rate risk. (As interest rates rise, bond prices usually fall, and vice versa). This effect is usually more pronounced for longer-term securities.

Fixed income securities also carry inflation risk, liquidity risk, call risk and credit and default risks for both issuers and counterparties. The municipal market can be affected by adverse tax, legislative, or political changes, and by the financial condition of the issuers of municipal securities. MBS are subject to prepayment and extension risk; as such, they react differently to changes in interest rates than other bonds. Small movements in interest rates may quickly and significantly reduce the value of certain MBS.

Alternative fixed income asset class includes high yield, preferreds, bank loans, currency funds, developed non-US debt, emerging market debt, TIPS, and floaters. Lower-quality fixed income securities found in this category involve greater risk of default or price changes due to potential changes in the credit quality of the issuer. Any fixed-income security sold or redeemed prior to maturity may be subject to loss. Additionally, non-US/emerging market debt assumes the same risks as international investing.

Cash & Equivalents include direct cash positions and underlying cash positions within fund positions within a model. This also includes money market funds that may be held by the model or underlying positions.

Unassigned designations are used for positions that include options, commodities contracts, or other derivatives, and may not have composition data available.

Commodities include securities that tract bulk goods and raw materials, such as grains, metals, livestock, oil, cotton, coffee, sugar, and cocoa, that are used to produce consumer products. Buying commodities allows for a source of diversification for those sophisticated persons who wish to add this asset class to their portfolios and who are prepared to assume the risks inherent in the commodities market. Any commodity purchase represents a transaction in a non-income-producing asset and is highly speculative. Therefore, commodities should not represent a significant portion of an individual's portfolio.

Alternatives are securities that are typically less or inversely correlated with Equities and Fixed Income such as Index Volatility ETFs. Alternative investments are often non income producing and highly speculative. Therefore, alternative investments should not represent a significant portion of an individual's portfolio.

Dividends are not guaranteed and are subject to change or elimination.

ETFs are subject to substantially the same risks as those associated with the direct ownership of the underlying securities owned by the ETF. Additionally, the value of the investment will fluctuate in response to the performance of the underlying index or securities. ETFs typically charge therefore, investments in ETFs will result in the layering of expenses.

DEFINITIONS:

Acquired Fund Fees is the weighted average of the expense ratios of all model holdings.

Distribution yield refers to the percentage of income a portfolio has distributed to investors over the last 12 months. At the model level, this is calculated as a weighted average of TTM yield for all model holdings. This is based on fund and/or stock distributions, and is not a look-through calculation.

Geometric return is a measure of the compound rate of growth in a portfolio. This method eliminates the distorting effects created by inflows of new money. This is also called the 'geometric mean return,' as the reinvestment is captured by using the geometric total and mean, rather than the arithmetic total and mean. It is assumed that all cash distributions are reinvested in the portfolio and the exact same periods are used for comparisons. The difference between the two return measures is caused by volatility. The more volatile the asset class, the bigger the difference between its geometric and average annual returns. The geometric mean return is typically lower than the arithmetic mean return.

Pure gross returns are calculated before the deduction of advisory fees, trading expenses and other fees. Net of fees performance reflects the deduction of the advisory fees charged to the client, trading expenses, and other costs associated with investments made by the client. Returns do not include the reinvestment of dividends.

Standard deviation is a measure of the dispersion of a set of data from its mean. The more spread apart the data is, the higher the deviation. Calculated using monthly returns.

Alpha refers to the performance differential between a specific investment and that of the investment's beta multiplied by its benchmark. It isolates the portion of total return not accredited to movement in the broader market. Calculated using monthly returns.

Beta is a measure of the volatility—or systematic risk—of a security or portfolio compared to its relative benchmark. Securities with betas higher than 1.0 can be interpreted as more volatile relative to movements in the market benchmark while securities with a beta less than 1.0 can be interpreted as less volatile relative to movements in the market benchmark. Calculated using monthly returns.

The Sharpe ratio is the average return earned in excess of the risk-free rate per unit of volatility or total risk. Volatility is a measure of the price fluctuations of an asset or portfolio. Calculated using monthly returns.

The correlation coefficient is a statistical measure of the strength of the relationship between the relative movements of two variables. The values range between -1.0 and 1.0. A calculated number greater than 1.0 or less than -1.0 means that there was an error in the correlation measurement. A correlation of -1.0 shows a perfect negative correlation, while a correlation of 1.0 shows a perfect positive correlation. A correlation of 0.0 shows no linear relationship between the movement of the two variables. Calculated using monthly returns.

R-squared (R2) is a statistical measure that represents the proportion of the variance for a dependent variable that's explained by an independent variable or variables in a regression model. Calculated using monthly returns.

Tracking error is the divergence between the price behavior of a position or a portfolio and the price behavior of a benchmark. This is often in the context of a hedge fund, mutual fund, or exchange-traded fund (ETF) that did not work as effectively as intended, creating an unexpected profit or loss. Tracking error is reported as a standard deviation percentage difference, which reports the difference between the return an investor receives and that of the benchmark they were attempting to imitate. Calculated using monthly returns.

The upside capture ratio measures an investment manager's relative performance during bull markets. The ratio is calculated by comparing the manager's returns in up-markets with that of a benchmark. Calculated using monthly returns.

The down-market capture ratio is a statistical measure of an investment manager's overall performance in down-markets. It is used to evaluate how well an investment manager performed relative to an index during periods when that index has dropped. The ratio is calculated by dividing the manager's returns by the returns of the index during the down-market and multiplying that factor by 100. Calculated using monthly returns.

A drawdown refers to how much an investment or trading account is down from the peak before it recovers back to the peak. Drawdowns are typically quoted as a percentage, but dollar terms may also be used if applicable for a specific trader. Drawdowns are a measure of downside volatility. Calculated using monthly returns.

Market capitalization is the sum of the total value of a company's outstanding shares multiplied by the price of one share. With a weighted average market capitalization, components that have a higher market cap have more influence because they constitute a higher percentage in the index; those with smaller caps have less influence.

The Price/Earnings Ratio or P/E Ratio is a valuation metric that assesses how many dollars investors are willing to pay for one dollar of a company's earnings. It's calculated by dividing a stock's price by the company's trailing 12-month earnings per share from continuous operations. Negative P/E ratios are excluded. Calculated using weighted harmonic average.

The forward (or leading) P/E uses future earnings guidance rather than trailing figures. Negative P/E ratios are excluded. Calculated using weighted harmonic average.

The Price/Sale (P/S) ratio is a stock's current price divided by the company's trailing 12-month sales per share. This represents the weighted average of the price/sales ratios of the stocks in a fund's portfolio. Price/sales represents the amount an investor is willing to pay for a dollar generated from a particular company's operations. Calculated using weighted harmonic average.

The forward (or leading) P/S uses future sales estimates rather than trailing figures. Calculated using weighted harmonic average.

The price/book (P/B) ratio of a fund is the weighted average of the price/book ratios of all the stocks in a fund's portfolio. Book value is the total assets of a company, less total liabilities (sometimes referred to as carrying value). A company's book value is calculated by dividing the market price of its outstanding stock by the company's book value, and then adjusting for the number of shares outstanding (Stocks with negative book values are excluded from this calculation.). Calculated using weighted harmonic average.

The price-to-cash flow (P/CF) ratio is a stock valuation indicator or multiple that measures the value of a stock's price relative to its operating cash flow per share over the trailing twelve months. The ratio uses operating cash flow (OCF), which adds back non-cash expenses such as depreciation and amortization to net income. Calculated using weighted harmonic average.

Price to free cash flow is an equity valuation metric used to compare a company's per-share market price to its per-share amount of free cash flow (FCF) over the trailing twelve months. This metric is very similar to the valuation metric of price to cash flow but is considered a more exact measure, owing to the fact that it uses free cash flow, which subtracts capital expenditures (CAPEX) from a company's total operating cash flow, thereby reflecting the actual cash flow available to fund non-asset-related growth. Negative P/E ratios are excluded. Calculated using weighted harmonic average.

The price/earnings to growth ratio (PEG ratio) is a stock's price-to-earnings (P/E) ratio divided by the growth rate of its earnings for a specified time period (NTM - next twelve months). The PEG ratio is used to determine a stock's value while also factoring in the company's expected earnings growth, and it is thought to provide a more complete picture than the more standard P/E ratio. Calculated using weighted harmonic average.

The dividend yield, expressed as a percentage, is a financial ratio (dividend/price) that shows how much a company pays out in dividends each year relative to its stock price. Unless otherwise stated, dividend yield takes the distributions over the trailing 12 months divided by the price on the as of date. Note that the dividend yield is a look through of all funds and securities to underlying holdings, and may not reflect what the fund or model actually distributes. Calculated using weighted harmonic average.

Gross margin is a ratio that equates to net sales minus the cost of goods sold divided by net sales. The gross margin shows the ratio of profit made before deducting selling, general, and administrative (SG&A) costs. Calculated using weighted average.

The net margin is a measure of profitability. It is equal to annual net income divided by revenues over the trailing 12 months. The resulting figure is then multiplied by 100. Calculated using weighted average.

Return on equity (ROE) is the percentage a company earns on its total equity in a given year. ROE shows how much profit a company generates on the money shareholders have invested in the firm. Calculated using weighted average.

Return on assets (ROA) is the percentage a company earns on its assets in a given year (Year 1, 2, etc.). The calculation is net income divided by end-of-year total assets. The resulting figure is then multiplied by 100. For a mutual fund, ROA represents a weighted median figure such that approximately 50% of the domestic stocks in the portfolio will have a greater ROA and roughly 50% of these domestic stocks will have a lower ROA than the weighted median. Calculated using weighted average.

Return on invested capital (ROIC) is the percentage of money a company earns that is above the average cost it pays for its debt and equity capital. Calculated using weighted average.

The interest coverage ratio is a debt and profitability ratio used to determine how easily a company can pay interest on its outstanding debt. The interest coverage ratio is calculated by dividing a company's earnings before interest and taxes (EBIT) by its interest expense during a given period. Calculated using weighted average.

The debt-to-equity (D/E) ratio is used to evaluate a company's financial leverage and is calculated by dividing a company's total liabilities by its shareholder equity. Calculated using weighted average.

The payout ratio, also known as the dividend payout ratio, shows the percentage of a company's earnings paid out as dividends to shareholders over the trailing twelve months. Calculated using weighted average.

Per share growth metrics calculate the growth metrics over the trailing twelve months (TTM) or estimated growth metrics over the next twelve months (NTM) for Earnings, Sales, Cash Flow, Free Cash Flow, Book Value, and Dividends. Calculated using weighted median.

Long-Term earnings (LT Earnings) calculates the growth in earnings per share over longer time horizons (5 years). Calculated using weighted median.

The coupon rate is calculated by weighting each bond's coupon by its relative size in the portfolio. It indicates whether the underlying fund owns more high- or low-coupon bonds. There can be advantages to holding higher coupon bonds, but many funds buy them simply to tempt investors with a high payout. This can be damaging to investors for two reasons. The first is that higher-coupon bonds often carry greater risk than lower-coupon issues. The second is that when these bonds don't carry extra risk, they are old issues that the fund has paid up for and if the offering doesn't amortize the extra yield, investors are likely to find that their principal erodes over time. Calculated using weighted average.

Effective duration is a measure of a fund's interest-rate sensitivity; the longer a fund's duration, the more sensitive the fund is to shifts in interest rates. Duration is determined by a formula that includes coupon rates and bond maturities. Small coupons tend to increase duration, while shorter maturities and higher coupons shorten duration. The relationship between funds with different durations is straightforward: A fund with a duration of 10 years is twice as volatile as a fund with a five-year duration. Calculated using weighted average.

Modified Duration expresses the measurable change in the value of a security in response to a change in interest rates. Calculated using weighted average.

Average effective maturity is a weighted average of all the maturities of the bonds in a portfolio, computed by weighting each bond's effective maturity by the market value of the security. Average effective maturity takes into consideration all mortgage prepayments, puts, and adjustable coupons. Longer-maturity funds are generally considered more interest-rate sensitive than their shorter counterparts. We list Average Effective Maturity for Taxable Fixed-Income and Hybrid funds and Average Nominal Maturity for Municipal Bond Funds. Since this is collected by survey, it is important to bear in mind that different fund companies may use different interest-rate assumptions in determining call likelihood and timing. Generally speaking, the longer the maturity, the greater the interest rate risk. When duration is unavailable, this is used in the calculation of the fixed income style box. Calculated using weighted average.

Yield to Maturity: is the holding weighted average yield of all applicable holdings within a portfolio. Yield is a measure of the expected rate of return. Calculation of yield to maturity of a security ignores the impact of options such as a call or put feature. Calculated using weighted average.

Yield to worst is calculated on all possible call dates. It is assumed that prepayment occurs if the bond has call or put provisions and the issuer can offer a lower coupon rate based on current market rates. If market rates are higher than the current yield of a bond, the yield to worst calculation will assume no prepayments are made, and yield to worst will equal the yield to maturity.

The assumption is made that prevailing rates are static when making the calculation. The yield to worst will be the lowest of yield to maturity or yield to call (if the bond has prepayment provisions); yield to worst may be the same as yield to maturity but never higher. Calculated using weighted average.

Convexity demonstrates how the duration of a bond changes as the interest rate changes. If a bond's duration increases as yields increase, the bond is said to have negative convexity. If a bond's duration rises and yields fall, the bond is said to have positive convexity. Calculated using weighted average.

Key rate duration measures how the value of a debt security or a debt instrument portfolio, generally bonds, changes at a specific maturity point along the entirety of the yield curve. When keeping other maturities constant, the key rate duration is used to measure the sensitivity in a debt security's price to a 1% change in yield for a specific maturity.

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