

Understanding tax-equivalent yield

Tax-equivalent yield is the return a taxable bond would need to generate to match the yield of an equivalent tax-exempt bond. Yields from tax-exempt fixed-income investments such as municipal bonds aren't subject to federal taxes, and sometimes state and local taxes, unlike the comparable taxable alternatives. By calculating the tax-equivalent yield, investors can make an informed comparison of returns between taxable and tax-exempt investments.

An investor's rate of taxation is correlated to the tax-equivalent yield. The table below illustrates the additional amount of yield required from a taxable bond to match the yield of a tax-exempt bond. Calculation of the tax-equivalent yield can be a particularly useful tool for investors in high income-tax brackets.

How to calculate tax-equivalent yield

The formula below helps an investor calculate the tax-equivalent yield on a tax-exempt bond, where x represents an investor's federal income-tax bracket.

Tax equivalent yield = Yield of tax-exempt bond % / (1-x)

For example, while comparing a taxable bond with a 4.20% yield to a tax-exempt bond of 3.50% for an investor in the 22% tax bracket, where x = 0.22, the tax-equivalent yield is calculated as

Tax-equivalent yield = 3.50% / (1-0.22) = 4.49%

In this case, the tax-equivalent yield of a tax-exempt bond of a lower yield of 3.50% is calculated as 4.49%, which is higher than the 4.20% yield of the taxable bond.

With a tax-free yield of (%):

		1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00
Single filers tax bracket	2022 federal income-tax rate (%)	You need to find a taxable investment yielding (%):								
\$0-\$10,275	10.00	1.11	1.67	2.22	2.78	3.33	3.89	4.44	5.00	5.56
\$10,276-\$41,775	12.00	1.14	1.70	2.27	2.84	3.41	3.98	4.55	5.11	5.68
\$41,776-\$89,075	22.00	1.28	1.92	2.56	3.21	3.85	4.49	5.13	5.77	6.41
\$89,076-\$170,050	24.00	1.32	1.97	2.63	3.29	3.95	4.61	5.26	5.92	6.58
\$170,051-\$215,950	32.00	1.47	2.21	2.94	3.68	4.41	5.15	5.88	6.62	7.35
\$215,951-\$539,900	38.80 ¹	1.63	2.45	3.27	4.08	4.90	5.72	6.54	7.35	8.17
\$539,901+	40.80 ²	1.69	2.53	3.38	4.22	5.07	5.91	6.76	7.60	8.45

¹ Tax brackets shown are for single filers. ² The 2022 federal income-tax rate includes an additional 3.8% net investment income tax that may be imposed on single filers with modified adjusted gross income exceeding \$200,000.

How John Hancock Investment Management can help you leverage the power of tax-equivalent yield

Goal	John Hancock fund	Tickers	Managed by	Key feature
High current income, exempt from federal and state taxes	California Municipal Bond Fund	A: TACAX I: JCAFX R6: JCSRX	Manulife Investment Management	Seeks high current income through investments in municipal securities that are exempt from federal and California state personal income taxes
High current tax-exempt income	High Yield Municipal Bond Fund	A: JHTFX I: JHYMX R6: JCTRX	Manulife Investment Management	Seeks high current tax-exempt income through investing in a nationally diversified portfolio of high-yield municipal securities exempt from federal income taxes
High current tax-exempt income	Municipal Opportunities Fund	A: TAMBX I: JTBDX R6: JTMRX	Manulife Investment Management	Investing in a nationally diversified portfolio of high-quality municipal securities exempt from federal income taxes

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Fixed-income investments are subject to interest-rate and credit risk; their value will normally decline as interest rates rise or if an issuer is unable or unwilling to make principal or interest payments. Investments in higher-yielding, lower-rated securities include a higher risk of default. Municipal bond prices can decline due to fiscal mismanagement or tax shortfalls, or if related projects become unprofitable. Liquidity—the extent to which a security may be sold or a derivative position closed without negatively affecting its market value, if at all—may be impaired by reduced trading volume, heightened volatility, rising interest rates, and other market conditions. The use of hedging and derivatives could produce disproportionate gains or losses and may increase costs. Tender option bonds use leverage that magnifies both positive and negative returns, which increases the fund risk by magnifying the volatility of returns and could lead to termination of the Tender Option Bond Trust. In that event, the fund may sell assets to purchase the trust's floating-rate security, which could negatively affect fund performance or liquidate the trust's assets. Fund distributions generally depend on income from underlying investments and may vary or cease altogether in the future. The fund may invest heavily in bonds from any given state or region, and currently has substantial investments in obligations of Massachusetts and New York and their agencies, instrumentalities, and/or political subdivisions. If the fund invests heavily in any one state or region, performance could be disproportionately affected by factors particular to that state or region. Please see the fund's prospectus for additional risks.

Request a prospectus or summary prospectus from your financial professional, by visiting jhinvestments.com, or by calling us at 800-225-5291. The prospectus includes investment objectives, risks, fees, expenses, and other information that you should consider carefully before investing.

 Investment Management

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