

## The Potential Tax Benefits of Passive Equity Investing

### Quick take:

- Actively managed equity mutual funds regularly have annual capital gains distributions which can serve as a significant tax drag on performance.
- Passively managed ETFs and index fund equity investing have historically offered significant tax advantages based on a greater level of gain deferment.
- Actively managed equity mutual funds are often bought high and sold low as investors chase past performance, contributing to additional turnover and taxes.
- According to a recent Wharton study<sup>1</sup>, 97% of large- and mid-cap actively managed mutual funds have underperformed on an after-tax basis over the past decade.
- Utilizing passive indexation for core public equity market exposure can offer important tax deferral benefits that can translate to meaningful after-tax gains when compared to similar actively managed funds. It can also offer more optionality upon liquidation.

It's often noted that actively managed equity mutual funds are less tax-efficient than equivalent passive equity ETFs/index funds but it's rarely quantified. We sought to provide some data behind the realized after-tax returns for \$1 million invested in a 1) highly ranked equity mutual fund and 2) comparable passive ETF to demonstrate the impact of taxes on total returns and investment gains over the 10 years ending in September 2021. While the pre-tax figures suggest the mutual fund performed better, the after-tax results might surprise you.

To start, finding an actively managed fund within the U.S. large-cap equity space that offered long-term outperformance was a challenging exercise. According to Morningstar as of June 2021<sup>2</sup>, 89% of U.S. large-cap blend funds underperformed their passive equivalents over the past decade on a pre-tax basis. The same study also showed that nearly 40% of the large-cap blend universe didn't even survive the past decade.

There is also no guarantee that the funds that have outperformed in the past will sustain outperformance in the future. In fact, a 2017 *Wall Street Journal* article titled *The Morningstar Mirage*<sup>3</sup> performed this exact analysis. The results indicated that of all the funds that received the coveted five-star Morningstar rating, 88% were unable to retain the same rating over the next five years. 10% did so poorly that they went from five-star funds to one-star funds. This is all before considering the impact of taxes.

For our exercise, we compared the pre- and post-tax returns of an actively managed mutual fund and passive, index-oriented ETF investing in the same portion of public markets (U.S. large-cap blend equities). The mutual fund selected, the JPMorgan U.S. Equity - Institutional (JUESX) currently has a five-star Morningstar ranking, a sizeable asset base of more than \$20 billion, and a reasonable expense ratio of 0.69%. The ETF selected, the Vanguard S&P 500 ETF (VOO) has an asset base of ~\$280 billion and a lower expense ratio of 0.03%. Both investment vehicles have generated similar levels of annualized total return (16.8% and 16.3%, respectively) over the past decade ending September 30, 2021, with the actively managed mutual fund even offering modest outperformance on a pre-tax basis.

The analysis assumes the top federal tax bracket for long- (20%) and short-term gains (37%) and then adds in the 3.8% Medicare surcharge for capital gains. The top individual rate for New Jersey (10.75%) residents is also applied to both short- and long-term gains, which comes into effect at income levels above \$1 million. For income and dividends, we assumed an average rate between the short- and long-term gains to account for qualified and non-qualified distributions and the same state-level tax rate. Lower federal or state tax rates would reduce the after-tax performance difference between the two investments in the analysis.

**Although the active equity mutual fund outperformed on a pre-tax basis, it would have returned ~\$635k less on a \$1 million investment over a decade on an after-tax basis relative to an equivalent passive ETF. The after-tax annualized return of the ETF is also nearly 2% higher than the mutual fund over the same period.**

### Summary of Results

	Pre-Tax		After-Tax	
	Annualized Return	Balance	Annualized Return	Balance
JPMorgan U.S. Equity - Institutional	16.8%	\$ 4,746,080	13.5%	\$ 3,559,319
Vanguard S&P 500 ETF	16.3%	\$ 4,524,686	15.4%	\$ 4,194,985
<b>Difference</b>	0.6%	\$ 221,394	-1.9%	\$ (635,666)

Source: Morningstar and Bloomberg. The analysis looks back 10 years from 9/30/2021. All data is representative of total returns. The analysis incorporates the tax rates listed above. The taxes are assumed to all be paid at year-end and are deducted before applying the next year's return.

## Detailed Results

### JPMorgan U.S. Equity - Institutional

Start Date	End Date	Pre-Tax	After-Tax	Taxes Paid			Balance	
		Total Return	Total Return	Long-Term	Short-Term	Income	Pre-Tax	After-Tax
Inception		N/A	N/A	N/A	N/A	N/A	\$ 1,000,000	\$ 1,000,000
9/30/2011	12/31/2011	8.2%	7.4%	\$ 2,199	\$ -	\$ 5,687	\$ 1,081,683	\$ 1,073,797
1/1/2012	12/31/2012	17.1%	15.5%	\$ 6,917	\$ 3,444	\$ 6,817	\$ 1,266,641	\$ 1,240,228
1/1/2013	12/31/2013	35.8%	31.2%	\$ 23,184	\$ 27,795	\$ 6,418	\$ 1,720,369	\$ 1,627,099
1/1/2014	12/31/2014	13.7%	9.1%	\$ 40,289	\$ 25,239	\$ 8,889	\$ 1,955,928	\$ 1,775,470
1/1/2015	12/31/2015	0.6%	-1.6%	\$ 27,372	\$ 6,297	\$ 6,712	\$ 1,968,381	\$ 1,746,395
1/1/2016	12/31/2016	10.7%	8.8%	\$ 24,214	\$ -	\$ 8,380	\$ 2,178,407	\$ 1,900,141
1/1/2017	12/31/2017	21.4%	17.5%	\$ 54,086	\$ 11,737	\$ 8,726	\$ 2,644,608	\$ 2,232,241
1/1/2018	12/31/2018	-6.1%	-11.0%	\$ 69,722	\$ 30,993	\$ 8,920	\$ 2,484,042	\$ 1,987,077
1/1/2019	12/31/2019	31.9%	27.2%	\$ 83,907	\$ -	\$ 9,725	\$ 3,276,671	\$ 2,527,498
1/1/2020	12/31/2020	26.4%	23.1%	\$ 56,611	\$ 14,486	\$ 11,608	\$ 4,142,195	\$ 3,112,425
1/1/2021	9/30/2021	14.6%	14.4%	\$ -	\$ -	\$ 6,863	\$ 4,746,080	\$ 3,559,319
<b>Annualized Return/Total</b>		<b>16.8%</b>	<b>13.5%</b>	<b>\$ 388,501</b>	<b>\$ 119,990</b>	<b>\$ 88,744</b>		

### Vanguard S&P 500 ETF

Start Date	End Date	Pre-Tax	After-Tax	Taxes Paid			Balance	
		Total Return	Total Return	Long-Term	Short-Term	Income	Pre-Tax	After-Tax
Inception		N/A	N/A	N/A	N/A	N/A	\$ 1,000,000	\$ 1,000,000
9/30/2011	12/31/2011	9.0%	8.9%	\$ -	\$ -	\$ 1,393	\$ 1,089,984	\$ 1,088,591
1/1/2012	12/31/2012	16.0%	15.4%	\$ -	\$ -	\$ 6,004	\$ 1,264,368	\$ 1,256,749
1/1/2013	12/31/2013	32.4%	31.7%	\$ -	\$ -	\$ 9,237	\$ 1,673,956	\$ 1,654,631
1/1/2014	12/31/2014	13.5%	12.6%	\$ -	\$ -	\$ 15,634	\$ 1,900,760	\$ 1,863,183
1/1/2015	12/31/2015	1.3%	0.4%	\$ -	\$ -	\$ 17,030	\$ 1,925,752	\$ 1,870,651
1/1/2016	12/31/2016	12.2%	11.2%	\$ -	\$ -	\$ 19,096	\$ 2,160,161	\$ 2,079,257
1/1/2017	12/31/2017	21.8%	20.8%	\$ -	\$ -	\$ 20,825	\$ 2,630,467	\$ 2,511,124
1/1/2018	12/31/2018	-4.5%	-5.3%	\$ -	\$ -	\$ 19,782	\$ 2,512,012	\$ 2,378,261
1/1/2019	12/31/2019	31.4%	30.2%	\$ -	\$ -	\$ 27,377	\$ 3,299,652	\$ 3,096,587
1/1/2020	12/31/2020	18.3%	17.4%	\$ -	\$ -	\$ 28,347	\$ 3,903,235	\$ 3,634,677
1/1/2021	9/30/2021	15.9%	15.4%	\$ -	\$ -	\$ 18,385	\$ 4,524,686	\$ 4,194,985
<b>Annualized Return/Total</b>		<b>16.3%</b>	<b>15.4%</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 183,110</b>		

#### Tax Rates

	Long-Term	Short Term	Income	State
Without state income tax	23.80%	40.80%	32.30%	10.75%
With state income tax	34.55%	51.55%	43.05%	

Source: Morningstar and Bloomberg. The analysis looks back 10 years from 9/30/2021. All data is representative of total returns. The analysis incorporates the tax rates listed above. The taxes are assumed to all be paid at year-end and are deducted before applying the next year's return.

Evaluating the results of this exercise, the actively managed mutual fund's excess return was completely eroded and then some after accounting for taxes from distributions over time. While the ETF has an annual income distribution, it is consistently around 2% with no long- and short-term capital gains. Over a decade, a \$1 million investment in the mutual fund would have generated nearly \$600,000 in taxes compared to approximately \$185,000 in taxes for the ETF. In addition to the level of taxation, lost compounding due to a tax drag translated to an

additional ~\$635k in gains over 10-years for the ETF, even with slight underperformance. The tax drag also converted the pre-tax outperformance of the mutual fund (16.8% vs. 16.3%) to after-tax relative underperformance (13.5% vs. 15.4%). Our results are consistent with a recent Wharton study<sup>1</sup> that found that **active large- and mid-cap funds underperformed their passive equivalents on an after-tax basis 97% of the time.**

While this exercise assumes that both investments are held for the entire period, actively managed strategies are often swapped over time as the ability to sustain outperformance is challenging. Nearly 40% of U.S. blend actively managed mutual funds didn't even survive the past decade<sup>2</sup>. That said, if both funds were liquidated after the 10-year holding period, the after-tax outperformance of the ETF relative to the mutual fund would lessen since the mutual funds cost basis will be raised over time in line with distributions. Still, the after-tax performance of the ETF would remain ahead even if assuming a full liquidation with all gains taxed at the long-term rate. The additional tax deferral capabilities of the ETF also provide more optionality were the investment to be realized in a lower tax state or at a time when the investor falls into a lower tax bracket.

This is not to say that there is never a time and place for actively managed equity funds in non-retirement accounts. Instead, it's important to consider the after-tax performance of investment vehicles. An investor should also consider the level of conviction in the manager to ensure that it can be held throughout times of underperformance to ensure the long-term alpha potential is realized. There may also be cases, especially in less efficient markets, where the magnitude of outperformance from active managers more than justifies their position in a portfolio well beyond the additional taxes paid over the holding period.

### Conclusion

Passive indexation can offer meaningful tax deferral advantages when compared to most actively managed equity mutual funds that regularly have larger taxable distributions. This is in addition to fee savings and the removal of potential performance chasing behaviors that can be associated with these funds. Tax deferral is an important component of an investment strategy as it allows for greater compounding of principal over time. Additionally, it can provide optionality to realize investment gains in a potentially lower tax state (such as Florida or Texas), within a lower tax bracket, or to avoid taxes altogether if held until death at which point the cost basis would be stepped up. For these reasons, we recommend that potential investment returns be evaluated on an after-tax basis when an actively managed mutual fund is deployed in a non-qualified account. It is also valuable to house actively managed equity funds in qualified accounts when appropriate or to try to ensure that realized gains are offset with losses.

## **DISCLAIMER**

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### **Sources:**

<sup>1</sup> Wharton: Active vs. Passive Investing: Which Approach Offers Better Returns?

Link: <https://executiveeducation.wharton.upenn.edu/thought-leadership/wharton-wealth-management-initiative/wmi-thought-leadership/active-vs-passive-investing-which-approach-offers-better-returns/>

<sup>2</sup> Morningstar Active/Passive Barometer

Link: <https://www.morningstar.com/lp/active-passive-barometer>

<sup>3</sup> WSJ: The Morningstar Mirage

Link: <https://www.wsj.com/articles/the-morningstar-mirage-1508946687>