Avantis Investors®

Mutual Funds & ETFs – Comparing and Contrasting

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Goals for Today

- Understand how mutual fund and ETF vehicles work
- Discuss the potential benefits and limitations of each structure and considerations across asset classes
- Examine the tradeoffs of using each structure in your portfolios

Differences in Structure

Mutual Funds and ETFs

Mutual Funds

Structured under the Investment Company Act of 1940, mutual funds allowed investors to get global, broadly diversified portfolios at reasonable fees.

ETFs

First offered in 1993. Most modern ETFs are also structured under the 1940 Act but enjoy operational efficiencies generally not available to mutual funds.

Typical Mutual Fund Structure

Mutual funds buy and sell securities to manage inflows/redemptions/turnover.

- Mutual funds tend to deal “in-cash” with investors
- Mutual funds buy and sell securities in response to investors cash flows.

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Typical ETF Structure

ETFs do not interact with investors cash flows directly. They do it through "authorized participants" that create/redeem ETFs shares "in-kind" to satisfy investors cash flows.

- ETFs tend to deal "in-kind" with investors' activity, accepting/delivering securities

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ETFs do not interact with investors cash flows directly. They do it through “authorized participants” that create/redeem ETFs shares “in-kind” to satisfy investors cash flows.

- ETFs tend to deal “in-kind” with investors’ activity, accepting/delivering securities

Costs tend to be paid by the investors involved in the transaction

ETFs minimize the effect of investors’ activity on long-term investors

Tax Treatment and Tax Impact

Tax Treatment and Tax Impact

Dividends

- A fund/ETF realizes dividend income from securities.
- Dividend income is distributed to investors who must pay taxes on those distributions

- Qualified holding period (common stock): 60 days during 121-day period that starts 60 days before the ex-dividend date

- Publicly traded “equity” securities with unqualified dividends: REITs

Tax Treatment and Tax Impact

Capital Gains

- A fund/ETF realizes capital gains when it sells appreciated securities.
- Realized capital gains are distributed to investors who must pay taxes on those distributions

Funds

Since mutual funds deal with investors "in-cash," the fund manager must sell securities to raise cash for the redeeming investor.

Low turnover funds tend to be more tax-efficient.

Fund can harvest losses to offset gains to minimize current distributions, but that process increases "unrealized capital gains" which may be distributed in the future.

Tax Treatment and Tax Impact

Capital Gains

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- Realized capital gains are distributed to investors who must pay taxes on those distributions

Funds	ETFs
Since mutual funds deal with investors "in-cash," the fund manager must sell securities to raise cash for the redeeming investor. Low turnover funds tend to be more tax-efficient. Fund can harvest losses to offset gains to minimize current distributions, but that process increases "unrealized capital gains" which may be distributed in the future.	Since ETFs deal with investors "in-kind," the fund manager tends not to sell securities to satisfy redemptions. ETF manager can sell "losers" to harvest losses and deliver "winners" in-kind, benefiting the tax position of investors. The in-kind redemption process minimizes the increase in realized and unrealized capital gains.

Taxation Matters

With increasing government debt, there is a concern about higher taxation

What can we do to minimize the effect of taxation on our savings?

- All else equal, tax deferrals may allow for higher expected compound rates of return
- Low turnover investment strategies tend to reduce capital gains realization. Turnover is the amount bought and sold by portfolio managers inside the portfolio
- All else equal, ETFs tend to be more tax efficient than mutual funds

Case Study: Significance of Tax Savings Over Time

An investor is deciding whether to invest her taxable account money in an ETF or a mutual fund.

Both the ETF and mutual fund have the same return of 8.9% annually;

- Of that, 0.9% will come from dividends (all qualified)
- 3.8% will come from capital gains distribution (10% short-term, 90% long-term)

More information about our investor:

- She's a high earner with an average federal tax rate on income of 30%.
- She currently lives in Florida where there is no state income tax.
- Her tax rate on long-term capital gains and qualified dividend income (QDI) is 20%.
- She wants to make a one-time investment of $1 million that she will hold for at least 20 years.

Case study uses Morningstar 2000-2019 average total, income and distributed capital gains returns data, assumes fund has 60% allocated to U.S. Large Blend and 40% allocated to U.S. Small Blend. Source: Morningstar, March 2020. Investors in the highest marginal tax rate bracket should use the marginal tax rate to calculate actual tax burden; any additional income will be taxed at the marginal tax rate, not the average rate, increasing the tax deferral benefit of the ETF. This information is for educational purposes only and is not intended as tax advice. Please consult your tax advisor for more detailed information or for advice regarding your individual situation.

Case Study: Significance of Tax Savings Over Time

Investor in No Tax State: Investment Tax Costs, Final Value Received and Returns

30% Short-Term Income Tax Rate	After 5 Years		After 10 Years		After 20 Years	
20% Long-Term/Dividend Tax Rate	Mutual Fund	ETF	Mutual Fund	ETF	Mutual Fund	ETF
Taxes Paid (Pre-sale)	$57,286	$10,713	$141,155	$26,984	$443,704	$89,244
Taxes Paid at Sale	$49,203	$95,223	$121,237	$239,862	$381,095	$793,284
Total Tax Paid	$106,489	$105,935	$262,392	$266,847	$824,799	$882,528
Final Value Received	$1,414,827	$1,423,740	$2,022,146	$2,067,387	$4,212,997	$4,530,113
Difference (ETF over MF)		**$8,914**		**$45,241**		**$317,117**
Annualized Return	7.19%	7.32%	7.30%	7.53%	7.46%	7.85%
Cumulative Return	41.48%	42.37%	102.21%	106.74%	321.30%	353.01%
Cumulative Return Diff (ETF over MF)		**0.89%**		**4.52%**		**31.71%**

Source: Avantis Investors. For illustrative purposes only

- If she chose an ETF and sold the investment after five years, her decision would result in a surplus of $8,914 after taxes vs. the mutual fund investment
- The surplus grows over time; if the investment is sold after 20 years it results in an additional $317,117

Case study uses Morningstar 2000-2019 average total, income and distributed capital gains returns data, assumes fund has 60% allocated to U.S. Large Blend and 40% allocated to U.S. Small Blend. Source: Morningstar, March 2020. Investors in the highest marginal tax rate bracket should use the marginal tax rate to calculate actual tax burden; any additional income will be taxed at the marginal tax rate, not the average rate, increasing the tax deferral benefit of the ETF. This information is for educational purposes only and is not intended as tax advice. Please consult your tax advisor for more detailed information or for advice regarding your individual situation.

What is the Impact if Tax Rates Change?

Table 1: 30% Short-Term Tax Rate; 20% Long-Term/Dividend Tax Rate.
Table 2: 30% Short-Term Tax Rate; 20% Dividend Tax Rate, 40% Long-Term Tax Rate

	After 5 Years		After 10 Years		After 20 Years	
	Mutual Fund	ETF	Mutual Fund	ETF	Mutual Fund	ETF
Taxes Paid (Pre-sale)	$ 57,286	$ 10,713	$ 141,155	$ 26,984	$ 443,704	$ 89,244
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Total Tax Paid	$ 106,489	$ 105,935	$ 262,392	$ 266,847	$ 824,799	$ 882,528
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	After 5 Years		After 10 Years		After 20 Years	
	Mutual Fund	ETF	Mutual Fund	ETF	Mutual Fund	ETF
Taxes Paid (Pre-sale)	$ 96,032	$ 10,713	$ 232,227	$ 26,984	$ 699,316	$ 89,244
Taxes Paid at Sale	$ 97,072	$ 190,445	$ 234,742	$ 479,724	$ 706,890	$ 1,586,568
Total Tax Paid	$ 193,105	$ 201,158	$ 466,969	$ 506,709	$ 1,406,206	$ 1,675,812
Final Value Received	$ 1,321,147	$ 1,328,518	$ 1,776,605	$ 1,827,524	$ 3,338,628	$ 3,736,829
Difference (ETF over MF)		**$ 7,370**		**$ 50,919**		**$ 398,202**
Cumulative Return	32.11%	32.85%	77.66%	82.75%	233.86%	273.68%
Annualized Return	5.73%	5.85%	5.92%	6.22%	6.21%	6.81%
Cumulative Return Diff (ETF over MF)		**0.74%**		**5.09%**		**39.82%**

Source: Avantis Investors. For illustrative purposes only

These tables show the difference in growth of a dollar between a mutual fund and ETF. Both strategies assume a $1 million beginning balance and an 8.9% annual return. Of that, 0.9% will come from qualified dividends, and 3.8% will come from capital gains distributions (10% short-term, 90% long-term). This breakdown used average data from Morningstar over the 2000-2019 period for a blend of US large cap (60%) and US small cap (40%) securities.

Trading ETFs

Helpful Hints When Trading ETFs

Trading ETFs is different from trading mutual funds. There are some important considerations to make when designing your trading process.

Your Custodian's Institutional Trading Desk

- The trading desk is well equipped to handle large blocks
- They can interact directly with market makers to help advisors improve their executions

Differences Between Market and Limit Orders

- A limit order is executable when the price is at or better than the limit entered, but not worse
- A market order will be filled by moving through prices in the order book. If there is not enough shares at a given price, it will move to the next price level

Multiple Layers of Liquidity in ETFs

- There is often more liquidity available than what is displayed in an order book
- Estimating liquidity in ETFs involves considering the aggregate amount of liquidity available in the underlying securities

A Suite of Competitive Offerings

	U.S. Equity	U.S. Large Cap Value	U.S. Small Cap Value	U.S. Small Cap	Intl Equity	Intl Large Cap Value	Intl Small Cap Value	EM Equity	EM Value Equity	Real Estate	Core Fixed Income	Short-Term Fixed Income	Core Muni Fixed Income
ETF	**AVUS**	**AVLV**	**AVUV**	**AVSC**	**AVDE**	**AVIV**	**AVDV**	**AVEM**	**AVES**	**AVRE**	**AVIG**	**AVSF**	**AVMU**
Mutual Fund	**AVUSX**	---	**AVUVX**	---	**AVDEX**	---	**AVDVX**	**AVEEX**	---	---	**AVIGX**	**AVSFX**	**AVMUX**
Expense Ratio	0.15%	0.15%	0.25%	0.25%	0.23%	0.25%	0.36%	0.33%	0.36%	0.17%	0.15%	0.15%	0.15%

Expense ratio as of the current prospectus.

Exchange Traded Funds (ETFs) are bought and sold through exchange trading at market price (not NAV), and are not individually redeemed from the fund. Shares may trade at a premium or discount to their NAV in the secondary market. Brokerage commissions will reduce returns.

Investment return and principal value of security investments will fluctuate. The value at the time of redemption may be more or less than the original cost. Past performance is no guarantee of future results.

You should consider the fund's investment objectives, risks, charges and expenses carefully before you invest. The fund's prospectus or summary prospectus, which can be obtained by visiting avantisinvestors.com, contains this and other information about the fund, and should be read carefully before investing.

Exchange Traded Funds (ETFs): Foreside Fund Services, LLC – Distributor, not affiliated with American Century Investment Services, Inc.
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Resources

Avantis ETF Resources

Articles

ETFs – An Important Tool for Wealth Management
How Much Value Does an ETF Add to My Taxable Account?

Webcasts

A Market Maker's Perspective (Part 1)
A Market Maker's Perspective (Part 2)
ETF Trading from a Block Desk's Perspective
Utilizing ETFs - An Advisor's Perspective
ETFs – Past, Present and Future: A Conversation with Reginald Browne
Peer to Peer: Should Advisors Adopt ETFs in Tax-Deferred Accounts?

Questions?

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Your Custodian's Institutional Trading Desk

Schwab, TD Ameritrade, Fidelity and others have institutional trading desks to help advisors improve their executions.

In some cases, there is automatic connectivity between advisors' trading/rebalancing software and the custodian trading desks, however advisors may have to contact their custodian to create the connectivity.

The desks can help with large block trades since they can interact directly with market makers who are able to create/redeem ETF shares. The creation/redemption mechanism allows for cost-effective purchases/sales of large quantities of ETF shares.

We have seen trades of >10,000 shares executed directly in the market with limit orders, but it may be better to send those orders to the custodian desks.

How Do Limit Orders Work?

Consider two examples:

Limit Order – Scenario A

- Ask is at $10.00
- Buy limit order for 800 shares entered at $10.02
- Order Book when trade is submitted:

Shares	Price
1000	$ 10.03
1000	$ 10.02
1000	$ 10.01
1000	$ 10.00

- 800 shares will be executed at $10.00

Limit Order – Scenario B

- Ask is at $10.00
- Buy limit order for 3,300 shares entered at $10.02
- Order Book when trade is submitted:

Shares	Price
1000	$ 10.03
1000	$ 10.02
1000	$ 10.01
1000	$ 10.00

- 1,000 shares will be executed at $10.00, 1,000 shares at $10.01, and 1,000 shares at $10.02. The remaining 300 shares will be left unfilled until there is more liquidity at or below $10.02
- If the market moves too much, the unfilled portion of the order can be canceled and a new order can be entered at a new price

Limit orders enable control for price execution risk, however orders may need to be reposted if prices move beyond the entered limit before the entire order is completed.

This may lead to a little extra work, but it gives traders peace of mind by minimizing the risks of a completely unexpected price execution.

How Do Market Orders Work?

Consider two examples:

Market Order – Scenario A

- Ask is at $10.00
- Buy market order for 3,300 shares
- Order Book when trade is submitted:

Shares	Price
1000	$ 10.03
1000	$ 10.02
1000	$ 10.01
1000	$ 10.00

- There are no additional shares available beyond what is displayed in the order book
- 1,000 shares will be executed at $10.00, 1,000 at $10.01, 1,000 at $10.02 and 300 shares at $10.03 for an average price of $10.012

Market Order – Scenario B

- Ask is at $10.00
- Buy market order for 3,300 shares
- Order Book when trade is submitted:

Shares	Price
1000	$ 10.03
1000	$ 10.02
1000	$ 10.01
1000	$ 10.00

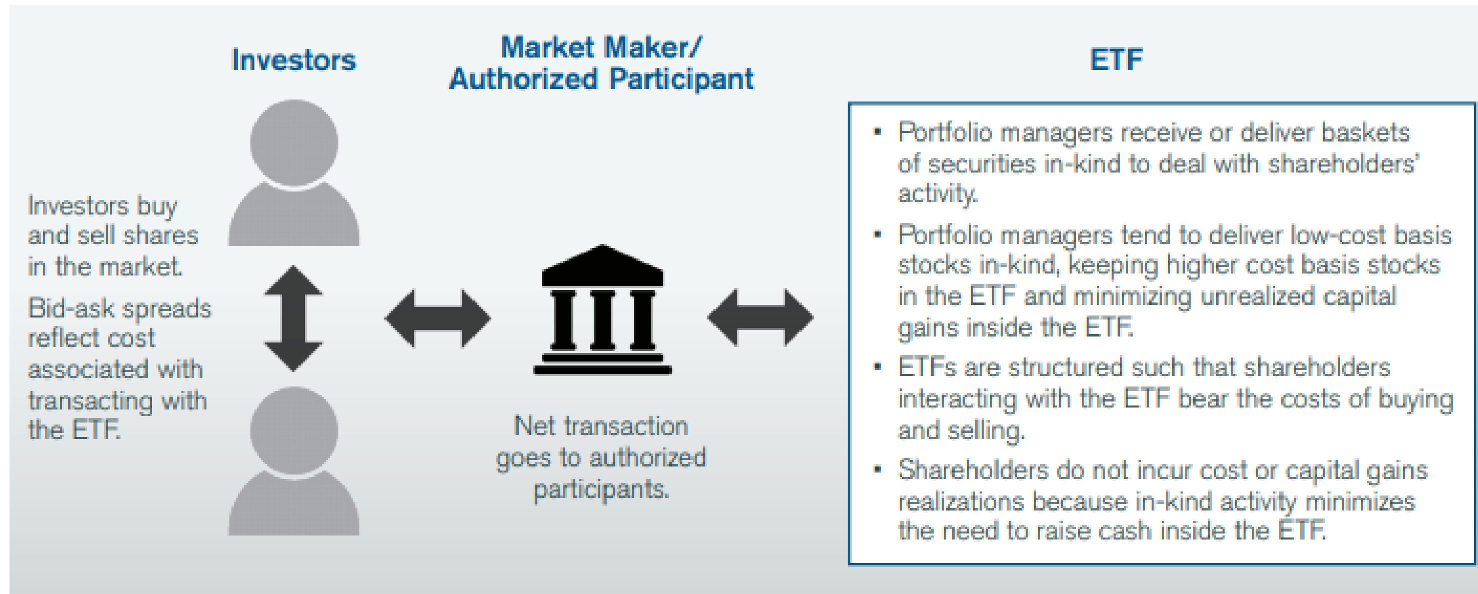
- There are an additional 1,000 shares not displayed but available at $10.01
- 1,000 shares will be executed at $10.00, 2,000 shares will be executed at $10.01, and 300 shares will be executed at $10.02 for an average price of $10.008

While market orders ensure the trade gets done, the risk is that the price may move a lot to fill the order. Orders move so quickly through the electronic systems that there may not be enough time for market makers to replenish liquidity at the lower price levels.

- For large orders, using the institutional trading desk or splitting the trade into several limit orders will likely achieve better execution prices.
- If using market orders, smaller sized trades (<1,000 shares) may be better, but it is a good practice to check the size of the book when the order is going to be entered.

Liquidity in ETFs

Investors buy and sell ETF shares in the market.



Available liquidity is greater than what we see at the bid/ask

- "Secondary" – Direct liquidity of ETF shares in the market at the bid/ask and other price levels
- "Primary" – Liquidity of underlying securities since market markers can create new ETF shares by delivering the underlying securities to the ETF.

Estimating liquidity in an ETF involves considering the aggregate liquidity of underlying stocks, which tends to be significant for broadly diversified portfolios.

Establishing Your Process

Leveraging different order types can help you structure an effective process that allows for efficient trading

- ❑ Use your custodian's institutional desk whenever possible, particularly for very large trades (e.g., reallocation trades across all accounts)
- ❑ Avoid trading at the market open
- ❑ Marketable limit orders allow you to get trades done while controlling risks
  - Set limit prices at, or even a few cents above, the ask for buys and split orders into blocks (up to 10,000 shares)
- ❑ Market orders should only be used for smaller sized trades
  - Generally order sizes up to 1,000 shares, but check size of the book
  - Again, entering marketable limit orders by setting the limit at the ask or a few cents above for buys can achieve the same goal while managing risks

Please reach out to us if you have questions. We are here to help.

Disclosures

Investment return and principal value of security investments will fluctuate. The value at the time of redemption may be more or less than the original cost. Past performance is no guarantee of future results.

International investing involves special risks, such as political instability and currency fluctuations. Investing in emerging markets may accentuate these risks.

Historically, small- and/or mid-cap stocks have been more volatile than the stocks of larger, more-established companies. Smaller companies may have limited resources, product lines and markets, and their securities may trade less frequently and in more limited volumes than the securities of larger companies.

This information is for educational purposes only and is not intended as tax advice. Please consult your tax advisor for more detailed information or for advice regarding your individual situation.

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The opinions expressed are those of the portfolio team and are no guarantee of the future performance of any Avantis fund. This information is for an educational purpose only and is not intended to serve as investment advice. References to specific securities are for illustrative purposes only and are not intended as recommendations to purchase or sell securities. Opinions and estimates offered constitute our judgment and, along with other portfolio data, are subject to change without notice.

Generally, as interest rates rise, the value of the securities held in the fund will decline. The opposite is true when interest rates decline.

Derivatives may be more sensitive to changes in market conditions and may amplify risks.

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Calculation for Years 1-5

	Years				
Mutual Fund	**1**	**2**	**3**	**4**	**5**
Cost Basis	$1,000,000	$1,037,220	$1,077,389	$1,120,739	$1,167,524
Begin Value	$1,000,000	$1,079,220	$1,164,716	$1,256,985	$1,356,563
Return	$89,000	$96,051	$103,660	$111,872	$120,734
Ending Value (pre-tax, pre-dist.)	$1,089,000	$1,175,271	$1,268,376	$1,368,856	$1,477,297
Income Distribution	$9,000	$9,713	$10,482	$11,313	$12,209
Cap Gain Distribution	$38,000	$41,010	$44,259	$47,765	$51,549
Short-Term Gain	$3,800	$4,101	$4,426	$4,777	$5,155
Long-Term Gain	$34,200	$36,909	$39,833	$42,989	$46,394
Tax Paid	$9,780	$10,555	$11,391	$12,293	$13,267
Ending Value (after-tax, reinvested)	$1,079,220	$1,164,716	$1,256,985	$1,356,563	$1,464,030
Post-Liquidation Value	$1,070,820	$1,147,250	$1,229,736	$1,318,755	$1,414,827

	Years				
ETF	**1**	**2**	**3**	**4**	**5**
Cost Basis	$1,000,000	$1,007,200	$1,015,028	$1,023,538	$1,032,791
Begin Value	$1,000,000	$1,087,200	$1,182,004	$1,285,075	$1,397,133
Return	$89,000	$96,761	$105,198	$114,372	$124,345
Ending Value (pre-tax, pre-dist.)	$1,089,000	$1,183,961	$1,287,202	$1,399,446	$1,521,478
Income Distribution	$9,000	$9,785	$10,638	$11,566	$12,574
Tax Paid	$1,800	$1,957	$2,128	$2,313	$2,515
Ending Value (after-tax, reinvested)	$1,087,200	$1,182,004	$1,285,075	$1,397,133	$1,518,963
Post-Liquidation Value	$1,071,200	$1,148,609	$1,232,767	$1,324,265	$1,423,740

	1	2	3	4	5
ETF/MF Post-Liquidation Value	1.00	1.00	1.00	1.00	1.01

Source: Avantis Investors. Calculation does not take into account trading costs/commissions that may exist for investor to purchase/sell either investment vehicle. Calculation assumptions: same expense ratio for both vehicles; all distributions (dividend and capital gains) net of taxes are reinvested into strategy immediately; ETF does not distribute capital gains; capital gains taxes are paid for ETF at sale; time period used is years; income and capital gains distribution occur at end of period; sale occurs at end of period.

Pre-Liquidation Value: value of investment before investment is sold and any outstanding taxes are paid.

Post-Liquidation Value: value of investment after investment is sold and any outstanding taxes are paid.

ETF/MF Post-Liquidation Value: ratio of the ETF investment value divided by mutual fund investment value after investments are sold and taxes are paid, assuming the investor is required to pay taxes on the investment.

This hypothetical situation contains assumptions that are intended for illustrative purposes only and are representative of the performance of any security. There is no assurance similar results can be achieved, and this information should not be relied upon as a specific recommendation to buy or sell securities.

Avantis Investors™
By American Century Investments®

How Much Value Does an ETF Add to My Taxable Account?

TAX PERSPECTIVE

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Financial advisors weigh many complex considerations to help clients achieve their goals, including the tax consequences of different investment vehicles. According to the 2019 Trends in Investing Survey, 88% of advisors use or recommend exchange-traded funds (ETFs), up from 40% in 2006 when the survey began. Advisors have preferred ETFs over mutual funds for the last four years.[1] As of January 2020, there was $4.42 trillion invested across 2,100 U.S.-based ETFs.[2]

So why are so many advisors moving their clients' money into these products? One big reason is the advantage an ETF can have over a traditional mutual fund in a taxable account. ETF investors may pay less in taxes today, leaving a larger sum to invest and grow into the future.

In a mutual fund, income received from dividends and realized capital gains inside the fund are distributed to the investor each year—on which she must then pay taxes to the IRS and her state of residency, as applicable. Like a mutual fund, an ETF is required to distribute income received from dividends. However, the in-kind transaction structure of an ETF can minimize capital gains realizations inside the ETF.[3] As a result, an ETF investor is expected to receive lower distributions compared to a mutual fund and therefore a lower annual tax bill. Year over year, money that could have been paid in capital gains taxes on a mutual fund investment would instead compound for the ETF investor, potentially resulting in greater total gains—maybe even accounting for the tax bill on the final gains at liquidation.

In this paper, we share some hypothetical examples to show the magnitude of the impact and expected advantage an ETF has over a mutual fund in a taxable account. For readers interested in understanding more about the design differences between ETFs and mutual funds, we suggest **"ETFs – An Important Tool for Wealth Management"** by our Avantis colleagues Phil McInnis and Mitch Firestein.

SCENARIO 1:

Investor Resides in State With No State Income Tax

Suppose we have an investor, Ava, who is deciding whether to invest her taxable account money in an ETF or a mutual fund. Both strategies have the same return of 8.9% annually; of that, 0.9% will come from dividends (all qualified), and 3.8% will come from capital gains distribution (10% short-term, 90% long-term).[4] Let's assume the following information about Ava:

- She's a high earner with an average federal tax rate on income of 30%.[5] She currently lives in Florida where there is no state income tax.
- Her tax rate on long-term capital gains and qualified dividend income (QDI) is 20%.
- She wants to make a one-time investment of $1 million that she will hold for at least 20 years.

Ava chooses to invest in the ETF instead of the mutual fund because of the tax advantage it offers. If she sold the investment after five years, her decision would result in $8,914 after taxes—more than if she had invested in the mutual fund, a cumulative return difference of 0.89%. As shown in **Figure 1**, if Ava sold after 20 years, she would earn an extra $317,117 after all taxes, a cumulative return difference of 31.71% (353.01% versus 321.30%).

FIGURE 1

No State Tax Scenario: Investment Tax Costs, Final Value Received and Returns

30% Short-Term Income Tax Rate	After 5 Years		After 10 Years		After 20 Years	
20% Long-Term/Dividend Tax Rate	Mutual Fund	ETF	Mutual Fund	ETF	Mutual Fund	ETF
Taxes Paid (Pre-sale)	$57,286	$10,713	$141,155	$26,984	$443,704	$89,244
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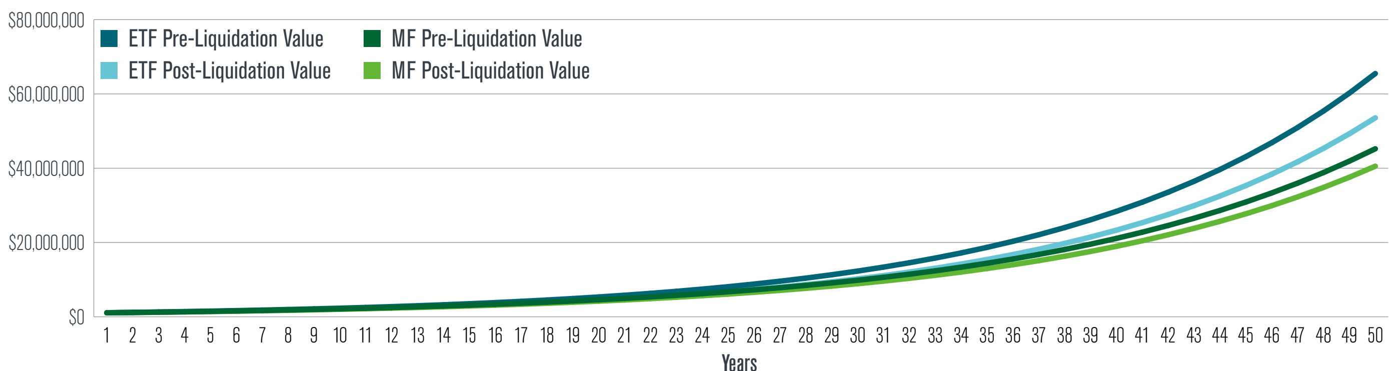
Source: Avantis Investors.

Figure 2 shows the growth in value of the ETF and mutual fund (MF) both before the final sale (pre-liquidation) and after the final sale where all taxes have been paid (post-liquidation) going out 50 years. For a sample of the calculation from years 1-5, please see the appendix.

FIGURE 2

ETFs vs. Mutual Funds: Pre- and Post-Liquidation Values



Source: Avantis Investors.

SCENARIO 2:

Investor Resides in State With High State Income Tax

Now let's suppose Ava decides to move west to California, a state with some of the highest state income tax rates in the country. She would now have an additional California state tax rate of 10%, on top of her federal tax rates, increasing the tax impact on her investment.

After five years in the ETF, Ava's investment would be $10,797 greater than if she invested in the mutual fund, a cumulative return difference of 1.08%. After 20 years, she would earn an extra $390,624, a cumulative return difference of 39.06% (305.79% versus 266.73%). See **Figure 3**.

FIGURE 3

State Tax Scenario: Investment Tax Costs, Final Value Received and Returns

40% Short-Term Income Tax Rate	After 5 Years		After 10 Years		After 20 Years	
30% Long-Term/Dividend Tax Rate	Mutual Fund	ETF	Mutual Fund	ETF	Mutual Fund	ETF
Taxes Paid (Pre-sale)	$84,025	$16,040	$204,385	$40,304	$623,751	$132,527
Taxes Paid at Sale	$73,116	$142,578	$177,849	$358,254	$542,767	$1,178,017
Total Tax Paid	$157,141	$158,618	$382,233	$398,557	$1,166,518	$1,310,543
Final Value Received	$1,359,311	$1,370,108	$1,873,999	$1,929,967	$3,667,311	$4,057,935
Difference (ETF over MF)		**$10,797**		**$55,968**		**$390,624**
Annualized Return	6.33%	6.50%	6.48%	6.80%	6.71%	7.25%
Cumulative Return	35.93%	37.01%	87.40%	93.00%	266.73%	305.79%
Cumulative Return Diff (ETF over MF)		**1.08%**		**5.60%**		**39.06%**

Source: Avantis Investors.

In both examples, in a taxable account, the ETF provides value over the mutual fund because of the capital gains tax advantage, which increases as the investor's income tax rate rises. What if Ava didn't sell the investment after some set number of years but held it to bequeath to heirs upon her death?

SCENARIO 3:

Investor Transfers Property at Death—Step-Up in Cost Basis

Let's assume that from the start of her investment into the ETF, Ava lived 50 more years and never left Florida. After her passing, through her estate, the investment went to her children who received a step-up in cost basis and sold the following day. As a result, the value received from the ETF sale would exceed $65 million, whereas an investment in the mutual fund would yield $45 million—a $20 million difference, before estate taxes were paid. Even after the 40% estate tax based on current federal law, the benefit of the ETF investment would exceed $12 million.[6]

Financial advisors understand the importance of protecting clients' wealth and finding ways to minimize their tax burdens. By utilizing ETFs over mutual funds in a taxable account, you can see that the potential benefit to investors can be significant.

ENDNOTES

[1] Trends in Investing Survey is conducted by the *Journal of Financial Planning* and the FPA Research and Practice Institute™, 2014, 2018 and 2019 reports, Financial Planning Association, www.onefpa.org.

[2] "ETF Assets and Net Issuance, January 2020," Investment Company Institute (ICI), February 27, 2020. https://www.ici.org/research/stats/etf/etfs_01_20.

[3] Phil McInnis and Mitchell Firestein, "ETFs – An Important Tool for Wealth Management," Avantis Investors, October 2019, https://www.avantisinvestors.com/content/avantis/en/insights/etfs-important-tool-for-wealth-management.html.

[4] Using Morningstar 2000-2019 average total, income and distributed capital gains returns data, assume fund has 60% allocated to U.S. Large Blend and 40% allocated to U.S. Small Blend. Source: Morningstar, March 2020.

[5] Investors in the highest marginal tax rate bracket should use the marginal tax rate to calculate actual tax burden; any additional income will be taxed at the marginal tax rate, not the average rate, increasing the tax deferral benefit of the ETF.

[6] Pre-liquidation ETF value: $65,384,105; MF value: $45,237,568. Estate tax of 40% on value above $11.4 million, results values of $39,230,456 and $27,142,534, respectively, difference of $12,087,922.

APPENDIX | CALCULATIONS FOR SCENARIO 1, YEARS 1-5

	Years				
Mutual Fund	1	2	3	4	5
Cost Basis	$1,000,000	$1,037,220	$1,077,389	$1,120,739	$1,167,524
Begin Value	$1,000,000	$1,079,220	$1,164,716	$1,256,985	$1,356,563
Return	$89,000	$96,051	$103,660	$111,872	$120,734
Ending Value (pre-tax, pre-dist.)	$1,089,000	$1,175,271	$1,268,376	$1,368,856	$1,477,297
Income Distribution	$9,000	$9,713	$10,482	$11,313	$12,209
Cap Gain Distribution	$38,000	$41,010	$44,259	$47,765	$51,549
Short-Term Gain	$3,800	$4,101	$4,426	$4,777	$5,155
Long-Term Gain	$34,200	$36,909	$39,833	$42,989	$46,394
Tax Paid	$9,780	$10,555	$11,391	$12,293	$13,267
Ending Value (after-tax, reinvested)	$1,079,220	$1,164,716	$1,256,985	$1,356,563	$1,464,030
Post-Liquidation Value	$1,070,820	$1,147,250	$1,229,736	$1,318,755	$1,414,827

	Years				
ETF	1	2	3	4	5
Cost Basis	$1,000,000	$1,007,200	$1,015,028	$1,023,538	$1,032,791
Begin Value	$1,000,000	$1,087,200	$1,182,004	$1,285,075	$1,397,133
Return	$89,000	$96,761	$105,198	$114,372	$124,345
Ending Value (pre-tax, pre-dist.)	$1,089,000	$1,183,961	$1,287,202	$1,399,446	$1,521,478
Income Distribution	$9,000	$9,785	$10,638	$11,566	$12,574
Tax Paid	$1,800	$1,957	$2,128	$2,313	$2,515
Ending Value (after-tax, reinvested)	$1,087,200	$1,182,004	$1,285,075	$1,397,133	$1,518,963
Post-Liquidation Value	$1,071,200	$1,148,609	$1,232,767	$1,324,265	$1,423,740

	1	2	3	4	5
ETF/MF Post-Liquidation Value	1.00	1.00	1.00	1.00	1.01

Source: Avantis Investors. Calculation does not take into account trading costs/commissions that may exist for investor to purchase/sell either investment vehicle. Calculation assumptions: same expense ratio for both vehicles; all distributions (dividend and capital gains) net of taxes are reinvested into strategy immediately; ETF does not distribute capital gains; capital gains taxes are paid for ETF at sale; time period used is years; income and capital gains distribution occur at end of period; sale occurs at end of period.

Pre-Liquidation Value: value of investment before investment is sold and any outstanding taxes are paid.

Post-Liquidation Value: value of investment after investment is sold and any outstanding taxes are paid.

ETF/MF Post-Liquidation Value: ratio of the ETF investment value divided by mutual fund investment value after investments are sold and taxes are paid, assuming the investor is required to pay taxes on the investment.

This hypothetical situation contains assumptions that are intended for illustrative purposes only and are representative of the performance of any security. There is no assurance similar results can be achieved, and this information should not be relied upon as a specific recommendation to buy or sell securities.

VADIM GORIN, CFA

Vadim is a vice president, relationship director and investment specialist at Avantis Investors. Prior to Avantis Investors' establishment in 2019, he served as vice president and regional director at Dimensional Fund Advisors (DFA). In this role, Vadim managed firm relationships with California-based RIA firms and family offices, developed new client relationships with RIAs and co-led sales efforts of ESG funds. Before that, he was a member of DFA's research department where he was responsible for supporting the management of separately managed accounts and researching equity reconstruction effects, portfolio versus benchmark tracking errors and accounting rule changes on book equity values of U.S. firms.

Vadim earned an MBA with concentrations in analytic finance and entrepreneurship from the University of Chicago Booth School of Business and a Bachelor of Arts in applied mathematics with a concentration in econometrics and a minor in business administration from the University of California, Berkeley. He is a CFA charterholder and holds Series 7 and 63 licenses.

JEFF CORNELL

Before joining Avantis Investors, Jeff served as a vice president and regional director at Dimensional Fund Advisors (DFA) where he spent over 16 years working with wealth management firms in a variety of capacities. He specialized in helping advisors understand and implement DFA's academic-based investment strategies. In addition, Jeff supported DFA clients in areas of messaging and business strategy. In his most recent role, he managed a team of regional directors focused on large, strategic relationships. Before DFA, Jeff was a senior consultant in the International Tax Group at Ernst & Young where he assisted multinational corporations with the strategic planning and analysis of intercompany transfer pricing.

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