Index Mutual Funds vs. ETFs

Which one is right for you?

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Agenda

- Father of indexing
- Mutual Funds
- Index Mutual Funds
- ETFs
- ETFs vs. Index Mutual Funds
- Relevance to us

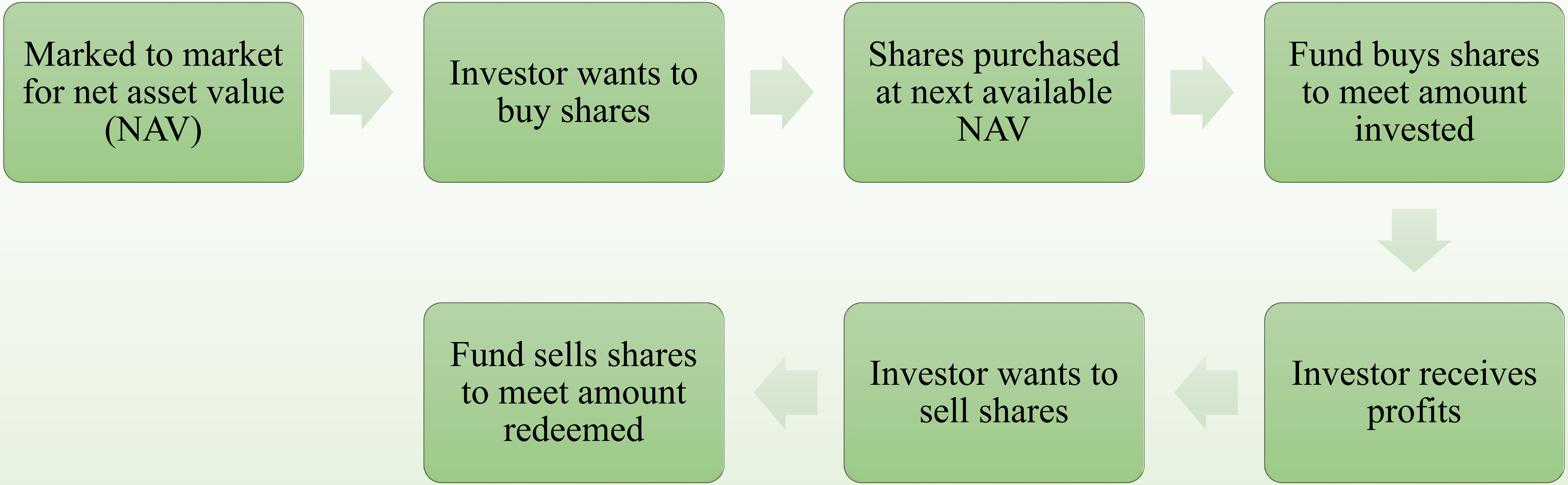
John (Jack) C. Bogle

- "Time is your friend; impulse is your enemy."
- Founded Vanguard Group in 1974
- Passive investing for everyone

What is a mutual fund?

- An investment vehicle made up of a pool of money collected from many investors for the purpose of investing in securities
- Operated by money managers to achieve capital gains and/or income for investors
- Investors buy shares of ownership in the fund and its income
- Open-ended vs. closed-ended
- Registered under the Investment Company Act of 1940

How shares are purchased



Mutual fund fees

- Annual operating fees or expense ratio
  - Annual % of funds under management: 1-3%
- Shareholder fees
  - Commissions and redemptions
  - Short-term redemption
  - Transaction fees
  - Purchase fees
  - Exchange fees
  - Account fees

Mutual funds

Pros

- Diversification
- Professional management
- Easy access
- Individual-oriented
- Automatic transactions

Cons

- Costs
- Investment minimums
- Lack of transparency
- Cash holdings
- Price of investment

Index Mutual Funds

- Match or track components of an index
- Broad market exposure, low operating expenses and portfolio turnover
  - Fees often less than 1%
- Majority of mutual funds fail to beat S&P 500
- Vanguard 500 Index Fund
  - 0.14% expense ratio

Average annual returns—updated monthly

as of 10/31/2018

	1-yr	3-yr	5-yr	10-yr	Since inception 08/31/1976
500 Index Fund Inv	7.20%	11.37%	11.18%	13.10%	10.96%
S&P 500 Index* (Benchmark)	7.35%	11.52%	11.34%	13.24%	—

What is an Exchange Traded Fund?

- Marketable security that tracks a stock index, commodity, bonds, or basket of assets
- Trades like common stock on an exchange
- Divides ownership of assets into shares
- Leveraged, inverse, and non-benchmark ETFs
- Supply regulated through creation and redemption

Creation and redemption

Shares of ETF trading at premium → Authorized participant (AP) buys shares fund wants → Fund buys shares from AP in return for shares of ETF → ETF share creation lowers price in line with NAV

Shares of ETF trading at discount → AP buys shares of ETF on open market → AP sells shares of ETF to fund in return for underlying shares → ETF share redemption raises price in line with NAV

Legal structures

- Open-end fund
  - Majority of ETFs
- Unit investment trust (UITs)
  - No investment manager
- Grantor trust
  - Typically used for investing in physical commodities or currencies
- Exchange-traded notes
  - Debt instrument
- Partnerships
  - Usually organized for tax purposes

Criticisms of ETFs

- Flash crashes of May 2010 and August 2015
  - 2010 – ETFs exposed as complex securities
  - 2015 – underlying asset plunge left ETFs with no fair value
- Inflate stock prices
  - Improper allocation of stock holdings
- Influx of indexes reduce ability to price publicly traded securities
- BlackRock, Vanguard, and State Street are largest shareholders of 88% of companies in S&P 500
- Entices active vs passive trading

ETFs

Pros

- Diversification
- 1 share investment minimums
- Control over price of trade
- Low expense ratios
- Individual-oriented

Expense ratio as of 04/25/2018	0.14% This is **85% lower** than the average expense ratio of funds with similar holdings.* Save even more by investing in lower cost Admiral Shares or an ETF.

Cons

- Risk exposure
  - Complexity
  - Speculative
- Commissions

Why should we care?

- Retirement and investing plans
  - Both are potential vehicles to create a diversified portfolio for specific needs
  - Financial literacy important for investing
- Passive vs. active investing
- Relevance to financial markets
  - Buy-side vs. sell-side

Q&A