Will Exchange-Traded Funds Replace Conventional Mutual Funds?

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May 5, 2003

Outline

- ETF Structure
- Key ETF Features
- Future ETF Development
- Effect of Fund Structure on Investor Performance

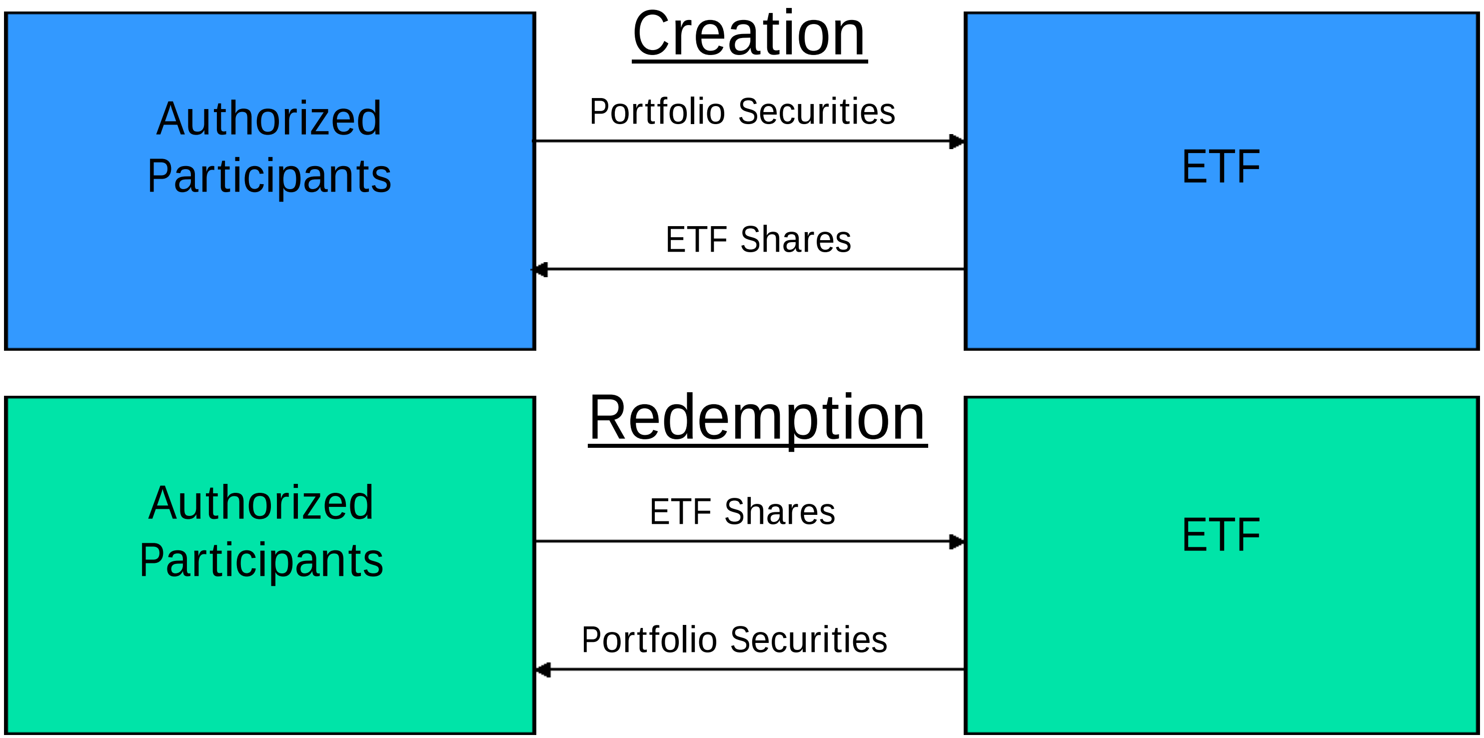
Exchange-Traded Funds

- Combine features of closed-end and open-end mutual funds
- Portfolios that trade like single stocks (like closed-end funds)
- Track net asset value (like open-end funds)
- In-kind creation and redemption makes this possible

Creation and Redemption

- Small investors typically trade ETF shares on an exchange, like any stock
- Large investors can trade ETF shares through in-kind exchange
  - Creation: deliver portfolio securities, receive ETF shares
  - Redemption: deliver ETF shares, receive portfolio securities

Creation and Redemption Simplified



Everything Priced Consistent with Net Asset Value Each Day

Why are Creation and Redemption So Important? - 1

- Arbitrage should keep an ETF's share price close to fund's net asset value
- Liquidity from underlying asset market should assure liquidity in an ETF market
- Insulate long-term holders from short-term traders

Why are Creation and Redemption So Important? - 2

- All costs of entry into and exit from ETF shares are borne by traders
- ETF investors pay their entry and exit trading costs – but only their own costs
- An investor’s cost to trade ETF shares can be lower than a conventional fund’s cost to accommodate traders
- Ongoing taxable ETF shareholders can actually benefit from entry and exit of traders

Trading Issues for Potential ETF Users

- Premiums, discounts, and ETF execution quality ★
  - Check specialist's bid-asked spread and size
- ETF liquidity is based primarily on the underlying market ★
  - Not on ETF trading volume (except SPY and QQQ)
  - Not on number of ETF shares outstanding
- Low costs of short selling and borrowing shares can make ETFs a substitute for futures ★

ETFs Can Improve Liquidity in the Underlying Market

- By increasing volume
- By creating a standard tradable basket
- Specialist system concentrates liquidity, order flow, fund share lending
  - Specialist has been a key factor in U.S. ETF successes
  - European results linked to market making by leading dealers

Key Features of Most ETFs

- Intraday trading at prices historically close to intraday underlying value
- Generally lower costs than conventional mutual funds
- Typically more fully invested than conventional mutual funds
- Protection of ongoing shareholders from impact of fund traders
- Tax efficiency

Protection of Ongoing Shareholders from Impact of Fund Traders

- Cost of shareholder turnover falls on *ongoing shareholder* in most conventional funds
- Most conventional funds provide daily liquidity to traders
- Academic studies show fund share turnover hurts shareholder returns dramatically
- In an ETF
  - Traders pay for their activity
  - Non-traders benefit from trading inactivity within the fund, and may also benefit from traders' activity

Tax Efficiency

- The unrealized gain (or loss) on assets exchanged for redeemed ETF shares disappears from the fund's tax accounting
  - Fund usually delivers its lowest-cost securities in a redemption
  - Fund can ratchet its average cost basis upward
- Process defers most or all capital gains realizations until a shareholder sells his fund shares
- Not unique to ETFs (widely used by conventional funds)
  - Some property exchanges are treated as tax-free exchanges throughout the Internal Revenue Code
- No meaningful pressure to change this tax treatment
  - Most fund shareholders sell their shares too soon to take advantage of tax deferral
  - Tax revenue loss is not material

An Example of ETF Tax-Efficiency

Capital Gains Distributions as a Percent of Year-End NAV

	S&P 500 SPDR ETF (SPY)	Open-End S&P 500 Index Fund Avg.
1993	0.00%	1.10%
1994	0.00	1.35
1995	0.00	3.85
1996	0.12	2.10
1997	0.00	2.34
1998	0.00	1.67
1999	0.00	1.52
2000	0.00	2.58
2001	0.00	1.76
2002	0.00	0.42
Average	0.01%	1.87%

Source: Lipper, Bloomberg, Morgan Stanley, Smith Barney. Note that short-term capital gains are treated as ordinary income by Regulated Investment Companies. While ETFs should have fewer short-term gains as well as fewer long-term gains, data on short-term gains is difficult to obtain for most funds.

Future ETF Development

Silent Indices as Improved Index Fund Templates

- Controlling principle: No one other than the fund manager needs to know what an index change will be and when it will occur
  - Benchmark index funds are the only funds whose portfolio targets are preannounced
- Rules similar to benchmark indices with important exceptions
  - Precise rules for index composition changes are not disclosed
  - Timing of any periodic re-balancing is confidential and randomized

See Endnotes for disclosure

Estimated Index Fund Cost Comparisons

	INDEX			
Fund Cost Item	**S&P 500**	**Silent "500"**	**Russell 2000**	**Silent Small-cap**
Fund Expense Ratio	10 bp	20 bp	25 bp	30 bp
Fund Transaction Costs Annually	50 – 100	Less than 25	200 – 300	Less than 100
Annual Range of Determinable Cost Elements	60 – 110	Less than 45	225- 325	Less than 130
Cost of Trading Fund Shares	10	20	20	30

See Endnotes for calculation information

Actively-Managed ETFs - 1

- Why?
  - Tax efficiency for actively-managed portfolios
  - Ongoing shareholder protection from fund-trader induced transaction costs
- How?
  - Self-indexing fund -- same structure as silent index fund
    - Actively managed, despite the name
  - Other active ETF structures are possible

Actively-Managed ETFs - 2

- When?
  - The SEC must increase its application review capacity
  - Dialogue between product designers and SEC staff can help
  - As can greater involvement by Commissioners

Estimate of the Annual ETF Performance Advantage

Silent Index Versus Conventional Benchmark Index Fund

ETF savings from eliminating shareholder accounting at fund level	.06%
Index license fee	0 - .05%
Embedded index transaction costs	.20 – 1.90%
Silent Index ETF annual performance advantage	.26 – 2.01%

Estimate of the Annual ETF Performance Advantage

Active ETF Versus Conventional Active Fund

ETF savings from eliminating shareholder accounting at fund levels	.06% - .30%
Cost of providing liquidity to traders	1.40% or more
Active ETF annual performance advantage	1.46% or more

Some Problems in Search of an ETF Solution - 1

- Traditional tax deductions are becoming less valuable
  - Alternative Minimum Tax (AMT)
  - Pease “tax” on deductions
- Traditional investment management fees can cost more than a commission or fund load after tax

Comparison of After-Tax Cost of Management Fees

Assumptions: Alternative Minimum Tax Applies, effective

Federal rate 35%

	Fee inside Fund	Investor pays fee directly
Investment Income	200	200
Fee	100 (deductible)	100 (not deductible)
Taxable Income	100	200
Tax	35	70
Net Income	65	30

Some Problems in Search of an ETF Solution - 2

- Improved index investment products need to pool investors with very different asset levels who are used to very different levels of cost and service
  - Silent index funds need to pool assets of diverse investors to operate effectively
  - Multiple share class funds based on ETFs can solve the problem

How Multiple Share Class ETFs Will Work

- All investors enter or leave the fund through the ETF share class unless a broker does an in-house transfer at NAV
- All share classes are interchangeable at NAV at any day's close, subject to simple rules
- The costs of the multiple share class structure will be material, but not overwhelming
  - Transfer agent function at fund level and firm (intermediary) level determines fund's cost of providing the exchange service
  - Offset against economies of scale

Possible Share Classes

- ETF Share class for traditional retail, fee based advisor, hedge fund and brokerage firm trading and risk management – all entry and exit through this class
- HNW advisor share class to pay fee efficiently: 1% incremental fee
- Special class to load more than 1% fee into an income fund
- Institutional share class(es) – lower fees than ETF share class to attract institutional assets

Slide 15 Disclosure:

- The Securities and Exchange Commission has not approved a silent index as a fund template.

Slide 18 Notes:

- Cost estimates based on discussions with brokerage and analytic sources.

There are risks involved with investing in ETFs including possible loss of money. Past performance is no guarantee of future results

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