

**35****EXCHANGE-TRADED FUNDS  
MECHANICS & APPLICATIONS**

- The maximum spread on an ETF is most likely to be negatively related to the:
  - probability of authorized participants (APs) completing an offsetting the trade in secondary market.
  - risk premium demanded by the authorized participants (APs) for carrying the trade until the close of trading.
  - spread quoted on the underlying securities.
- Consider the following two statements about exchange-traded funds:

**Statement 1:** Large ETF orders may incur price-impact costs depending on the liquidity of the secondary market.

**Statement 2:** ETFs that track stable indices will have a lower portfolio turnover cost.

It would be most accurate to state that:

  - only statement 1 is correct.
  - only statement 2 is correct.
  - both statements are correct.
- Settlement risk is most likely to be a concern for:
  - ETFs using OTC derivative contracts.
  - Exchange traded notes.
  - ETF investors where the ETF sponsors lend securities to short sellers for a fee.
- A large bank's decision to issue exchange traded notes (ETNs) that track the S&P500 index is most likely to be motivated by the belief that:
  - the return on the S&P 500 index would be higher than the bank's lending rate.
  - the return on the S&P 500 index would be lower than the bank's borrowing rate.
  - the yield on bank's unsecured debt would be higher than the swap fixed rate.
- Exchange-traded notes (ETNs) are similar to exchange traded funds (ETFs), in that they both:
  - are subject to total default by the issuer.
  - hold underlying securities.
  - use the creation/redemption process.

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6. Bob Nelson, analyst for Sigma securities, is evaluating EUXL, a leveraged ETF on European stocks. While the ETF is listed on multiple exchanges, it primarily trades on OTC markets. Nelson would most accurately assume that:
- (A) OTC quotes tend to be more "live" compared to exchange quotes.
  - (B) The increased settlement complexity from fragmented markets will lead to a decrease in quoted spreads.
  - (C) The increased settlement complexity from fragmented markets will lead to an increase in the quoted spreads.
7. ETF ownership costs are least likely to be increased by:
- (A) security lending.
  - (B) bid—ask spreads.
  - (C) portfolio turnover.
8. ETFs are most likely to underperform the benchmark by their:
- (A) tracking error.
  - (B) arbitrage gap.
  - (C) expense ratio.
9. An ETF is least likely to trade at a premium/discount to its NAV when:
- (A) there are timing differences between the capture of the ETF trade price and the price used to calculate its NAV.
  - (B) the underlying securities are exchange-traded.
  - (C) the ETF is infrequently traded.
10. Zhang Wei, portfolio manager at Zenith Capital, makes the following two statements:
- Statement 1:** For ETFs, hard closures entail creation halts and changes in investment strategy.
- Statement 2:** When a bank ETN issuer is no longer interested in additional borrowings, the resulting creation halts may cause those ETNs to trade at a discount.
- Regarding the statements made by Wei, it would be most accurate to state that:
- (A) neither statement is correct.
  - (B) only statement 2 is correct.
  - (C) only statement 1 is correct.

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11. The arbitrage gap for an ETF is most likely to be narrow when:
- (A) the securities underlying the ETF are illiquid.
  - (B) the ETF represents securities that are difficult to invest in directly.
  - (C) the ETF and the securities underlying the ETF trade in the same market.
12. When an ETF trades on the primary market, this is most likely to refer to a trade that happens:
- (A) over-the-counter.
  - (B) on an exchange.
  - (C) between Aps and issuers.
13. Compared to long-term buy-and-hold ETF investors, investors that trade frequently are most likely to be concerned with:
- (A) tracking error.
  - (B) management fees.
  - (C) trading costs.
14. PSTO ETF is quoted at a bid-ask spread of 0.10%. ETF commissions are 0.04% of trade value. Management fees are 0.09% per year. The average annual total cost of holding the PSTO ETF for 3 years is closest to:
- (A) 0.45%
  - (B) 0.15%
  - (C) 0.30%
15. Suppose that a particular mutual fund is benchmarked against a large-cap equity index. The fund manager unexpectedly receives a large inflow of cash and wants to quickly equitize this cash. The ETF strategy most appropriate in order for the fund manager to achieve this goal would be:
- (A) excess liquidity management.
  - (B) portfolio completion.
  - (C) portfolio liquidity management.
16. Which of the following is most likely to represent a passive strategy for constructing an ETF?
- (A) Smart beta.
  - (B) Representative sampling/optimization.
  - (C) Alternative weighting.

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17. It would be most accurate to state that ETF shares can be created or redeemed by:
- (A) anyone, including individual investors using a brokerage account.
  - (B) accredited investors (i.e. qualified investors) only.
  - (C) a special group of institutional investors (APs) only.
18. Which of the following is least likely a purpose of the in-kind creation/redemption of an ETF?
- (A) Lower cost.
  - (B) Narrowing the arbitrage gap.
  - (C) Tax efficiency.
19. An ETF's tracking difference is most accurately measured as the:
- (A) annualized standard deviation of the differences between the daily returns of the ETF and its benchmark.
  - (B) standard deviation of the difference in daily returns between the ETF and its benchmark.
  - (C) difference between the ETF's return (based on its NAV) and the return on the index tracked.
20. ETFs trade in:
- (A) both primary and secondary markets.
  - (B) secondary markets only.
  - (C) primary markets only.
21. Spreads tend to be narrower for:
- (A) popular ETFs.
  - (B) fixed-income ETFs (as compared to large-cap equity ETFs).
  - (C) specialized ETFs such as those that track commodity indexes.
22. All else constant, significant tracking error in an ETF is most likely to cause the ETF to:
- (A) trade at a discount.
  - (B) outperform the underlying benchmark.
  - (C) be a poor instrument for hedging an exposure to the underlying index.

