

Are ETFs Driving Your Stock and the Market?





About ModernIR

- Financial Technology: software, algorithms, models for measuring how investors behave
- Largest provider of advanced equity analytics to issuers
- Market-structure experts
- ETF experts

TRACK record

We are nationally recognized experts on US equity market structure, and have grown into industry educators and thought leaders. We frequently serve as financial media experts and have provided written testimony on market structure for Congress.



I. Why Exchange Traded Funds Have Boomed

ETFs are the Most Popular Investment Vehicle Today



Exchange Traded Funds have exploded in popularity by beating stock-pickers, the core IR audience, via tax and cost advantages.

How Blackrock Describes ETFs



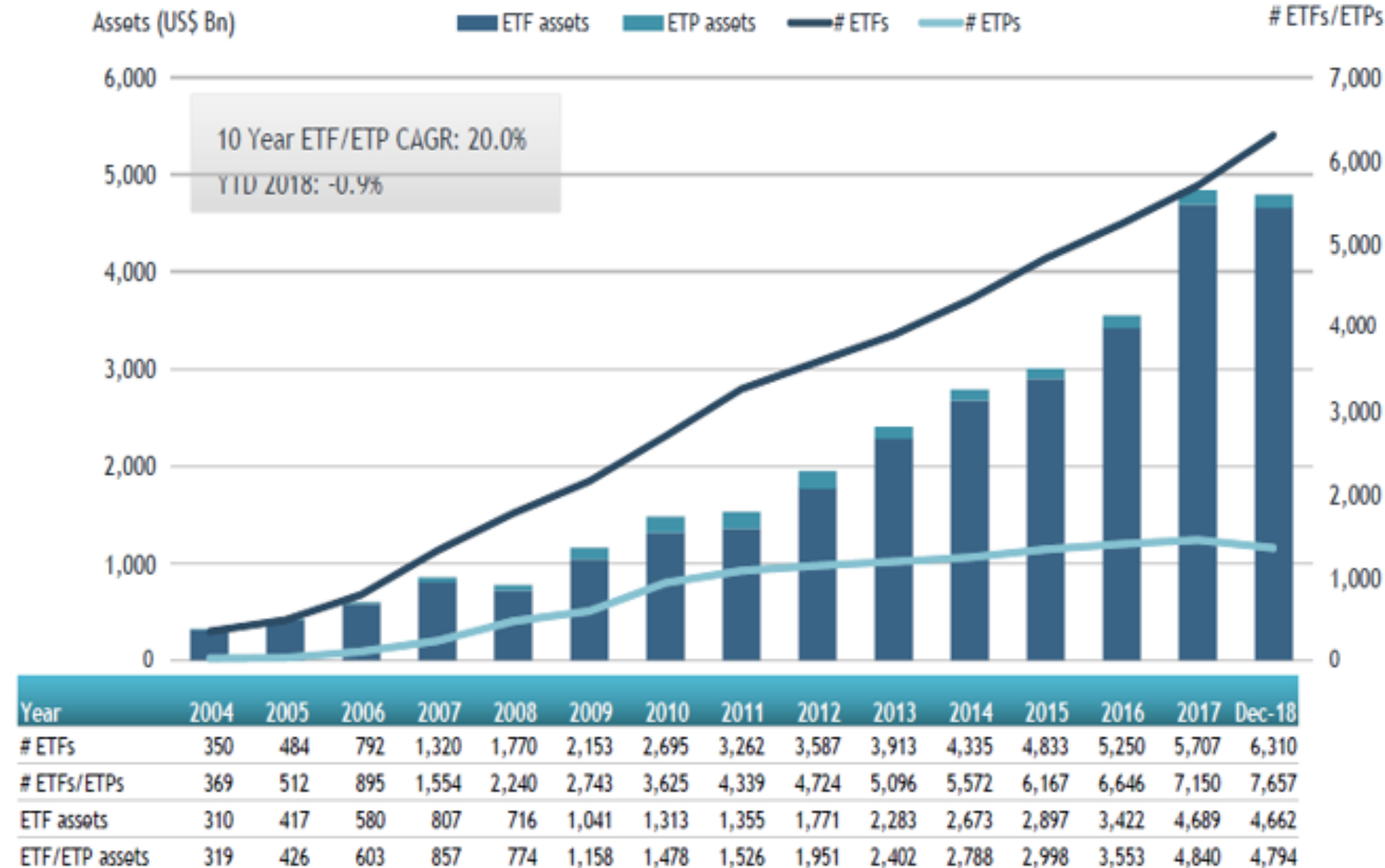
Similar to mutual funds, iShares ETFs are **diversified mixes of stocks or bonds that are managed by experienced professionals**. ETFs typically offer a few **extra perks, including lower fees** and increased price transparency throughout the day, so you always know what your investment is worth.

Source: Blackrock.com – “What is an ETF?”

ETFs By the Numbers



Growth in Global ETF and ETP assets as of the end of December 2018



- 7,650 global ETFs
- 10-yr compounded annual growth: 20%
- \$3.6 trillion in USA
- \$2 trillion US equities
- Over 850 ETFs in US equities

Source: Industry researcher ETFGI, Jan 9, 2019. Data on US ETFs, Investment Company Institute

ETFs are nearly 50% of Market Volume



Top 15 Dollar-Volume Leaders

Ticker	Fund	30-Day Avg Dollar Volume
SPY	SPDR S&P 500 ETF Trust	20,706,721,382
QQQ	Invesco QQQ Trust	5,188,346,343
EEM	iShares MSCI Emerging Markets ETF	3,049,347,252
IWM	iShares Russell 2000 ETF	3,029,539,409
HYG	iShares iBoxx \$ High Yield Corporate Bond ETF	1,641,843,996
EFA	iShares MSCI EAFE ETF	1,523,756,644
FXI	iShares China Large-Cap ETF	1,266,633,389
XLF	Financial Select Sector SPDR Fund	1,236,069,357
EWZ	iShares MSCI Brazil ETF	1,190,254,156
IVV	iShares Core S&P 500 ETF	1,120,904,372
GDX	VanEck Vectors Gold Miners ETF	1,034,360,072
LQD	iShares iBoxx \$ Investment Grade Corporate Bond ETF	975,545,502
GLD	SPDR Gold Trust	964,040,193
XLI	Industrial Select Sector SPDR Fund	929,890,771
DIA	SPDR Dow Jones Industrial Average ETF Trust	928,141,695

15 Most Active ETFs, out of 850, are 20% of total dollar volume

Of 50 most active stocks on a given day, nearly half are ETFs, generating 50% of market trading volume

Source:
15 Most Active ETFs, Mar 20, 2019, etf.com; trading volume data calculated, sourced from NYSE Arca, Dow Jones Marketwatch

Why Should I Care About ETFs?



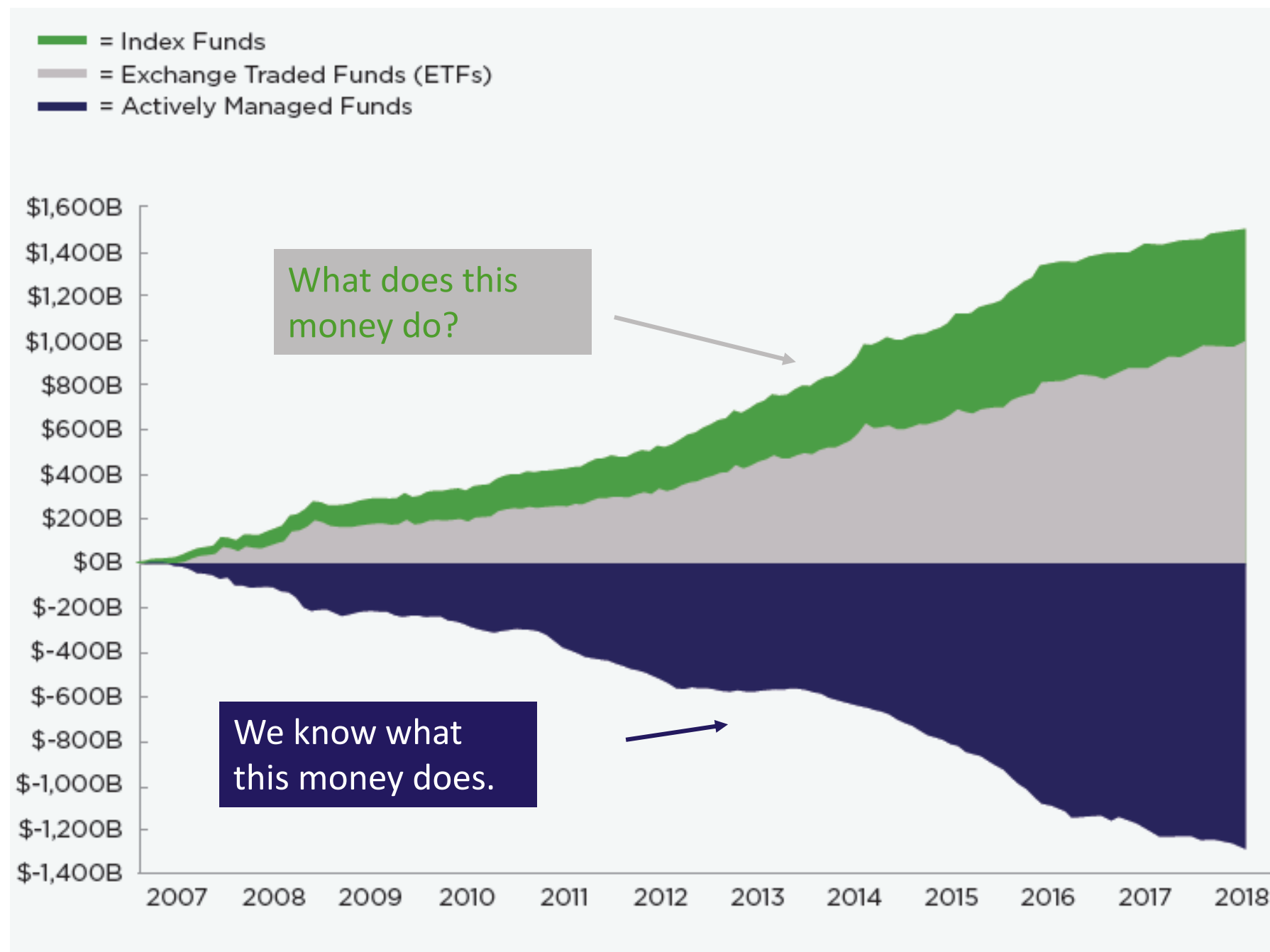
WHY MARKET STRUCTURE matters

Price-setting authority has shifted from fundamentals to fund flows as investors flee active management.

Active investors search for ways to beat the index when market rules promoting average prices favor passive investment.

Public companies seek answers for stock movement unrelated to story.

Know how today's investment vehicles work.





II. How ETFs Work

Understanding How ETFs Work



“ETFs are extremely difficult to understand.”

– author of critical paper on ETFs

We read:

- **Every white paper available from State Street, Blackrock, Vanguard, the Investment Company Institute and others**
- **Scores of Prospectuses, Annual Reports, Statements of Additional Information, and other regulatory documents**
- **Academic papers**
- **SEC regulatory filings**



“ETFs operate pursuant to SEC exemptive orders.”

SEC: Mutual Funds and Exchange-Traded Funds (ETFs) – A Guide for Investors



Exempt from what?
Let's find out....

ETFs Are Exempt from the “Redeemable” Rule



All Conventional “40 Act” Funds Must be Redeemable:

The Act defines “redeemable security” as any security that allows the holder to receive his or her proportionate share of the issuer’s current net assets

SEC Exemptions for ETFs:

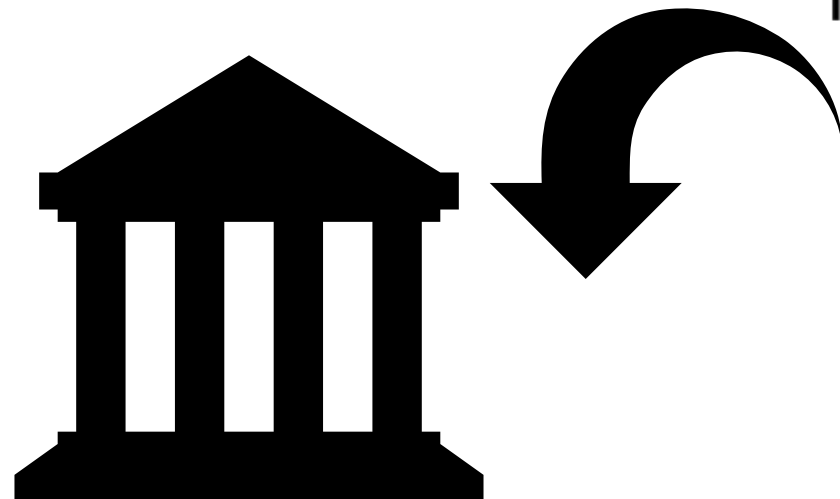
- ETFs with an arbitrage mechanism (all of them) are *not* redeemable
- Exempted from one price for all rule (instead, primary, secondary markets)

Definition of Arbitrage: *Profiting on different prices for the same thing.* ETFs depend on it.

Why ETFs Exist



THE STOCK MARKET...
has limited supply, most shares
owned by investors who don't sell



BUT...

A lot more people **want to invest**
in US stocks



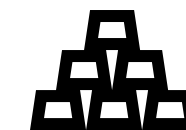
WHAT TO DO?

Create a **substitute for stocks** of
equal, in-kind, value that can be
increased or decreased in supply,
to trade **INSTEAD** of stocks



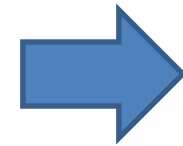
ETFs

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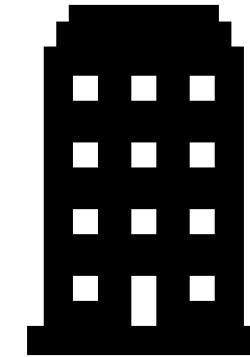
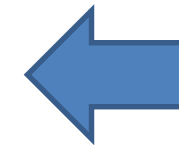


Collateral

Wholesale Market: How ETF Shares are Created



Creation basket:
Sponsor lets APs
create 50,000 ETF
shares in trade for
collateral



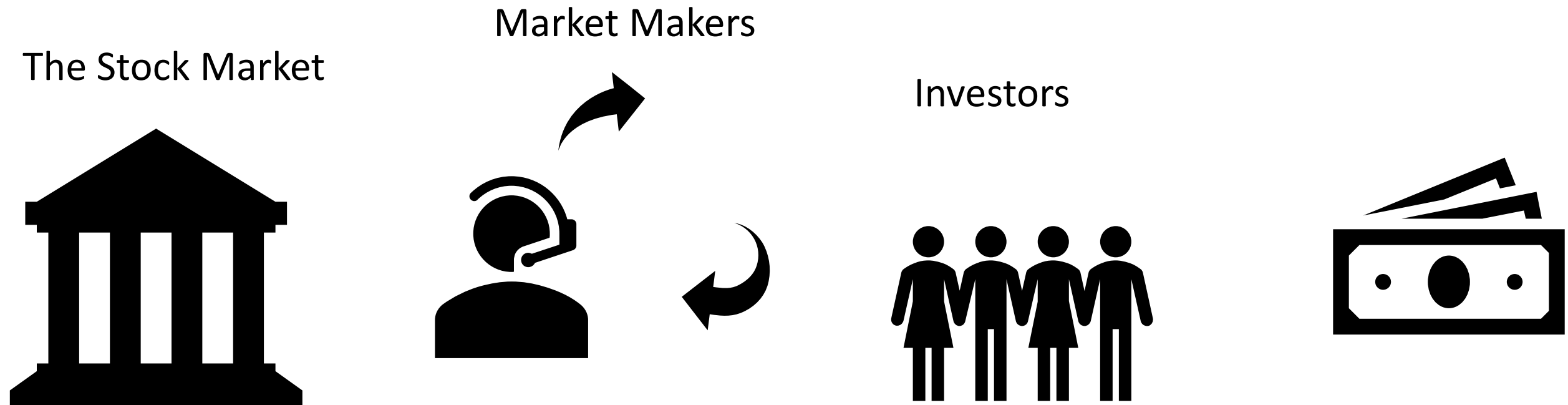
Broker
“Authorized
Participants”

- **Off-market BLOCK transaction**, no competition
- **No commission** for Fund Sponsor
- Broker pays \$3,000
- **No taxes**, an IRS “in-kind exchange”
- **Set price** determined by ETF Net Asset Value
- **Fund Sponsor gets collateral** – stocks, cash
- Broker gets **50,000 ETF shares to sell**



***The process works in **REVERSE**
for ETF share **REDEMPTIONS*****

Retail Market: ETF Shares Trading Like Stocks



The good: ETFs give investors exposure to the same stocks other investors own, at lower cost and better liquidity.

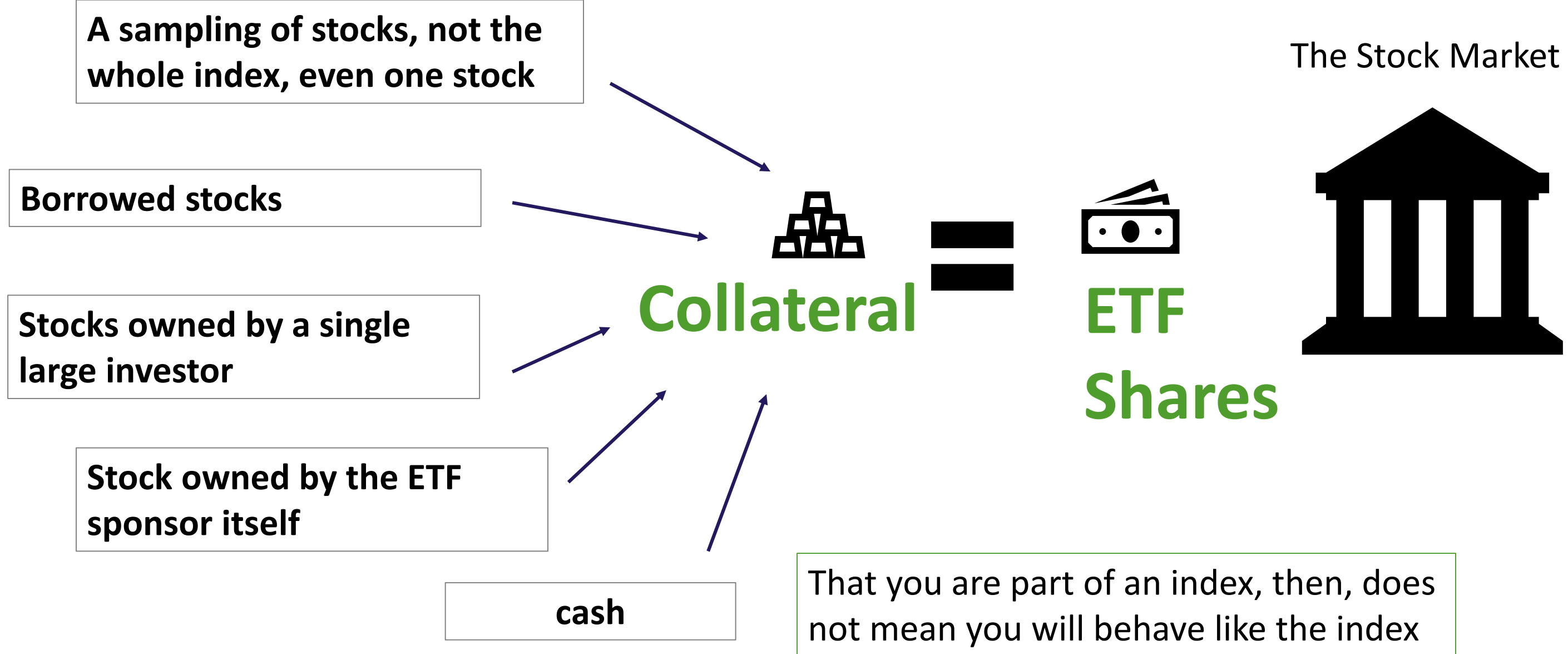
The bad: ETFs have no intrinsic value, and may be **collateralized** by stock someone else already owns.



What do we mean, “collateral?”



ETFs Revolve Around Collateral, Not Investment



Math Suggests ETFs May Be Undercollateralized



1. All indexes and ETFs in US markets built on 2,500 companies:
750 Large-Caps 91% of capitalization, 1,750 Small-Caps 9%,
(excluding multiple classes, microcaps) **Russell 1000 95%**
2. **Number of companies** is falling (3,486, Wilshire says)
3. 2008-18, S&P 500 **repurchased est. \$5 trillion of stock**
4. Big stock pickers say: No stock to buy (and Passives seeking waivers to own higher percentages)

Yet ETFs have no liquidity issues?

Company-count from Wilshire Associates, Wilshire 5000 data; Stock buyback data William Lazonick, Ken Jacobson, Univ of Massachusetts, New York Times Aug 23, 2018



What do we call a substitute derived from an underlying asset?

A derivative.

ETF Creations and Redemptions= \$Trillions

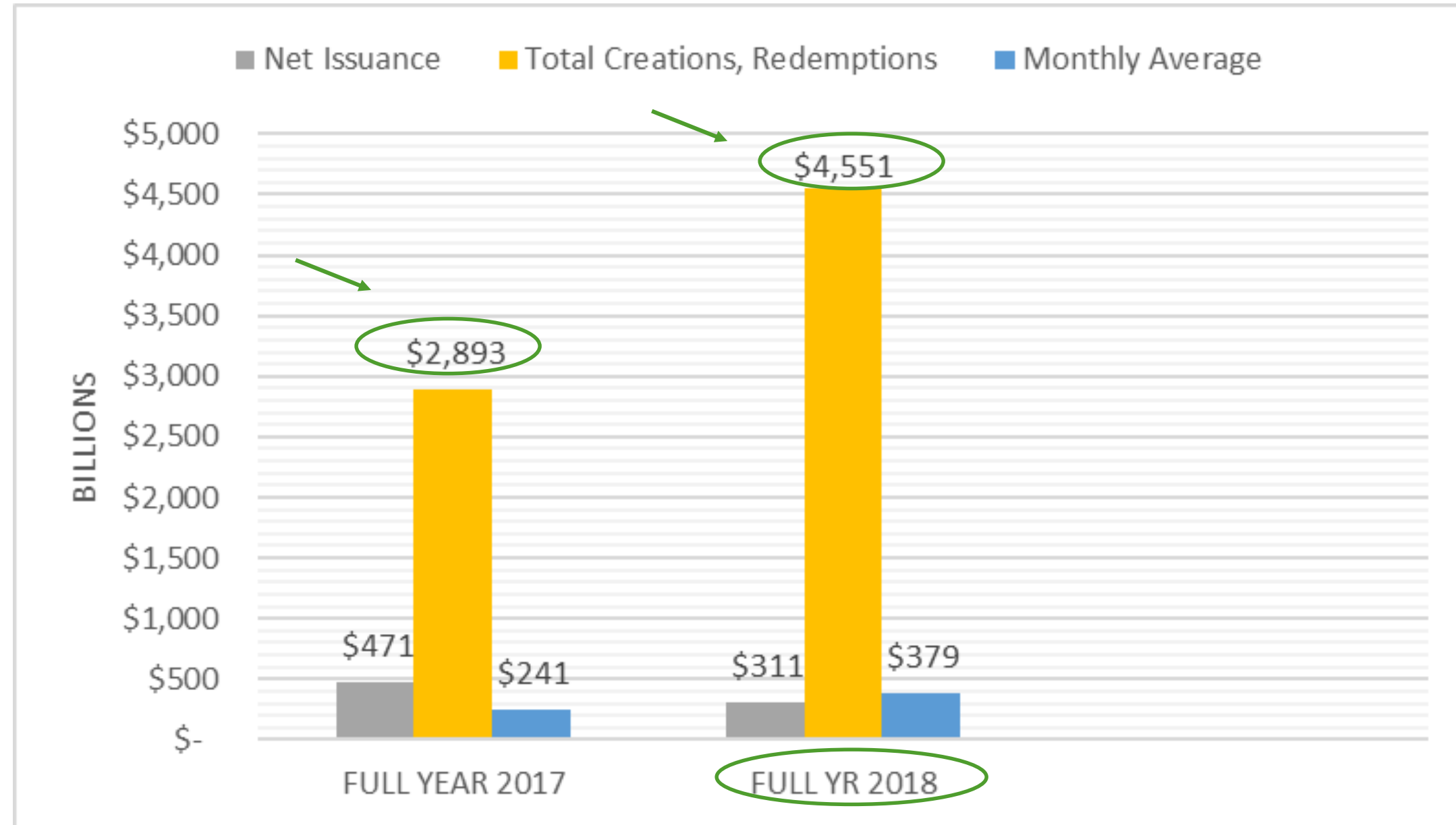


ETFs permit a cadre of brokers to move, reprice trillions of dollars of collateral like stocks or cash behind ETF shares

2017: \$500 billion more creations than redemptions, \$250 billion/mo. total

2018: \$311 billion more creations, \$380 billion/mo.

ETF wholesale market vastly larger than ANY form of fund flows



ETF data: Investment Company Institute

ETFs Exclude Issuance from Turnover: From SPY



Portfolio turnover rate^(g)

3%

4%

3%

4%

3%

- (a) Per Unit numbers have been calculated using the average shares method, which more appropriately presents per Unit data for the year.
- (b) Contribution paid by the Trustee (State Street Bank and Trust Company) in the amount of \$26,920,521. (See Note 3).
- (c) Total return is calculated assuming a purchase of Units at net asset value per Unit on the first day and a sale at net asset value per Unit on the last day of each period reported. Distributions are assumed, for the purposes of this calculation, to be reinvested at the net asset value per Unit on the respective payment dates of the Trust. Total return for a period of less than one year is not annualized. Broker commission charges are not included in this calculation.
- (d) Reflects a non-recurring litigation payment received by the Trust from State Street Corp., an affiliate, which amounted to less than \$0.005 per unit outstanding as of March 20, 2017. This payment resulted in an increase to total return of less than 0.005% for the period ended September 30, 2017.
- (e) Total return would have been lower by 0.01% if the Trustee had not made a contribution. (See Note 3).
- (f) Net of expenses waived by the Trustee.
- (g) Portfolio turnover rate excludes securities received or delivered from in-kind processing of creations or redemptions of Units.

III. How ETFs Affect Your Stock



MOTIVATION in the ETF Market



Collateral

Wholesale Market

Retail Market

Investment

Blackrock: Minimize taxes, customer accounts, commissions, profit on USING COLLATERAL

Brokers: Profit on the difference between supplying COLLATERAL WHOLESale and trading the byproduct RETAIL.

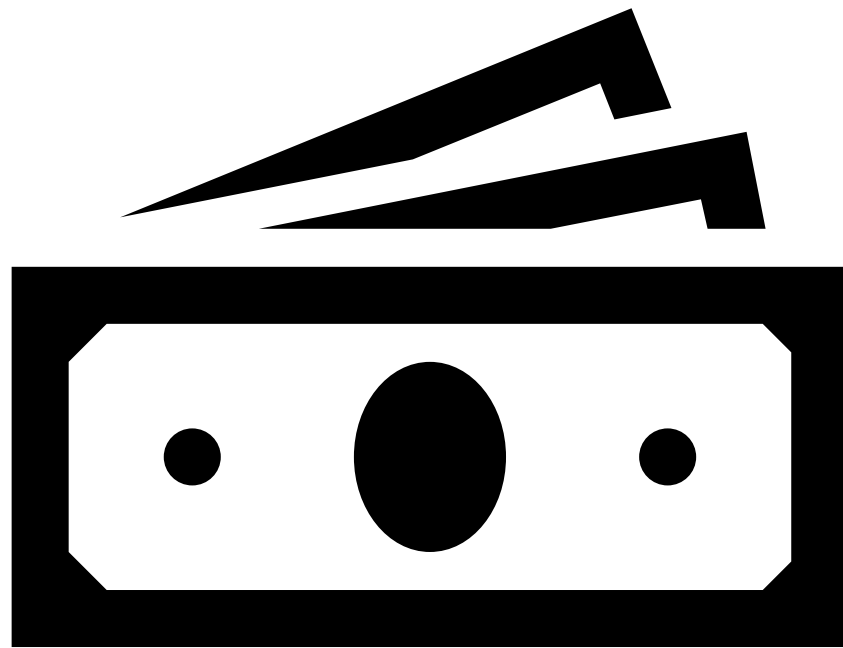
Mom and Pop Investors buy ETFs thinking they own "mutual funds that trade like stocks"

Institutional Investors have access to primary market, can create, redeem large blocks off market

Market Makers are trading them up and down using the ARBITRAGE MECHANISM

ETFs Make Stocks Trade Like Asset-Backed Currencies

- *Currency trading is a \$5 trillion daily market where the primary objectives are profiting on fluctuations (dollar, versus euro, yen, yuan, etc.), and hedging.*



Assets Backing ETFs Belong to ETF Sponsors



1. ETF shares are created and redeemed in a separate, private market (thanks to SEC exemptive orders) only by Authorized Participants.
2. The AP agreements say APs are **independent contractors** whose actions cannot be directed by the ETF sponsor.
3. ETF sponsors can reject or revoke acceptance of creation orders—proof **APs have no property claim** on shares provided to sponsors.
4. Creation Units will not be issued until the ***transfer of good title to the Trust of the Deposit Instruments and the payment of the cash component have been completed.***

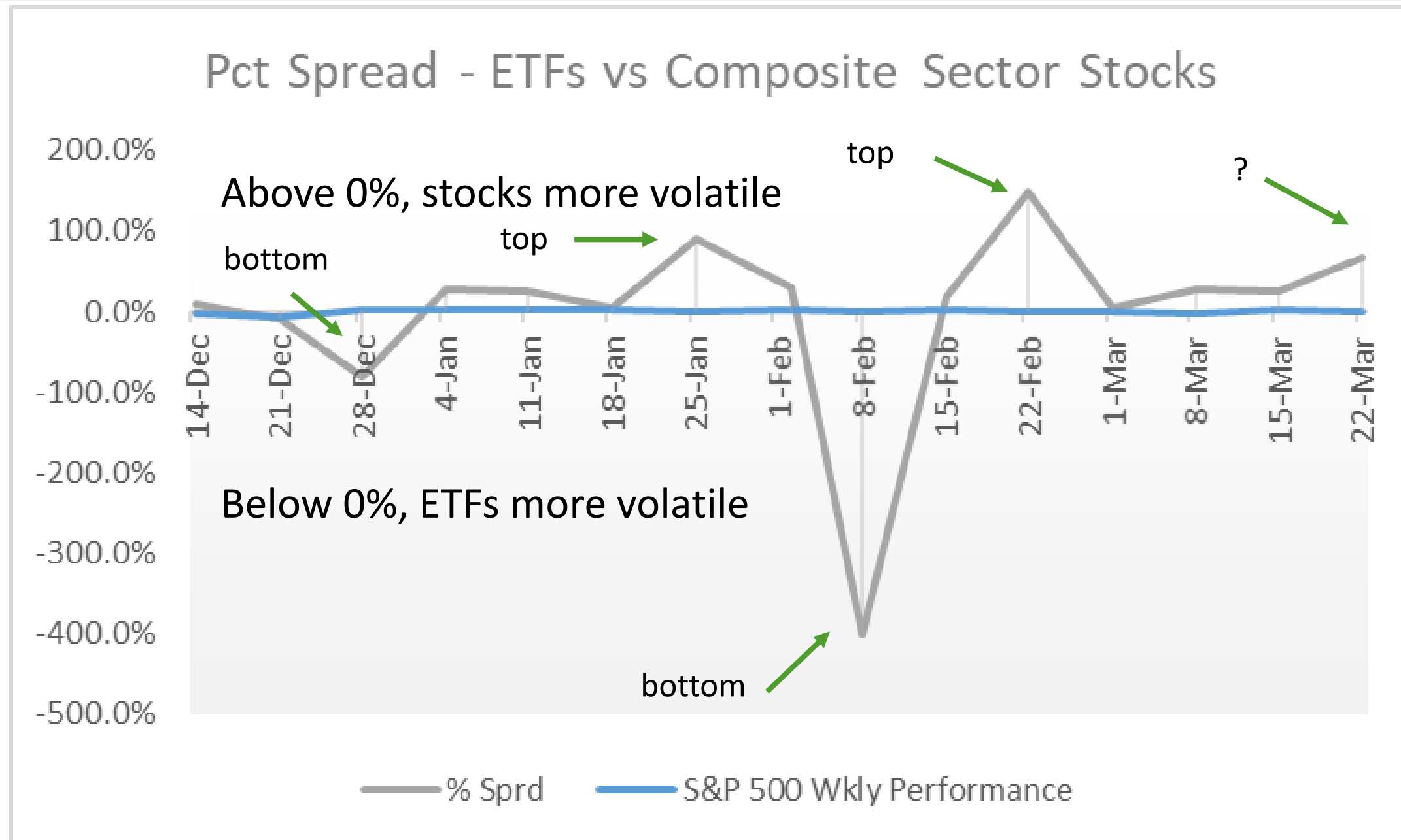
If assets belong to the sponsor, no assets back ETF shares.

Are ETFs Turning Stocks Into Spread Trades?



Green arrows show short-term tops and bottoms for stocks since December correction.

Implication: Spreads lead to reversal trades – which means MARKET FUNDAMENTALS are not causal.



ETFs Promote Share-Borrowing – Arbitrage



XLP: State Street Consumer Staples ETF

Consumer Staples: Composite data for sector stocks

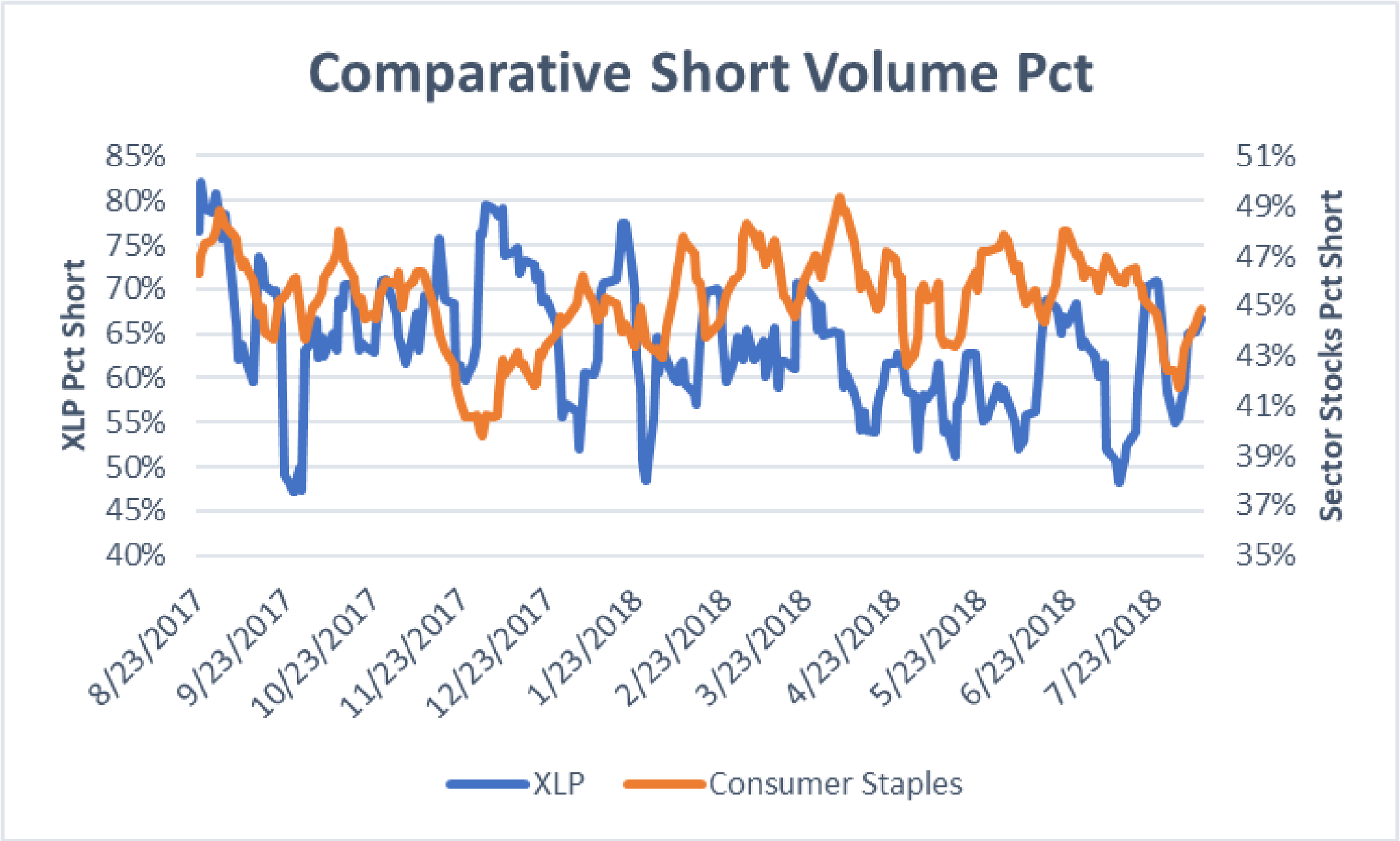
Correlation: -15% = inverse

Implication: *Brokers borrow stocks to create ETF shares, and borrow ETF shares to redeem in trade for stocks*

XLP: 64% of volume short daily

Consumer Staples: 45% short

To the degree your shares are borrowed or not, you will move differently from peers



Source: ModernIR proprietary analytics

ETFs Sample Stocks, Not The Whole Index



“[Blackrock]uses a representative sampling indexing strategy to manage the Fund. “Representative sampling” is an indexing strategy that involves investing in a representative sample of securities that collectively has an investment profile similar to that of the Underlying Index.”

Blackrock iShares IVV Prospectus, Nov 16, 2017

IR folks: If you're not in the sample, that along with your own liquidity characteristics is reason why you may not move with the sector.

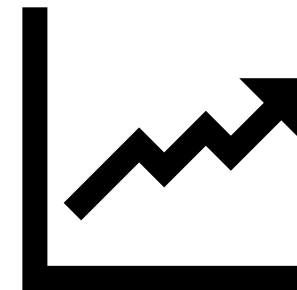
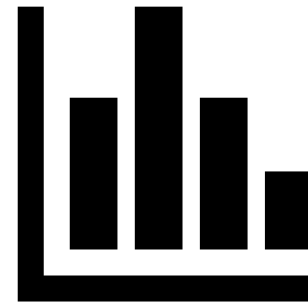
ETFs Are Motivated by Tax Consequences



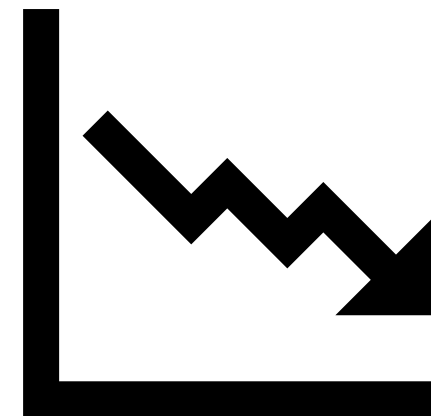
“Vanguard ETFs can also use in-kind redemptions to remove stocks that have greatly increased in value (which trigger large capital gains) from their holdings.”

-Vanguard ETF investor FAQ

You’ve been executing, communicating, differentiating – **your stock rises.**



Then Vanguard sheds imputed tax consequences by making your shares the “Redemption Basket.” Down goes your stock for no rational reason.

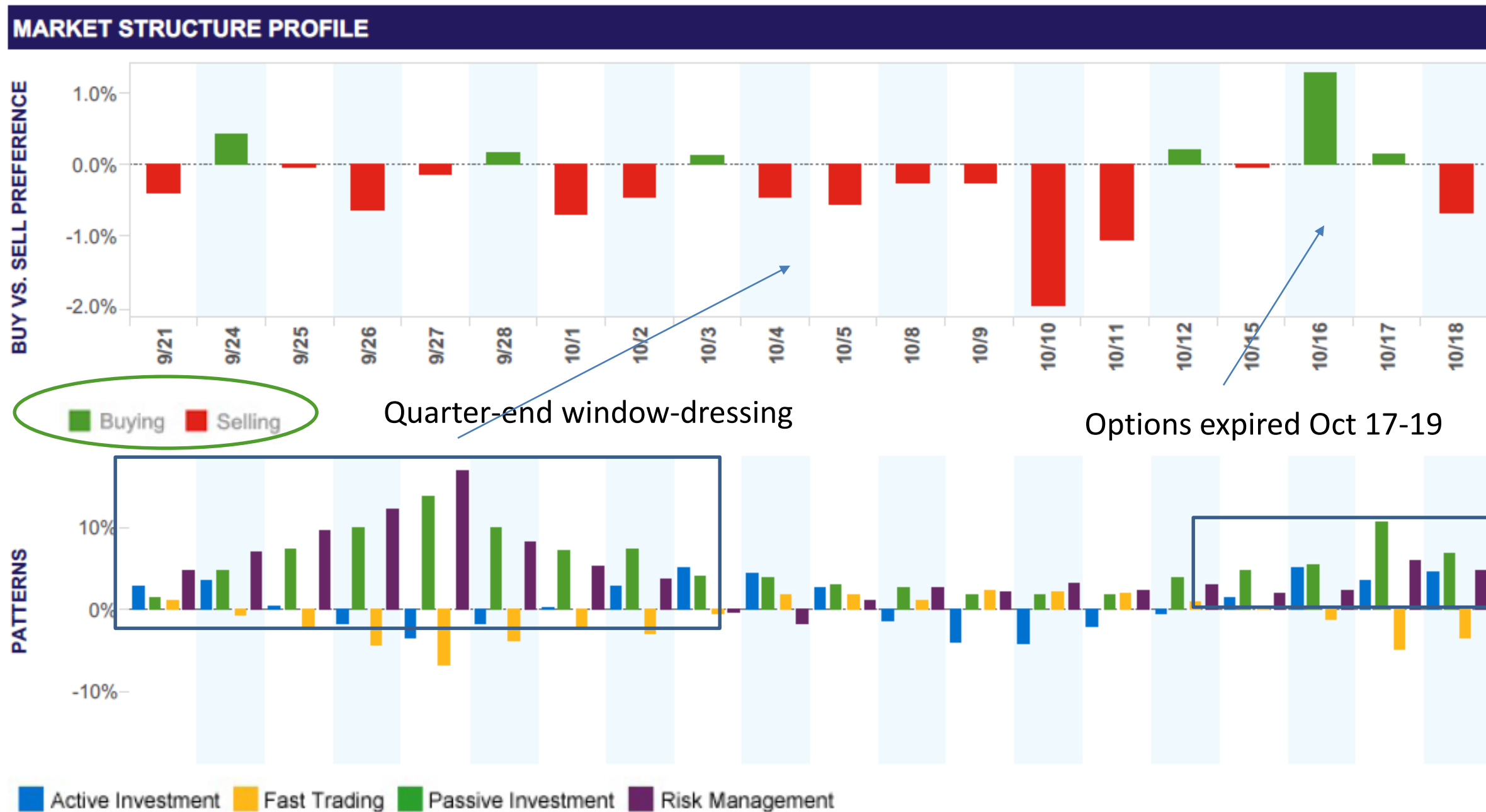


Tech Sector: October 2018 Correction – ETF Patterns



How ETF creations, redemptions, manifest in behavioral patterns

Can dwarf all other factors, especially at month-ends, options-expirations



Source: Proprietary Sector Reports from ModernIR

WMT vs Consumer Staples Stocks: Arbitrage

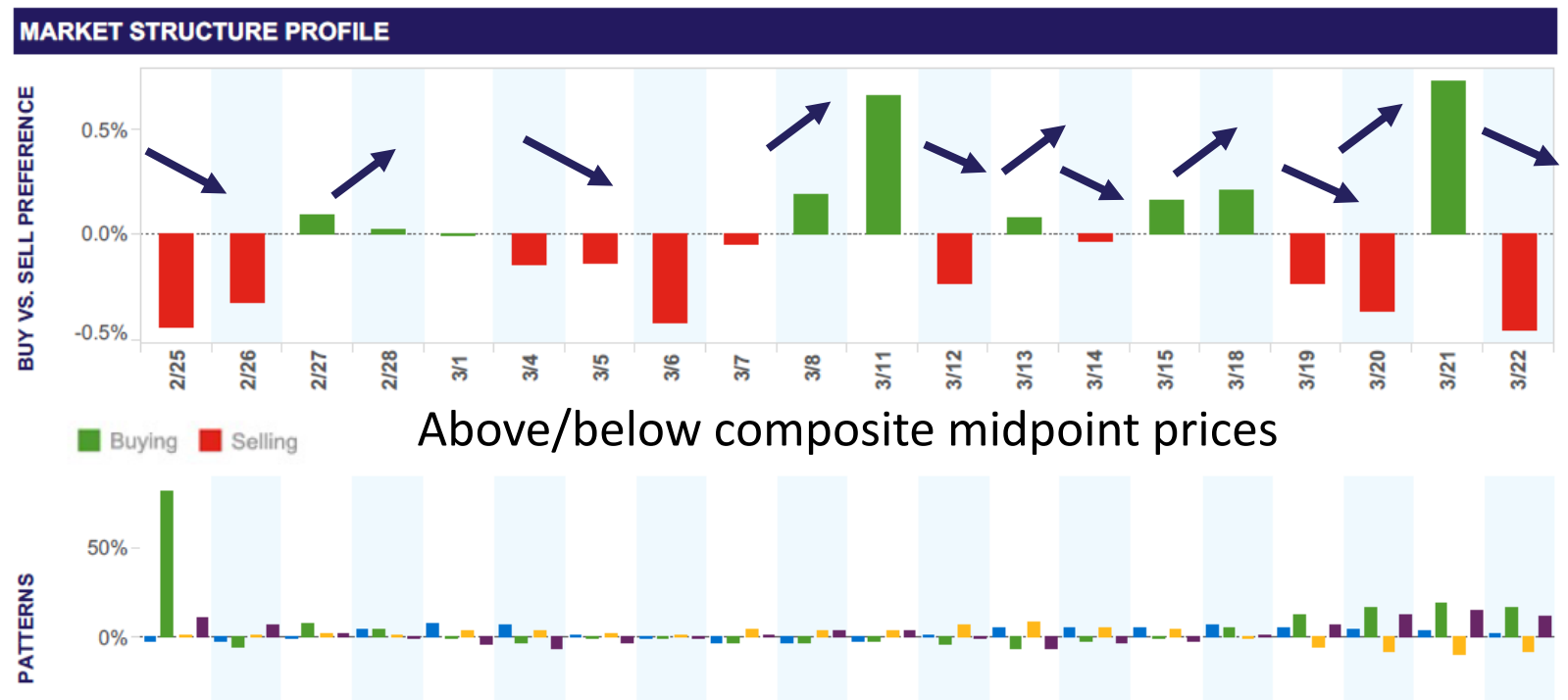


Walmart (WMT) 1-mo trading at Mar 22, 2019



Sources: Fidelity WMT quote; Proprietary ModernIR sector data

Consumer Staples Stocks 1-mo trading at Mar 22, 2019



Implication: WMT is principal collateral for Staples ETFs (WMT in 210 ETFs), moves up and down primarily arbitrage between ETFs, Staples stocks

Risk? Collateral Damage



In a rising market, ETFs permit more money to chase stocks, so collateral increases in value (good for Blackrock), trading ETFs makes money (good for brokers). **Everybody wins.**



In a falling market, both ETFs, stocks, decline, the arbitrage mechanism breaks down, Blackrock may be selling assets at the same time brokers pull back from supporting ETFs.



If stock prices become volatile or fall in unison, the arbitrage mechanism, the only way ETFs are redeemable, may break down. If the supply of ETF shares does not change to reflect asset prices, violent inflation, deflation, may occur.



Ramifications For You: IR Profession

- ETFs foster an *economic incentive for intermediaries to CHANGE PRICES OF STOCKS* (it's not your story -- and intraday volatility is 2.7% daily, 2018)
- ETFs have an insurmountable regulatory advantage (over core IR audience)
- ETFs are stock substitutes, not pooled investments, so they don't form capital, and data show strong indication ETFs cause stocks to trade like currencies
- IR needs to understand ETFs – because boards, execs, think story sets price

Summary: What Can You Do?

- Educate yourself. Sources: Read white papers from ICI, Blackrock, Vanguard, etc., join TABB Forum, read our blog; follow Joe Saluzzi, Nanex on Twitter.
- Educate your board and executives with summaries, presentations on passive investment.
- Understand periods when you can expect passive behavior to dominate: options expirations, month-end rebalances, index rebalances. Sources: Options Clearing Corp, ModernIR Planning Calendar, web-search index rebalances for any index family.
- If you want to attract Passive Investment (good/bad): Size, Volume, Industry silos, single class of voting shares. *Cannot directly influence passive investment (discuss).*
- Know how many ETFs may use your shares as collateral (Fidelity quotes is best free source).
- Measure and report key behavioral trends: At least weekly summary of key behavioral trends for Board, execs; behavioral assessments before/after results, analyst days, key news; behavioral data alongside fundamental data in board reports; proactive behavioral data around big moves; explanations for trading versus peers; controlling the controllables (when it's about you, when it's not).



Conclusion:

Reposition the IR role beyond “how do I attract more Active investors?” to “how do I lead the board and executive team to better understand the trends and drivers behind equity value?”

Questions?



ModernIR

Market Structure Analytics™