

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



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



\$5 Trillion
Global Assets



\$3.2 trillion in USA
\$2 trillion US equities, circa
Over 800 ETFs in US equities

37% Increase
2016-17



Comparison: Hedge funds
\$3.2 trillion worldwide

7,200
Exchange Traded Products

Source: Industry researcher ETFGI, Jan 26, 2018, Seeking Alpha

ETFs are nearly 50% of Market Volume



SPY - SPDR S&P 500

QQQ - POWERSHARES QQQ

AMZN - AMAZON.COM

AAPL - APPLE

IWM - iShares RUSSELL 2000 INDEX

EEM - iShares MSCI EMERGING MARKET

NVDA - NVIDIA

FB - FACEBOOK

BABA - ALIBABA GROUP HOLDING LTD

MSFT - MICROSOFT

BAC - BANK of AMERICA CORP

EFA - iShares MSCI EAFE INDEX

VXX - IPATH S&P 500 VIX ST FUTURES E

GOOGL - ALPHABET INC CL A

DIA - SPDR DJ INDUSTRIAL AVER

NFLX - NETFLIX

XLF - FINANCIAL SELECT SECTOR SPDR

GOOG - ALPHABET INC CL C

WFC - WELLS FARGO

BA - BOEING

IVV - iShares CORE S&P 500 ETF

JPM - JP MORGAN CHASE

HYG - iShares IBOX \$ HIGH YIELD CORP

TSLA - TESLA INC

MU - MICRON TECH

FXI - iShares FTSE CHINA 25 INDEX FU

CSCO - CISCO SYSTEMS

TWTR - TWITTER INC

XLI - INDUSTRIAL SELECT SECTOR SPD

XOM - EXXON MOBIL

XLK - TECH SELECT SECTOR SPD

XLE - ENERGY SELECT SECTOR SPDR

XLV - HEALTH CARE SELECT SECTOR SPDR

TLT - iShares Lehman 20+ Year Treasury Bond Fund

INTC - INTEL

C - CITIGROUP

VOO - VANGUARD S&P 500 ETF

JNJ - JOHNSON & JOHNSON

V - VISA

GE - GENERAL ELECTRIC

HD - HOME DEPOT

XLU - UTIL SELECT SECTOR SPDR

XLY - SPDR CONSUMER DISCRET SELECT

XLP - SPDR CONSUMER STAPLES SELECT

BRK.B - BERKSHIRE HATHAWAY

GDX - VANECK VECTORS GOLD MINERS ETF

T - AT&T

GLD - SPDR GOLD SHARES

TQQQ - PROSHARES ULTRAPRO QQQ

SNAP - SNAP INC

50 most active US stocks ranked by dollar volume 1H 2018

23 (almost half) were ETFs, largest SPY, the world's most actively traded stock

Stock trading averages roughly 6 billion shares daily, and 3 billion driven by ETFs now

Source: Stock-ideas.com

50% market volume statistic via State Street blog, Jan 16, 2018, referencing NYSE Arca data

Why Should I Care About ETFs?



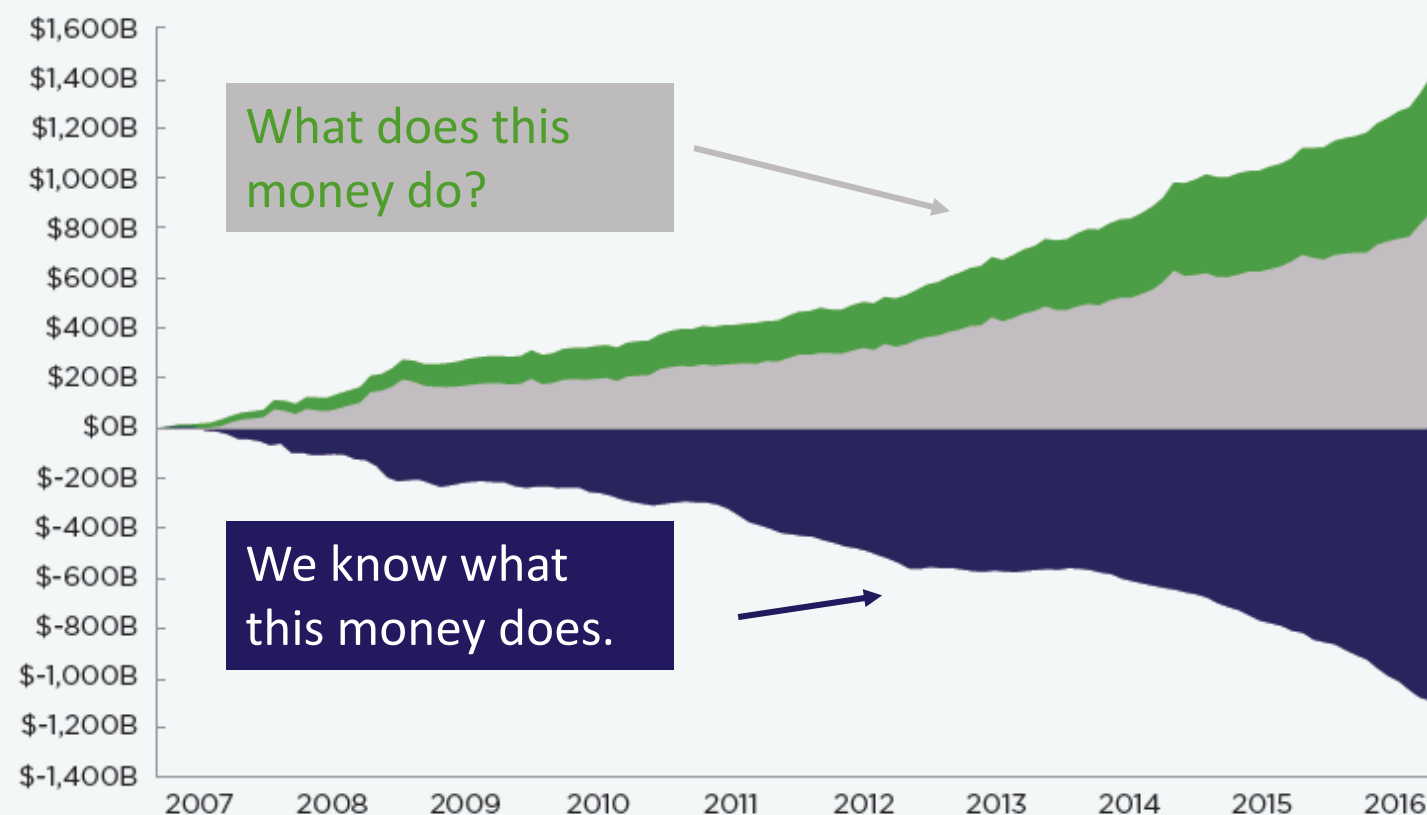
WHY MARKET STRUCTURE matters

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.

— = Index Funds
— = Exchange Traded Funds (ETFs)
— = Actively Managed Funds



Know how today's investment vehicles work.

*2017 Investment Company Institute Factbook



II. How ETFs Work



“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:

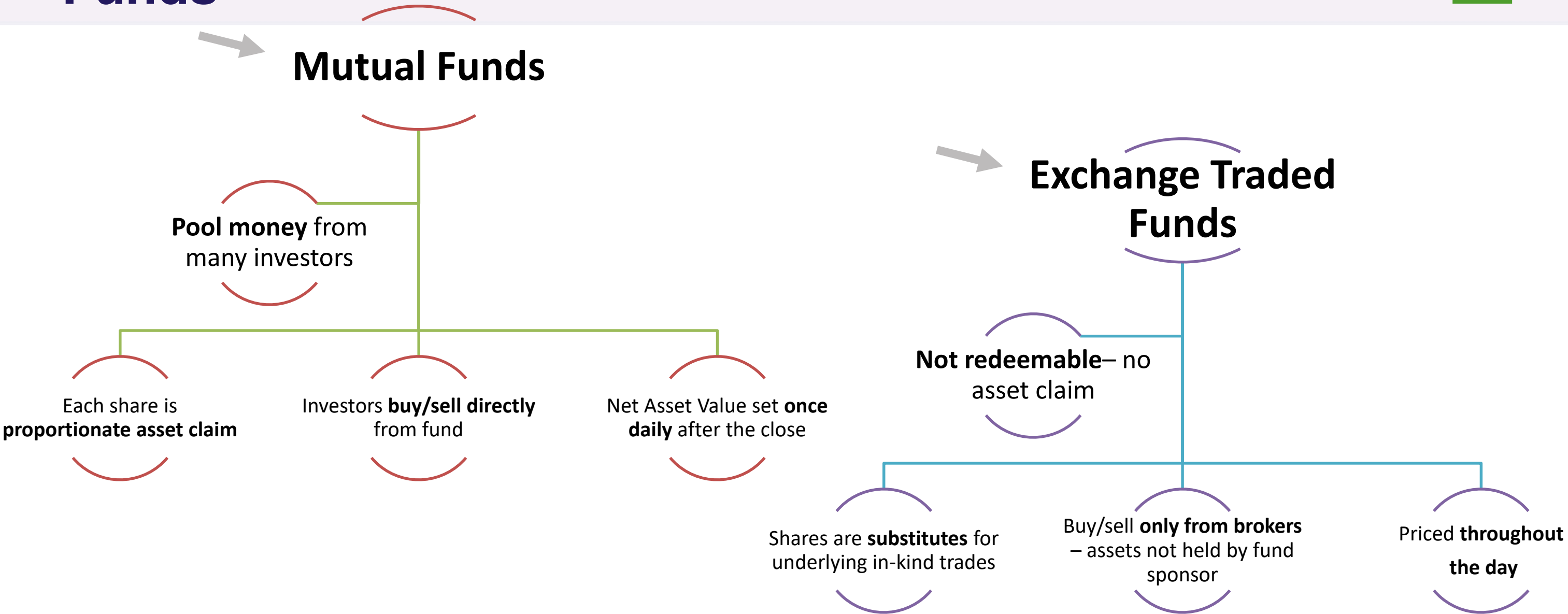
The Act defines “redeemable security” as any security that allows the holder to receive his or her proportionate share of the issuer’s current net assets

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 by rule **DEPEND** on traders who don’t want to own them for prices – the **OPPOSITE** of investment behavior.

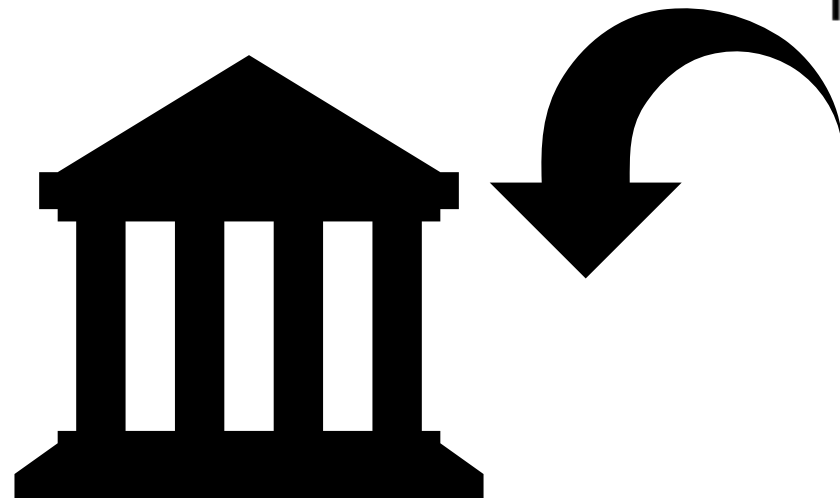
No Matter What You Hear...ETFs are *Not* Like Mutual Funds



Why ETFs Exist



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



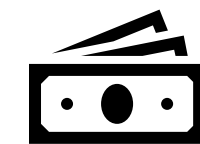
BUT...

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

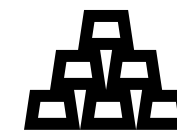


WHAT TO DO?

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

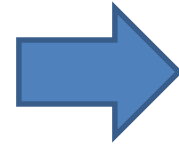


ETFs

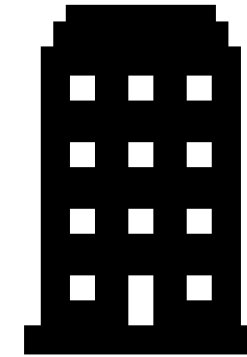
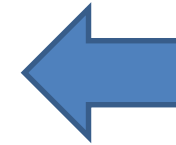


Collateral

The Primary Market: How ETF Shares are Created

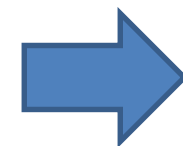


Creation basket:
Sponsor lets APs
create 50,000 ETF
shares in trade for
collateral



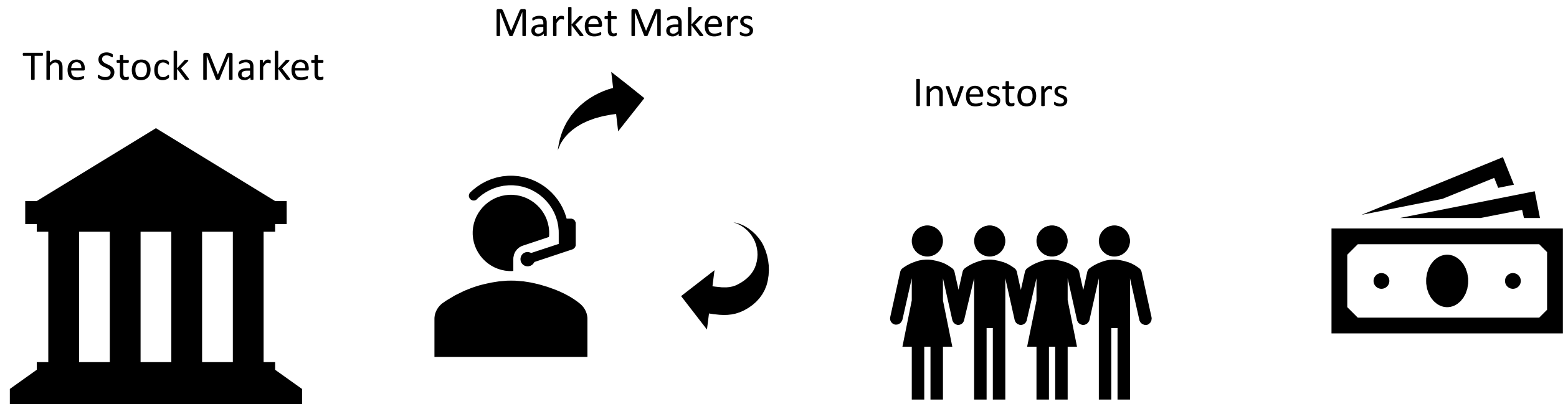
Broker
“Authorized
Participants”

- **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*****

The Secondary Market: ETF Shares Trading Like Stocks



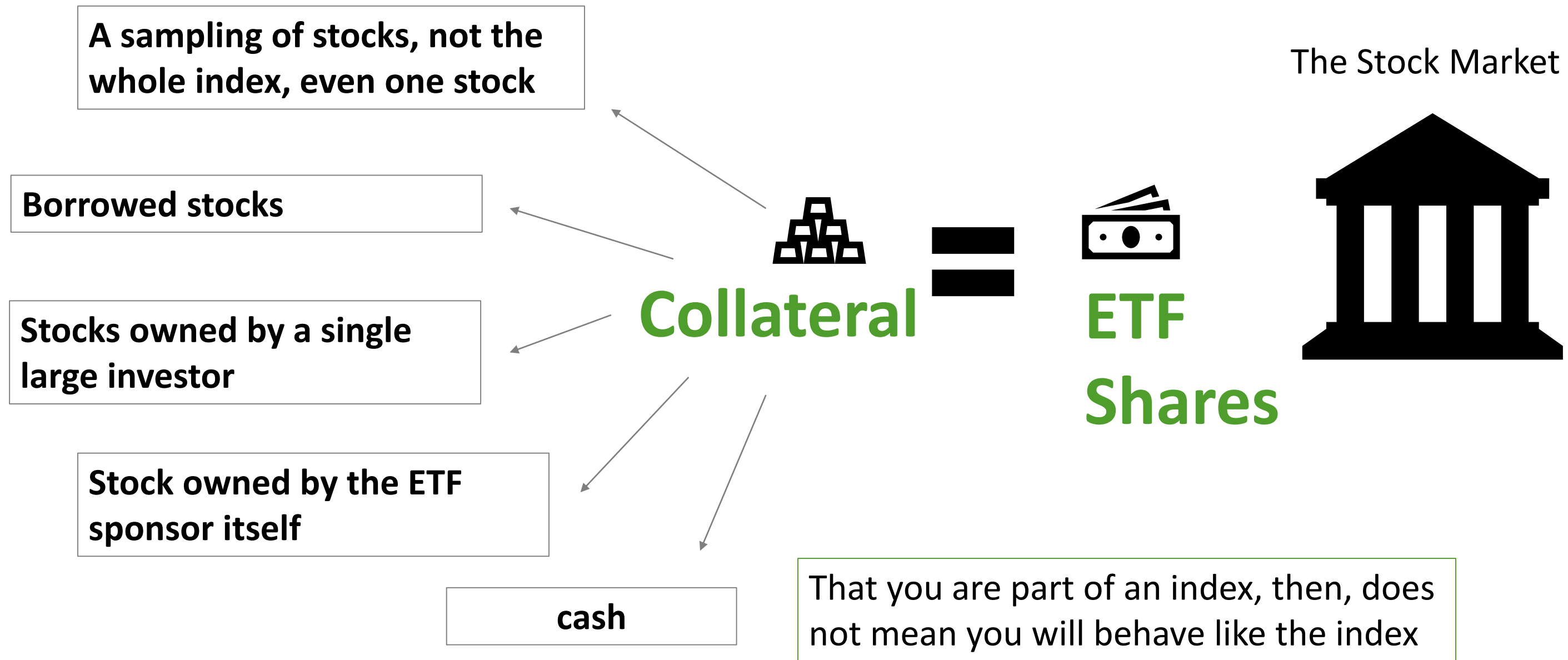
The good: ETFs give investors exposure to the same stocks other investors own, at lower cost and better liquidity.

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





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

A derivative.

Math Suggests ETFs May Be Undercollateralized



1. All indexes and ETFs in US markets built on 2,500 companies:
750 Large-Caps are 91% of capitalization, 1,755 Small-Caps are 9%, (excluding multiple classes, microcaps)
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



III. How ETFs Affect Your Stock

MOTIVATION in the ETF Market



Collateral

Primary
Market

Secondary
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 Promote Share-Borrowing – Arbitrage



XLP: State Street Consumer Staples ETF

Consumer Staples: Composite data for sector stocks

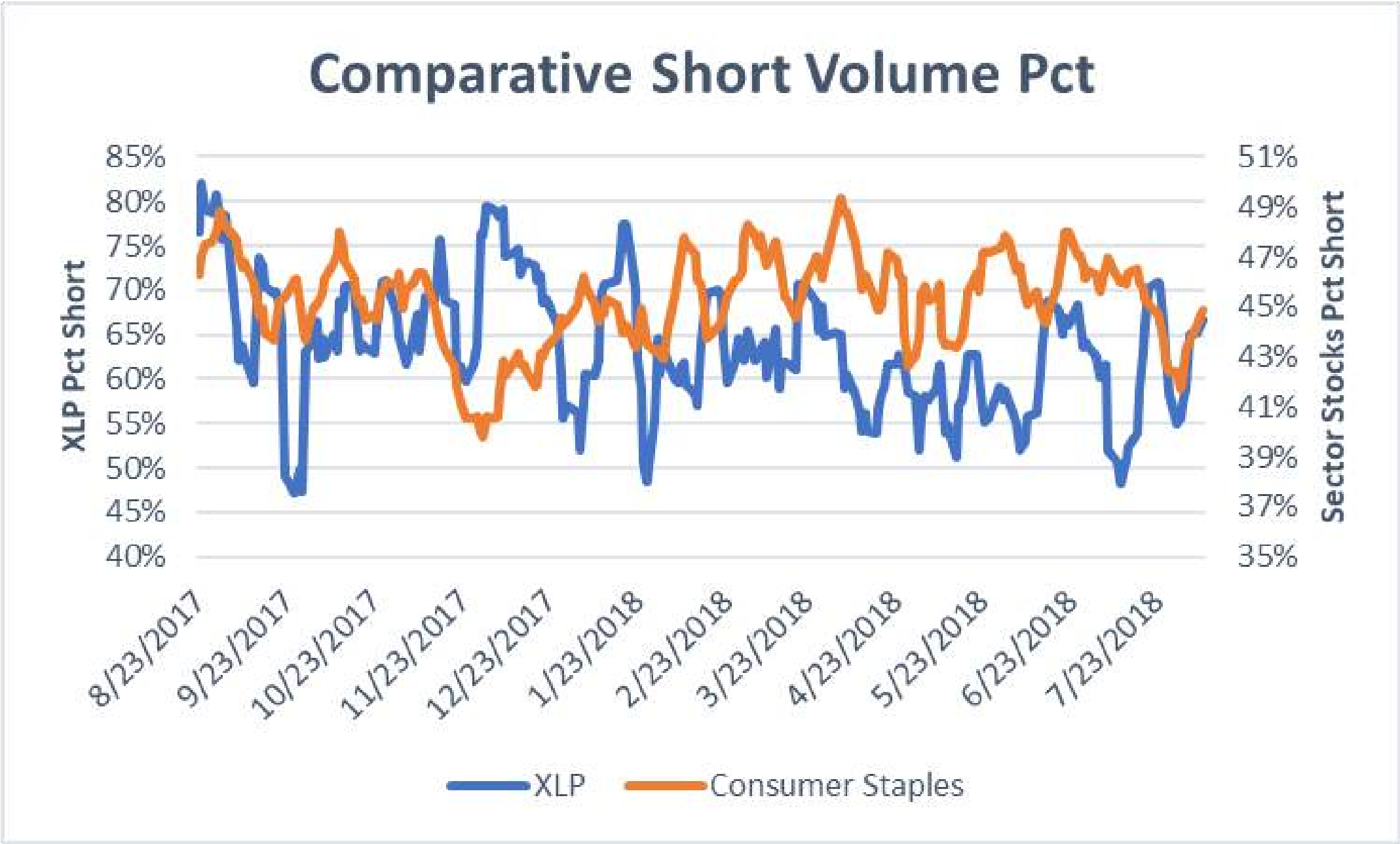
Correlation: -15% = inverse

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

Conclusion: Arbitrage drives many trades



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.

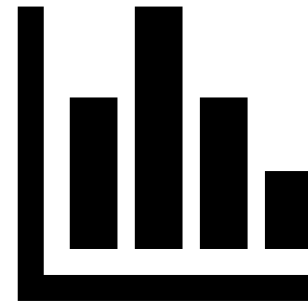
ETFs Are Motivated by Tax Consequences



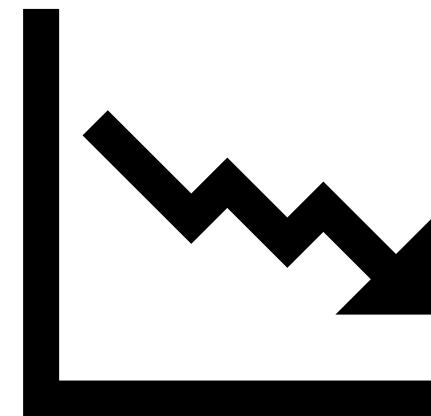
“Vanguard ETFs can also use in-kind redemptions to remove stocks that have greatly increased in value (which trigger large capital gains) from their holdings.”

-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.





“The Trust will not recognize gain or loss for U.S. federal income tax purposes on an in-kind distribution in redemption of Creation Units.”

— State Street SPY SPDR Prospectus 2018

ETF Creations and Redemptions= \$Trillions

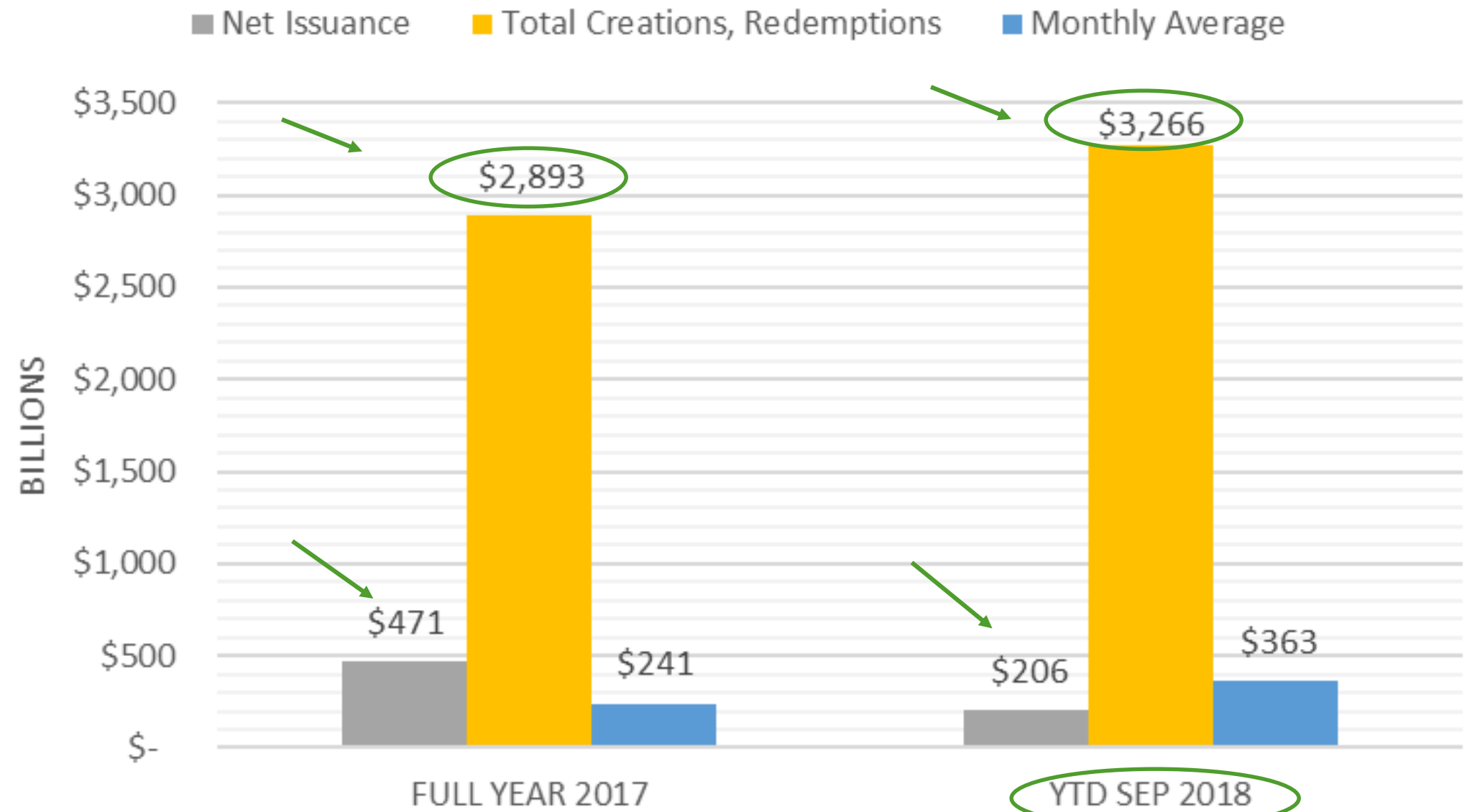


ETFs permit a cadre of brokers to move, reprice trillions of dollars of collateral like stocks or cash behind ETF shares

Only TWO months since 2008 Financial Crisis with net REDEMPTIONS:

- Feb 2018
- June 2018
- Oct 2018? (data out Nov 29)

NET issuance down 56% in 2018, inflows have slowed, markets weaker, volatile



ETF data: Investment Company Institute

ETFs Exclude Issuance from Turnover: From SPY



Portfolio turnover rate^(g)

3%

4%

3%

4%

3%

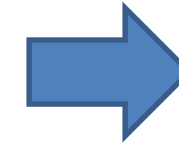
- (a) Per Unit numbers have been calculated using the average shares method, which more appropriately presents per Unit data for the year.
- (b) Contribution paid by the Trustee (State Street Bank and Trust Company) in the amount of \$26,920,521. (See Note 3).
- (c) Total return is calculated assuming 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.

SPY: The Real Turnover Picture



SPY is State Street S&P 500 ETF, world's most actively traded stock, with 2017 assets of **\$243 billion**, daily trading volume c. **\$20 billion**, claims turnover is **3%**.

Total trading value in SPY in 2017:
\$6.8 trillion



Math say 94% of trading is **ARBITRAGE**

REAL TURNOVER:
If creations counted: **86%**
With gross issuance: **167%**

\$7 billion of purchases reflected only changes to S&P index

SPY stock purchases in 2017:
\$7 billion

SPY creations:
\$209 billion

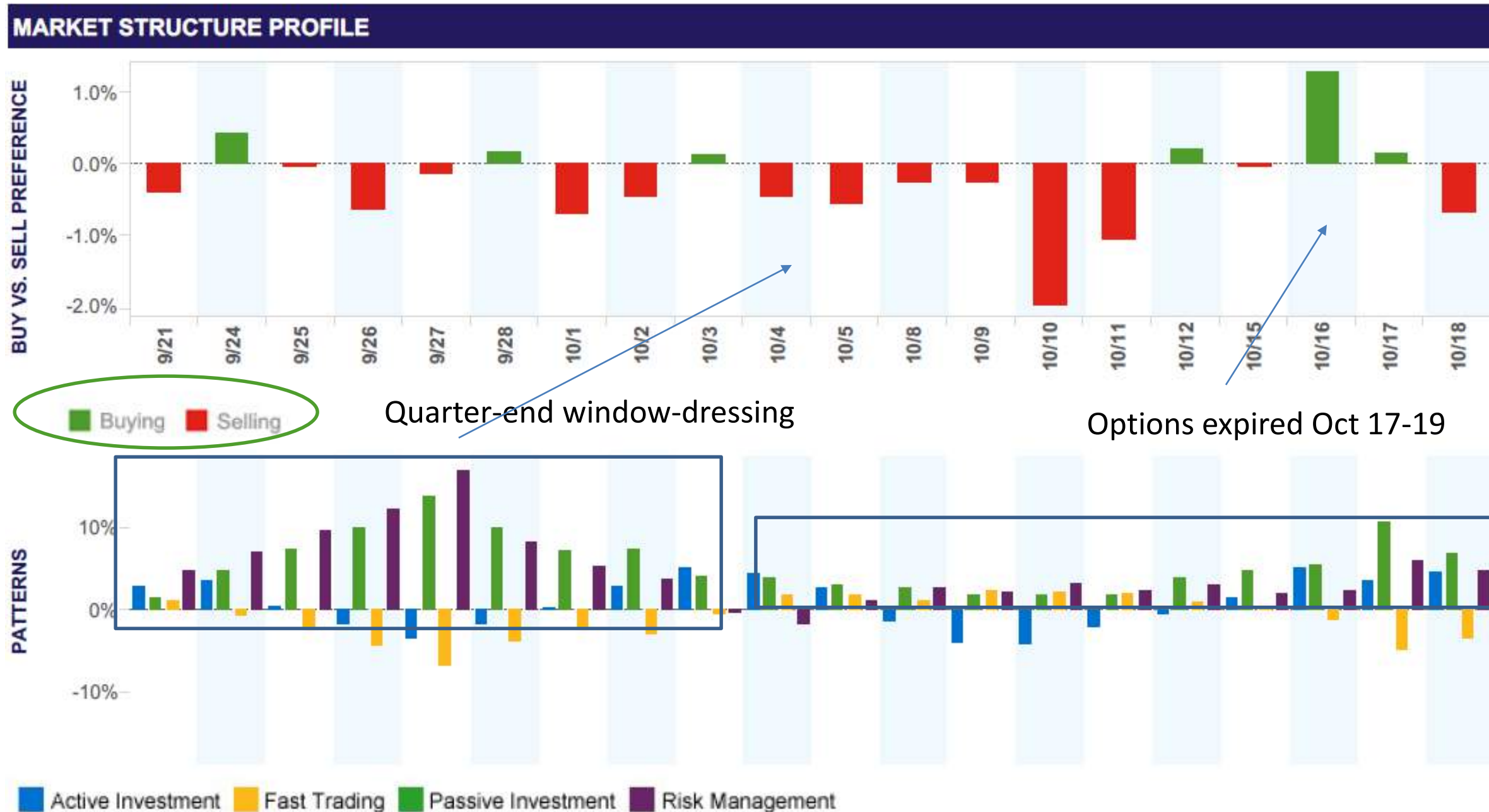
SPY gross issuance:
\$406 billion

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

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Market Structure Analytics™



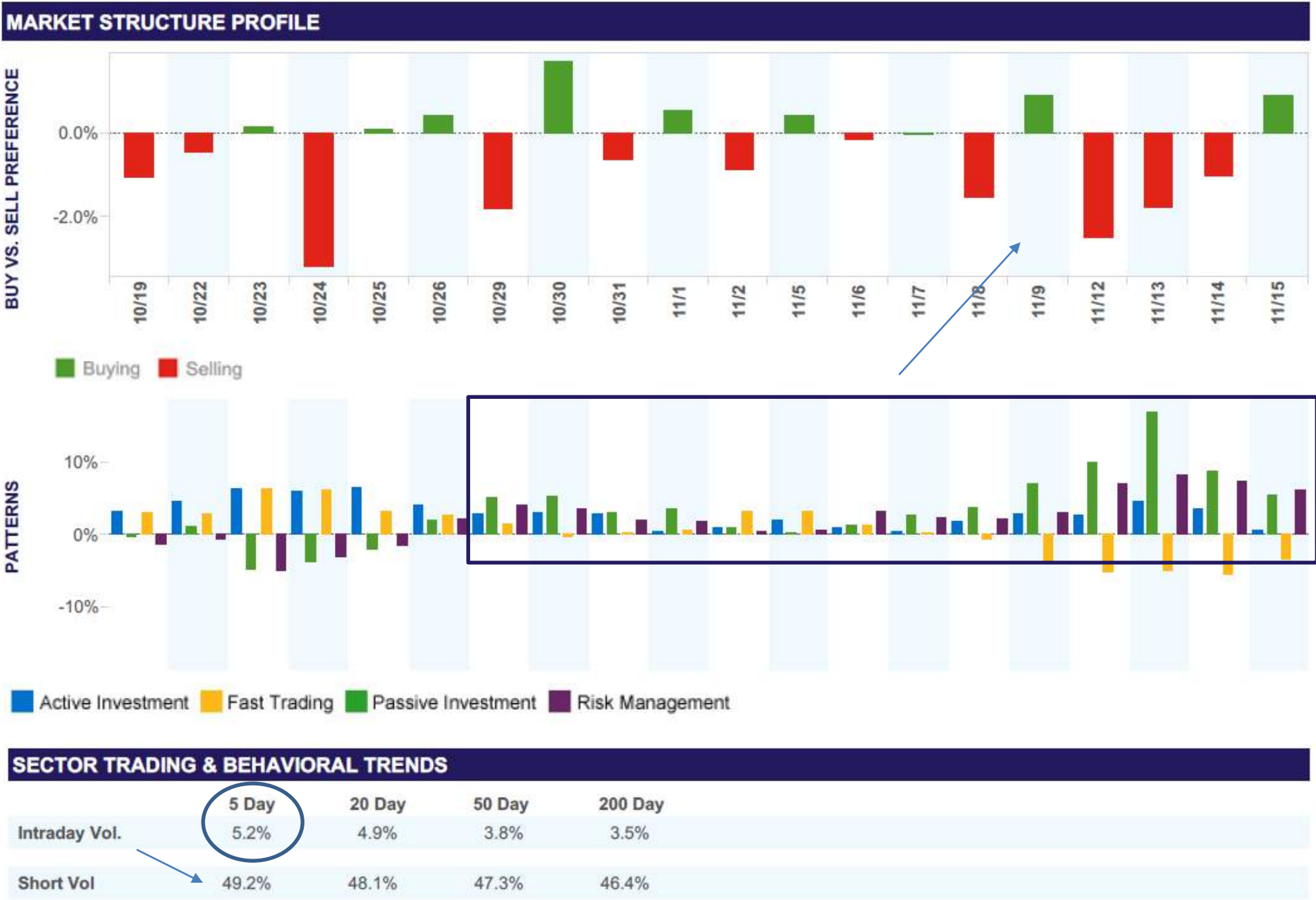
Energy Sector: Oct 19-Nov 15, 2018



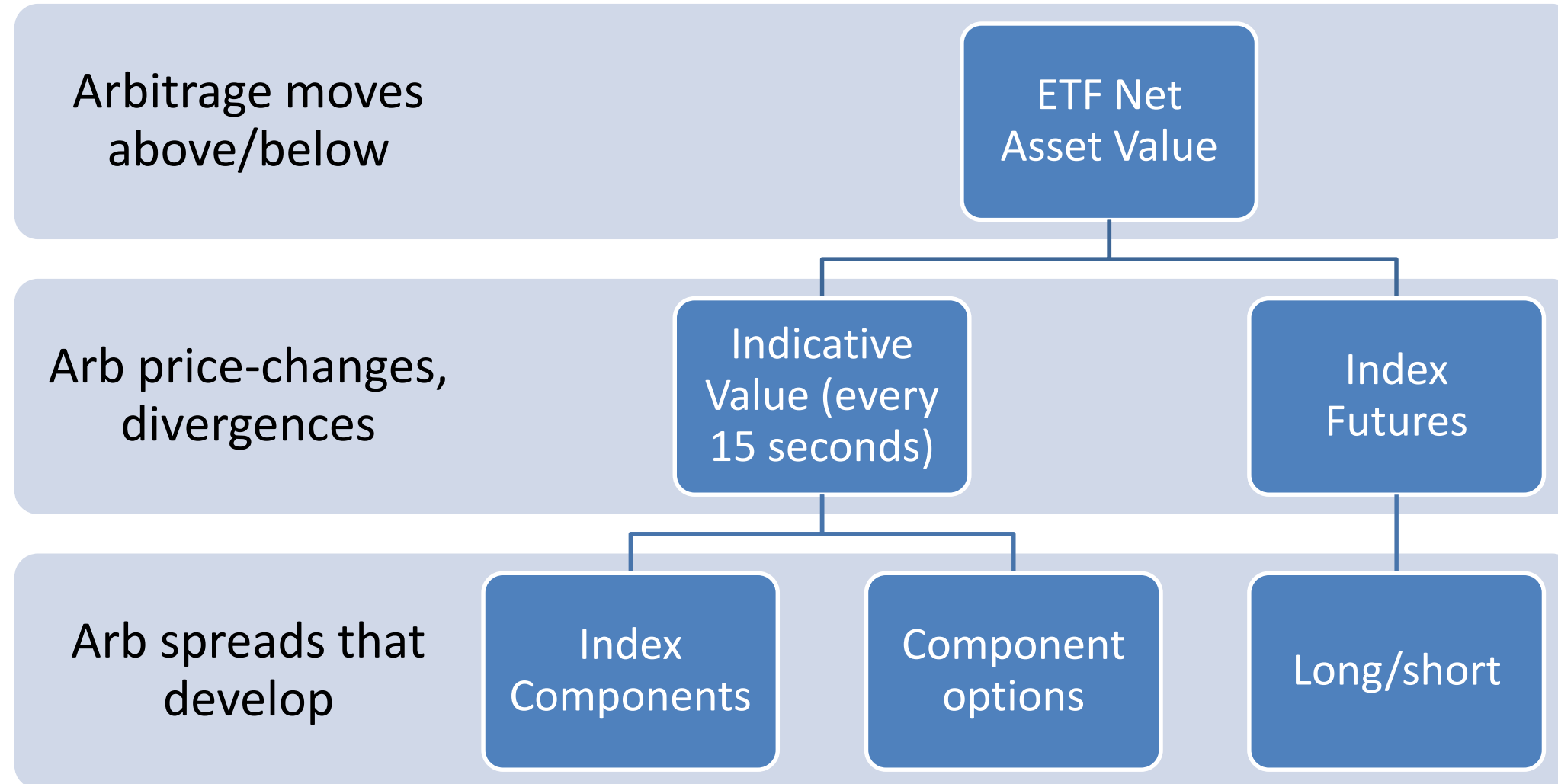
PATTERNS behind continued pressure for the Energy sector are ETFs – PURPLE/GREEN BARS.

Intraday volatility has exploded among energy stocks to over 5% daily – **breakdown of the ARBITRAGE MECHANISM**

Shorting is nearly 50% of all volume in energy stocks, so shares are STILL coming out of Passive “collateral.”



Primary ETF Market: Motivation is ARBITRAGE



Every arbitrage opportunity can set your price and the price of your peers.

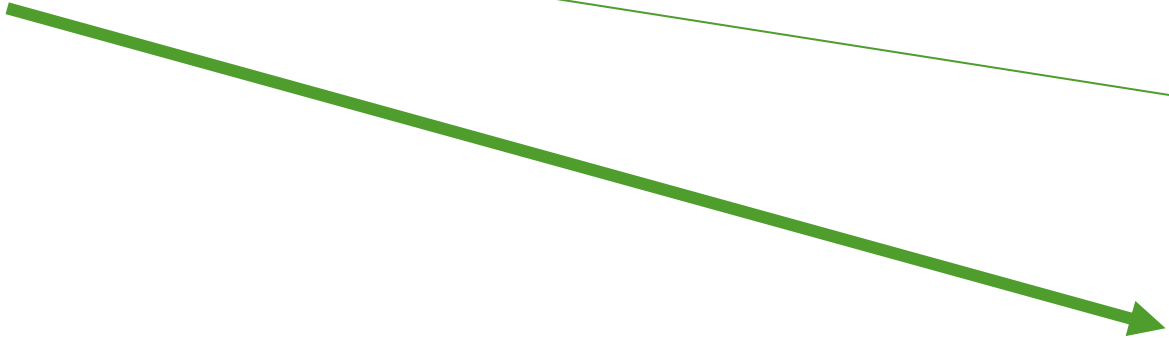
Risk? Collateral Damage



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 forced to sell assets at the same time brokers pull back from supporting ETFs.



If stock prices become volatile, the arbitrage mechanism, the only way ETFs are redeemable, may break down. Aug 24, 2015.

Ramifications For You: IR Profession



1. 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)
2. ETFs have an insurmountable regulatory advantage (over core IR audience)
3. ETFs are stock substitutes, not pooled investments, so they don't form capital
4. IR needs to understand ETFs – because boards, execs, think story sets price

Summary: What Can You Do?



1. Educate yourself. Sources: Read white papers from ICI, Blackrock, Vanguard, etc., join TABB Forum, read our blog; follow Joe Saluzzi, Nanex on Twitter.
2. Educate your board and executives with summaries, presentations on passive investment.
3. 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.
4. If you want to attract Passive Investment (good/bad): Size, Volume, Industry silos, single class of voting shares. *Cannot directly influence passive investment (discuss).*
5. Know how many ETFs may use your shares as collateral (Fidelity quotes is best free source).
6. 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™