

# Market Data Revenue Analysis for panel Six

## Funding of Core Data Infrastructure

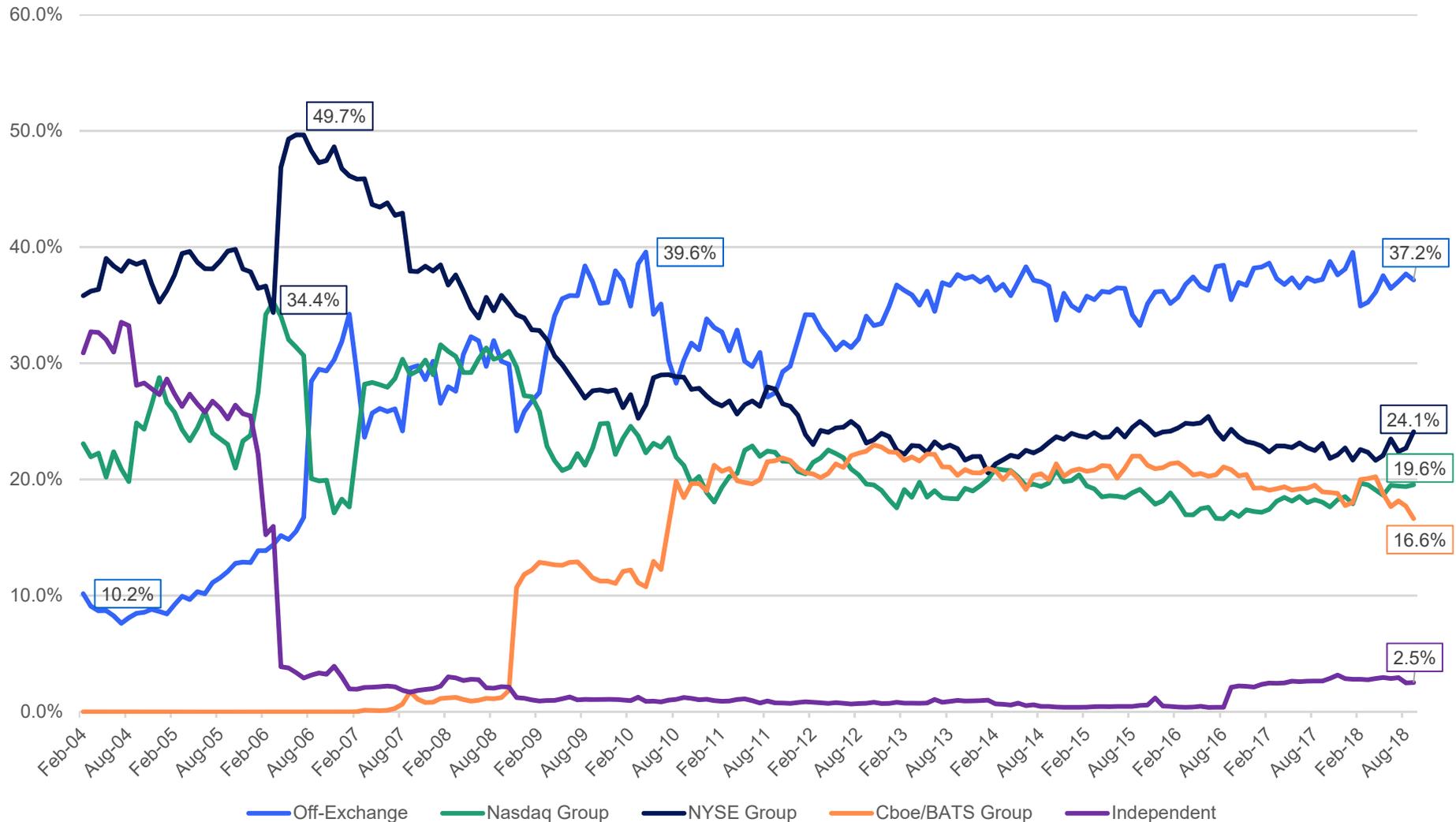
Larry Tabb  
Founder and Research Chairman  
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# Summary of revenue analysis

- Exchange revenues of ICE/NYSE, NASDAQ & Cboe have grown over the past 8 years faster than buy-side institutional commissions and market maker profits
- While transactional revenues have improved for exchanges (+2.2% CAGR) , it isn't attributable to equities (-0.5% CAGR)
- However exchange **non-transactional** revenues have grown on a compound annual growth rate of 8.5% CAGR
- Much of this is attributable to **data** (market data, connectivity, and non-exchange data, tech and services) which grew at a CAGR of 11.7%
- **Exchange-based market data and connectivity** grew at a CAGR of 6.1%
- But **non-exchange data, technology & services** grew at a CAGR of **18.7%**
  - This is attributable to the growth of adjunct businesses (SuperDerivatives, InteractiveData, NASDAQ Market Technologies, Index data...)

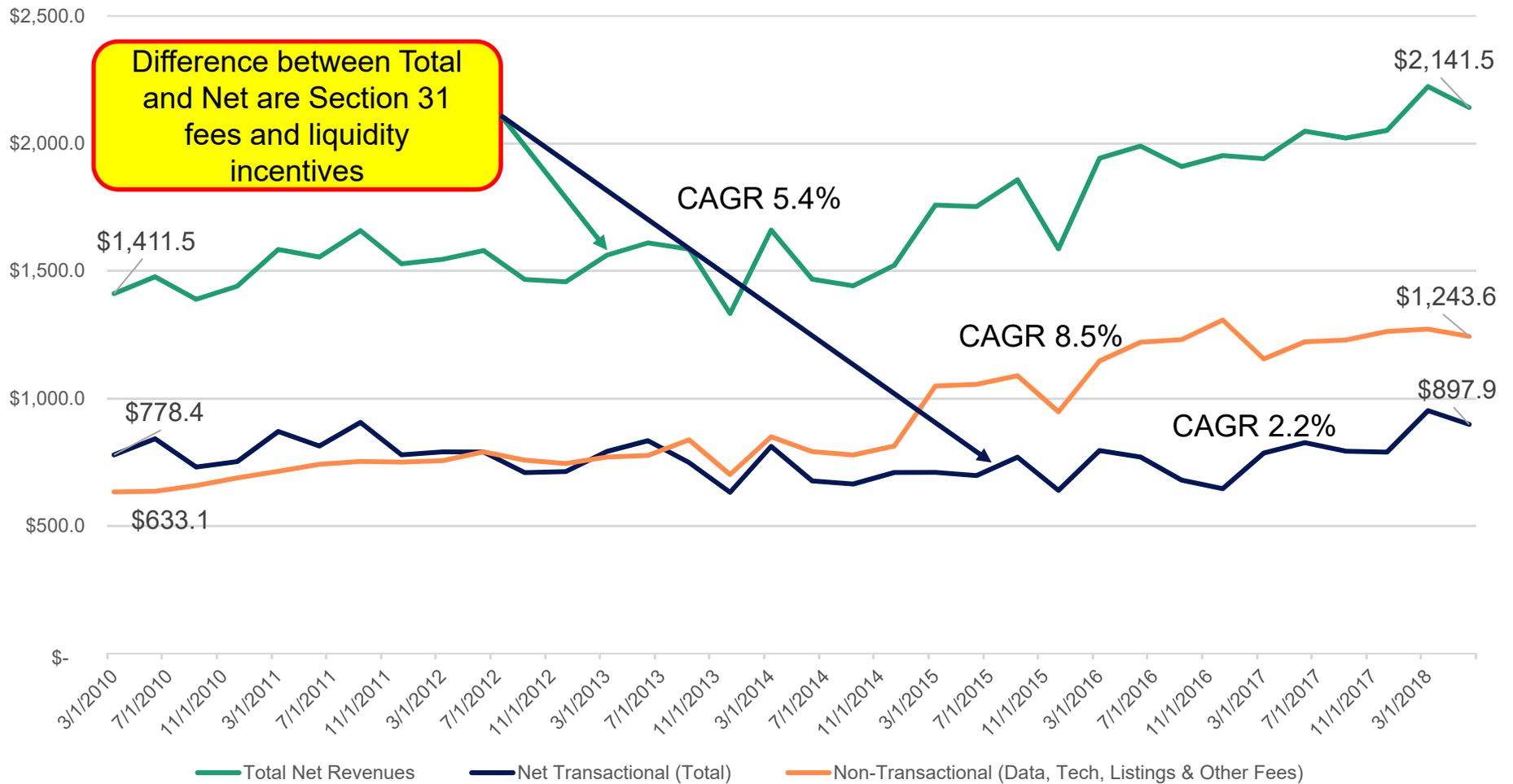
Exchanges trade approximately 63% of the market volume, down from a pre-Reg NMS 90% in '04, but down from 60% pre 2010 Flash Crash

On/Off Exchange Volume by Group



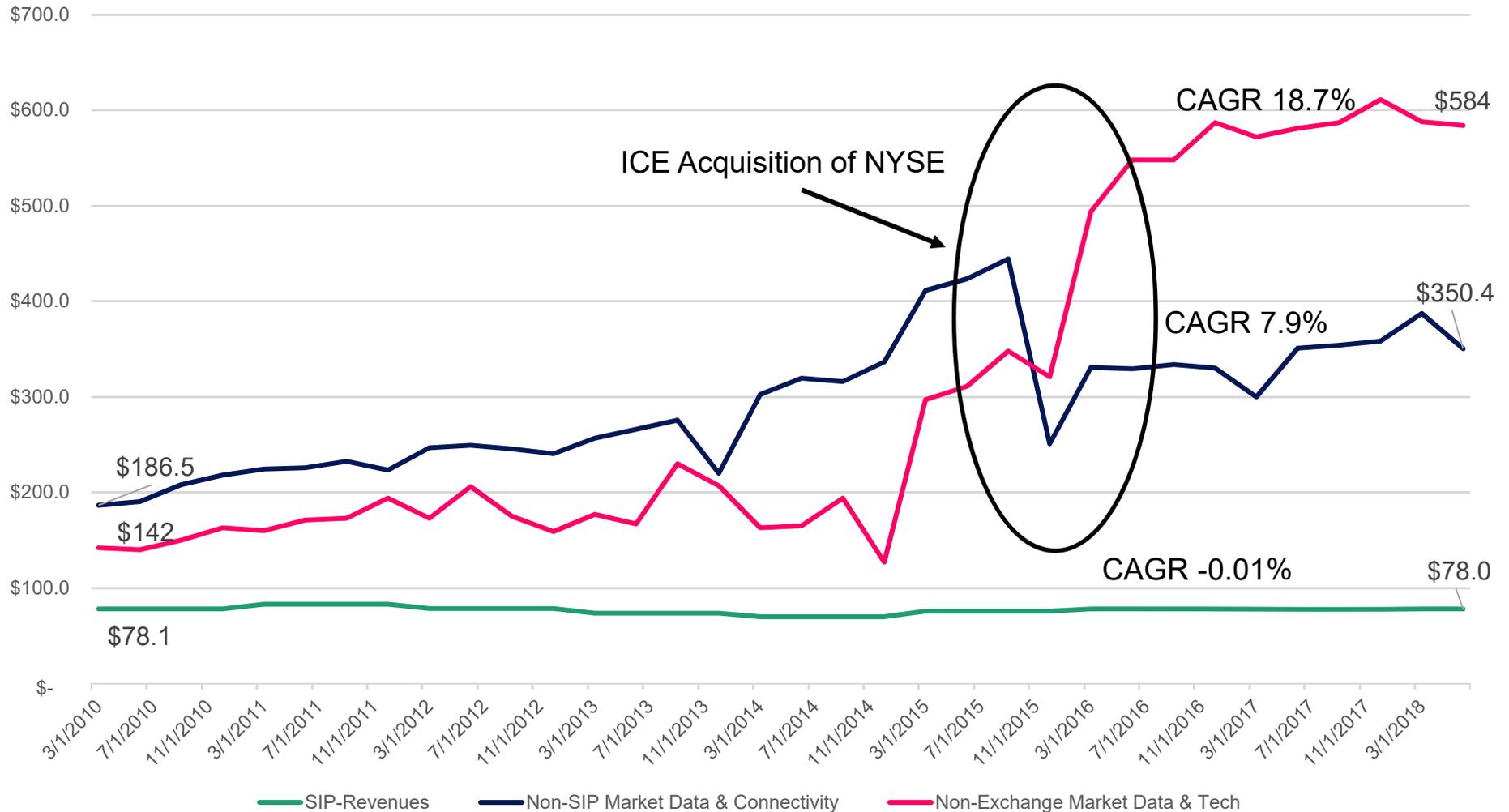
Revenues of ICE/NYSE, NASDAQ & Cboe increased 5.4% annually from 2010 through 2018 (annualized). Non-transactional revenue is greater than net transactional

Major Exchange Group's Revenue Breakdown  
 Quarterly Total, Transactional & Non-transactional (Data, Tech, Listings, & Fees)



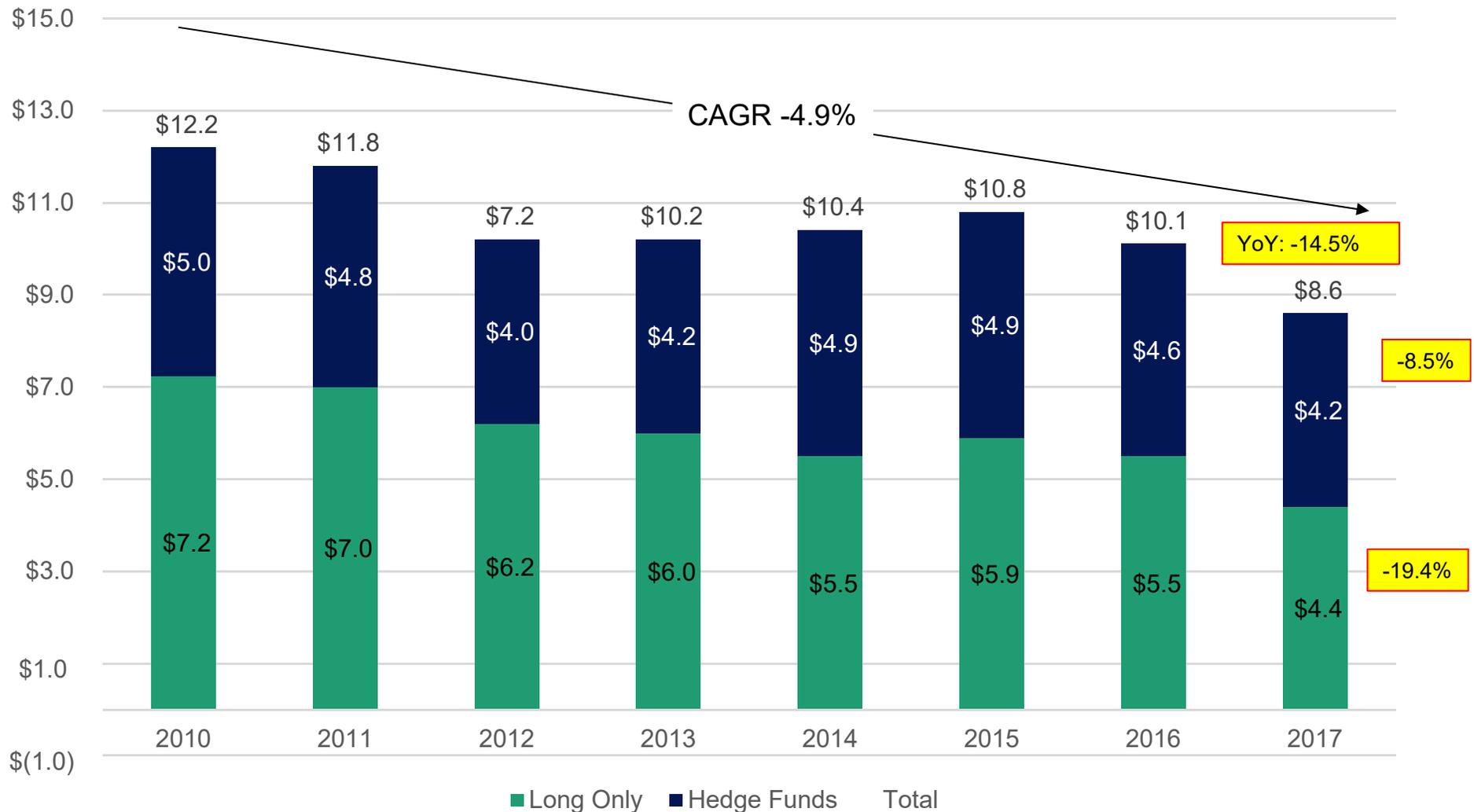
SIP revenues remained constant, non-SIP market data grew 7.9% annually from '10-'18 while non-exchange data & tech grew almost 19% annually

Exchange Market Data Spend Breakdown Quarterly



While the market data revenue is up, US Equity Commission pool is down 4.9% annually from '10-'17. Last year was down 14.5% & '18 projected down too

### US Institutional Equity Commission Pool



# Market maker profitability has also declined over the decade as competition and technology costs have escalated

US Equity Market Maker / HFT Industry Profitability  
US\$ in Billions



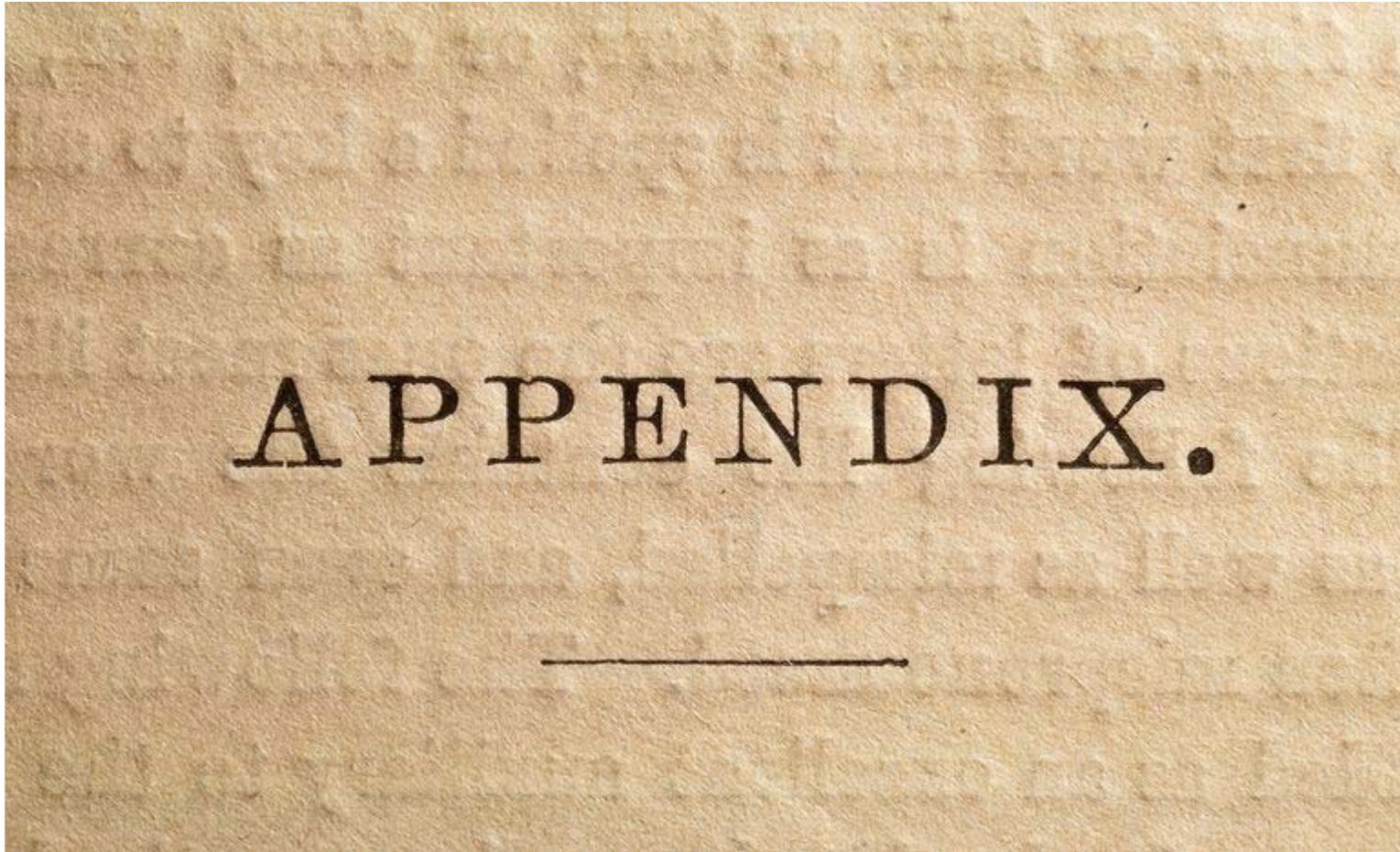
# TABB Group's view of market data issues

- **Pricing** of data has **not been** subject to large price increases
- It is the **data licensing** that has substantially changed
  - Non-display proprietary data (which was included in traditional prop feed usage licenses years ago) is now sold by use case
  - A large broker could buy the same data 5 / 6 times (agency, principle & multiple ATs)
    - More than one firm has multiple ATs – each use case needs to buy their own data
- Best execution guidelines push brokers to connect and buy data from virtually all exchanges
  - While eliminating OPR may reduce data purchases, best execution is the guiding factor
    - SIPs are not fit for purpose for electronic trading
- SIP revenues have remained virtually unchanged over the past decade
  - It may be time to reinvestigate not just the market data fee allocation formula but how much revenue the SIP generates
- This is not a retail problem, or a problem with display data (outside of market maker cost reflected in a wider spread), it's an institutional issue around execution-quality market data

# My take

- Do a more complete cost analysis
  - Analyze data fees and costs by product and geo more accurately
- Exchanges seem to be capturing a larger percentage of industry revenues as they executed a smaller percentage of shares
- The economics of exchange data doesn't seem to be market-aligned – technology and connectivity have generally gone down over the past decade not up
  - Need to work with an economic & technology consulting group
  - Maybe DERA can help
- Create a group to analyze licensing models for direct/non-displayed feeds
- Maybe extend SIP to resolve some of these issues
- However, SIP isn't fit for electronic trading purpose
  - Need faster access – not processing speed but current aggregation distance issues
  - Need depth of book
  - Messages on direct feed that are not on the SIP
  - If you use a direct feed, FINRA looks for broker to use direct feed for best ex routing
- Leave non-exchange data, technology and services businesses alone
  - As those are non-exchange & non-equity/options businesses
  - Even though they are growing quickly they seem to be subject to traditional competitive forces and don't have a regulatory buttress

# Appendix

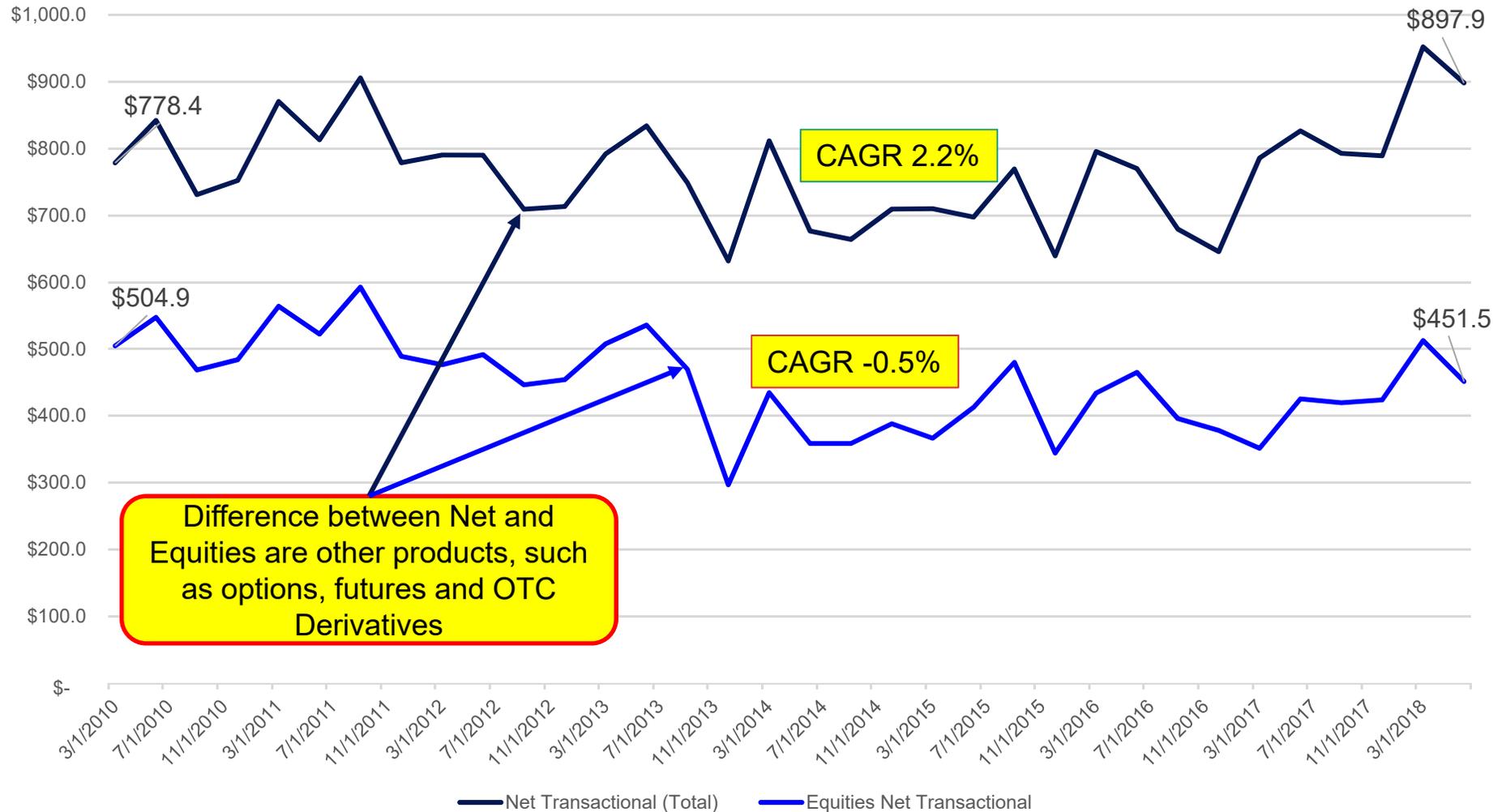


# Analyzing market data revenues produced by the exchanges is not easy

- Different exchanges categorize revenues differently
- Acquisitions have complicated the analysis
- Exchanges are not monoline
  - All have US Options Exchanges
  - All have European operations
  - Many have other derivatives exchanges
  - They group connectivity and services somewhat differently
- While all break out transactional equity revenues many do not break out US Equities from Europe or market data, listings, or services by business line/geo
- BATS did not produce quarterly financials prior to going public in 2013 (but annual information was released in S1. Quarterly data was generated by dividing annual by 4)
- The data contained in this deck is TABB Group's best efforts of aggregating exchange financial data, and depending upon how we have aggregated it we could be misrepresenting exchanges' actual view of their data given the above issues

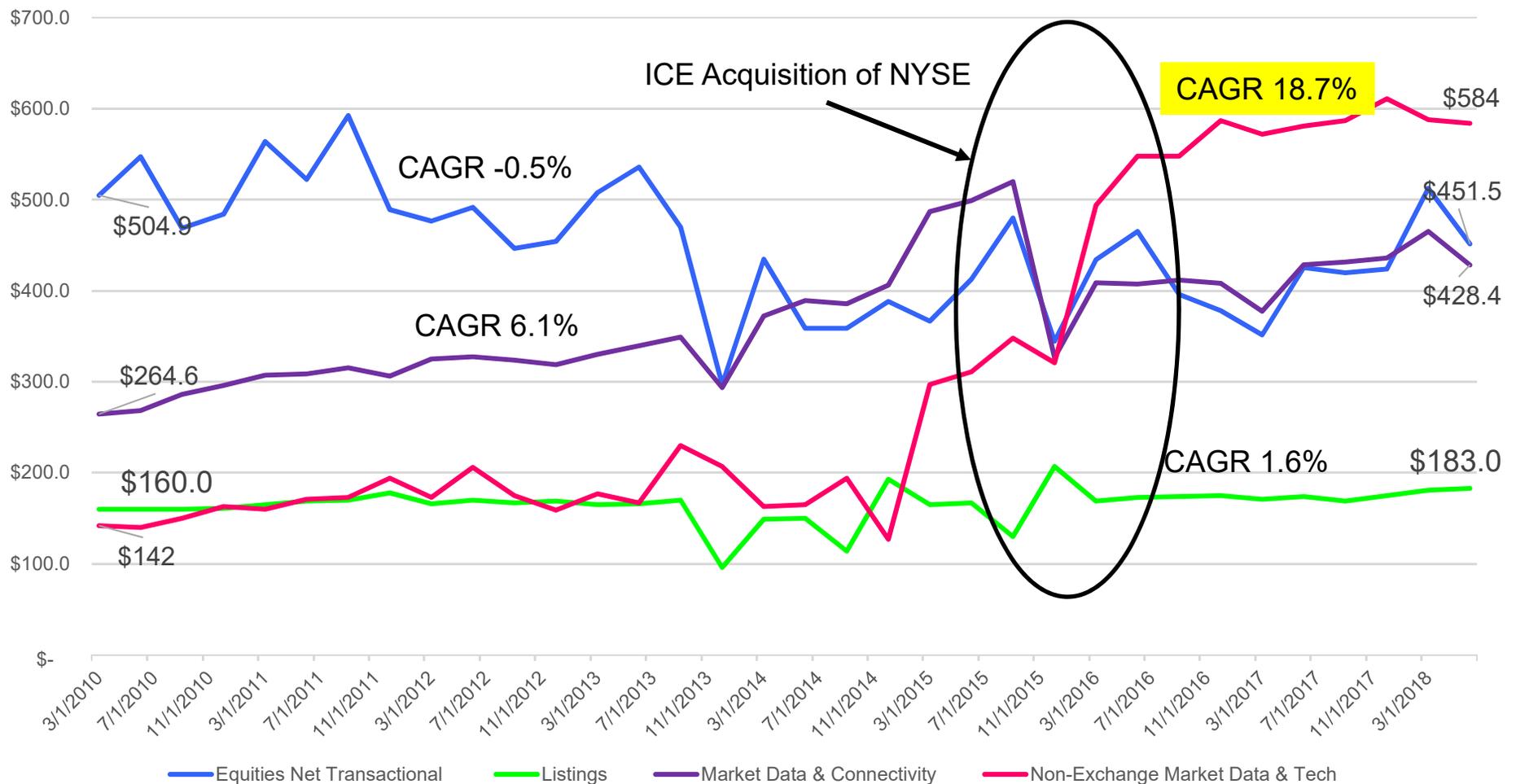
# Net transactional revenues only increased by a 2.2% CAGR while equities net revenue fell by 0.5% (CAGR)

Total Transactional Revenues vs. Equities Transactional Revenues  
Quarterly



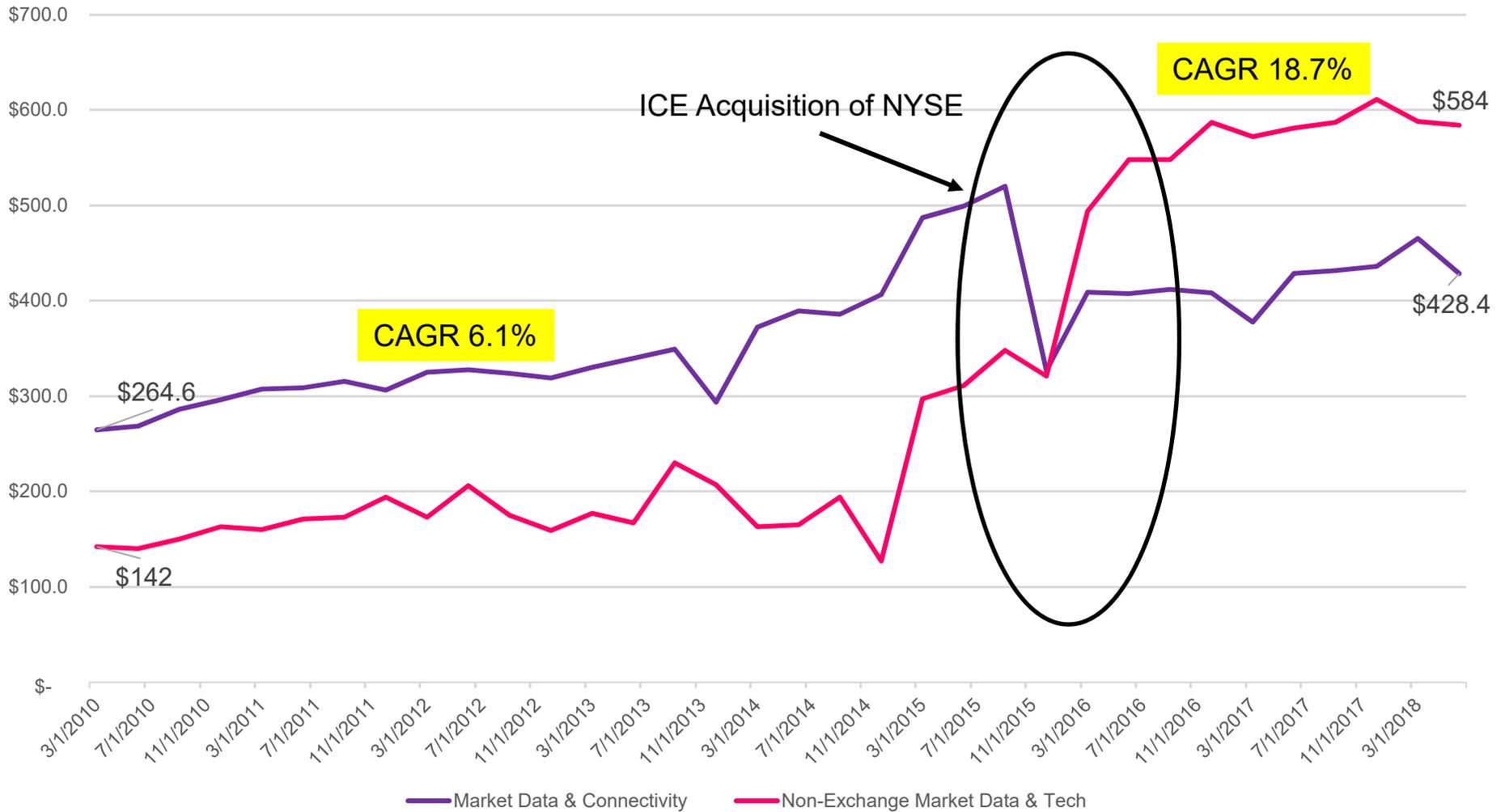
# While equity transactional revenues fell and listings kept pace, data revenues grew substantially

Exchange Net Transactional Revenue vs. Listings, Market Data, and Non-exchange Market Data Quarterly



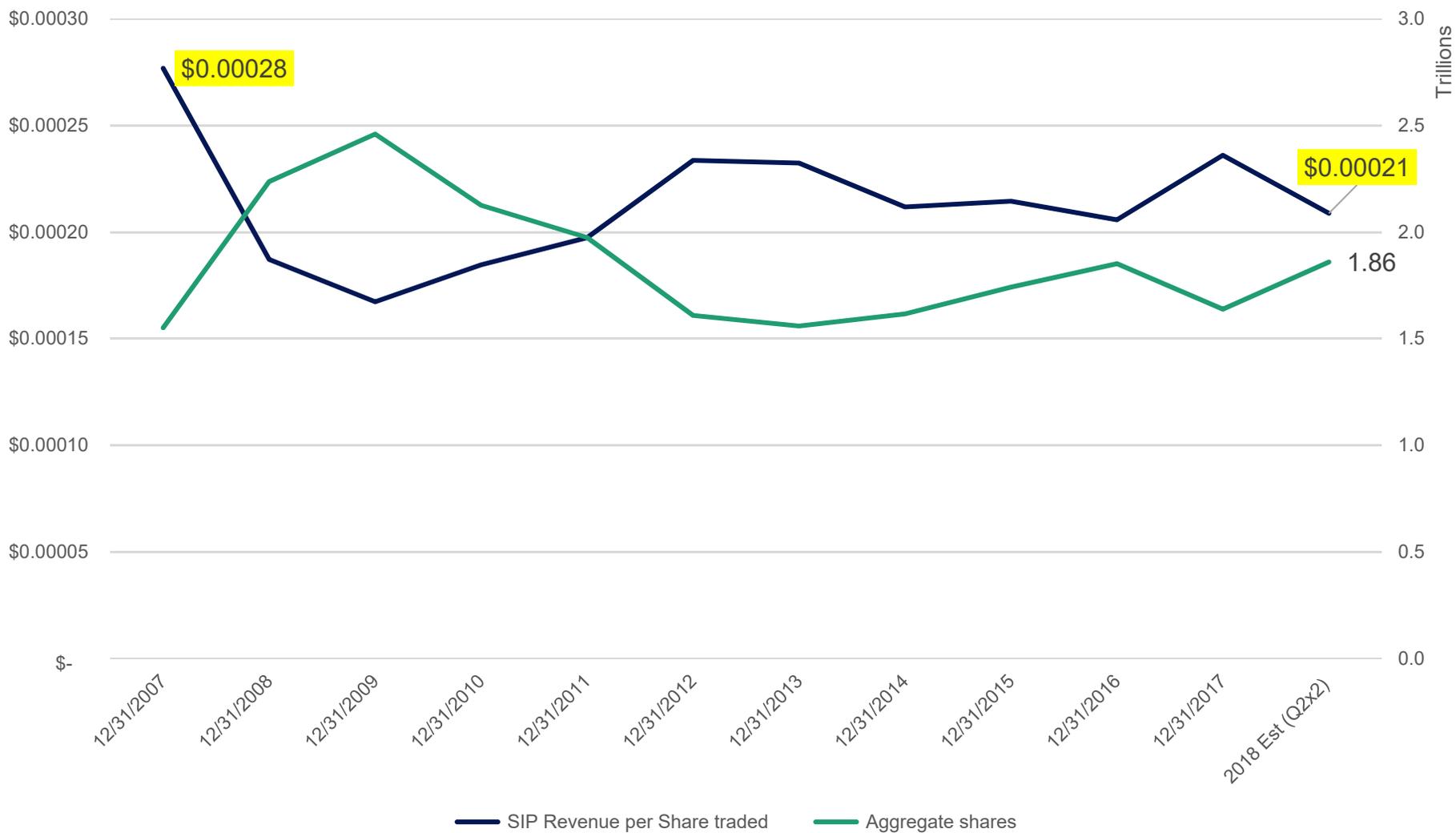
# Market data, connectivity and non-market data, data and transactional revenues increased at a 6.1% & 8.5% CAGR respectively

Market Data, and Non-exchange Market Data Quarterly



# SIP revenues, over time have remained fairly steady at between 2 and 3 mils per share traded

SIP Revenue Per Share Traded



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