



Financial Data as a Service

Raunak Onkar | Sept 2020



Big Tech

Data is the new...
<insert your favourite precious resource>

**Which other sector has this kind
of dominance?**

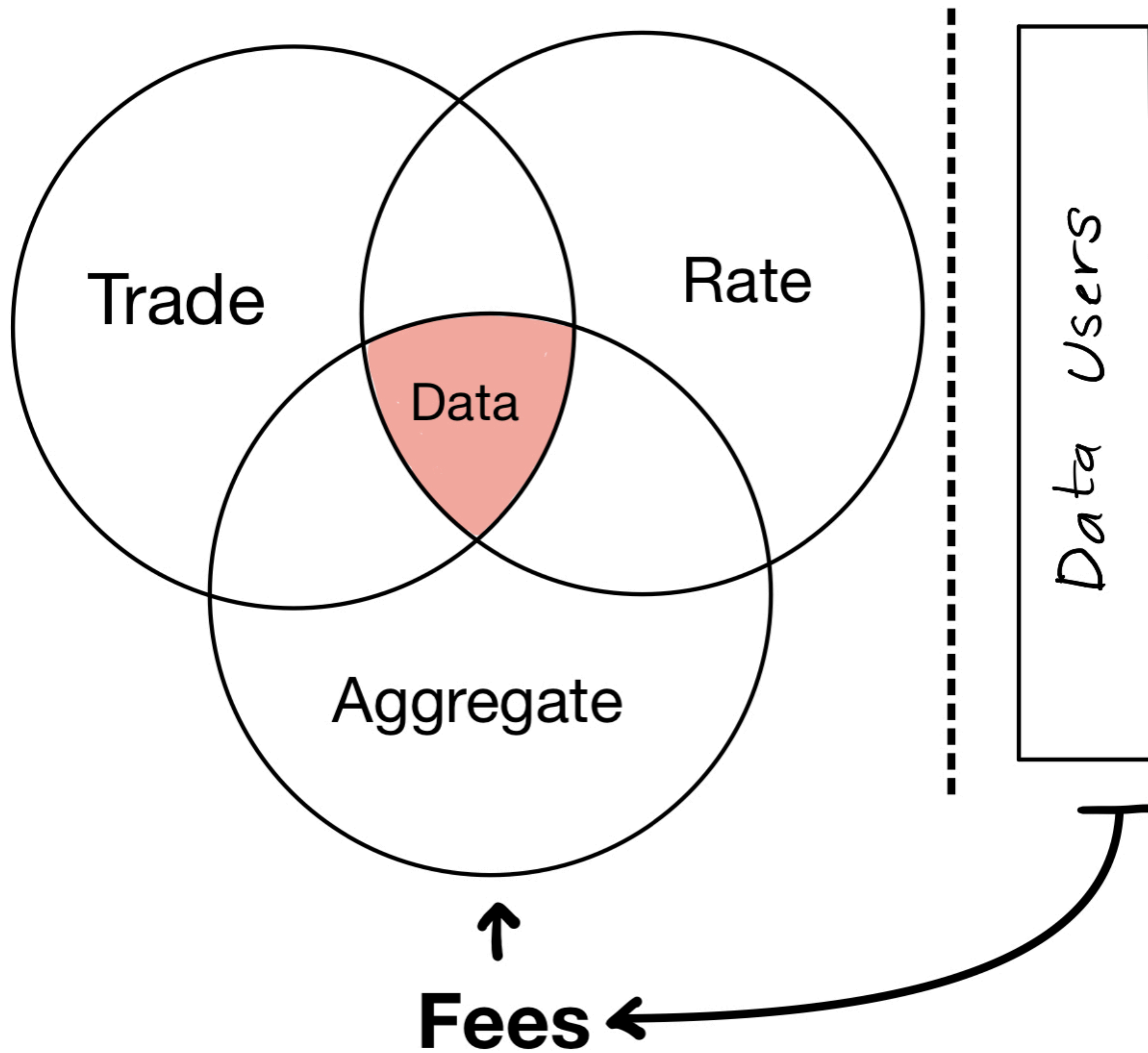
Who are the FAANG of Finance?

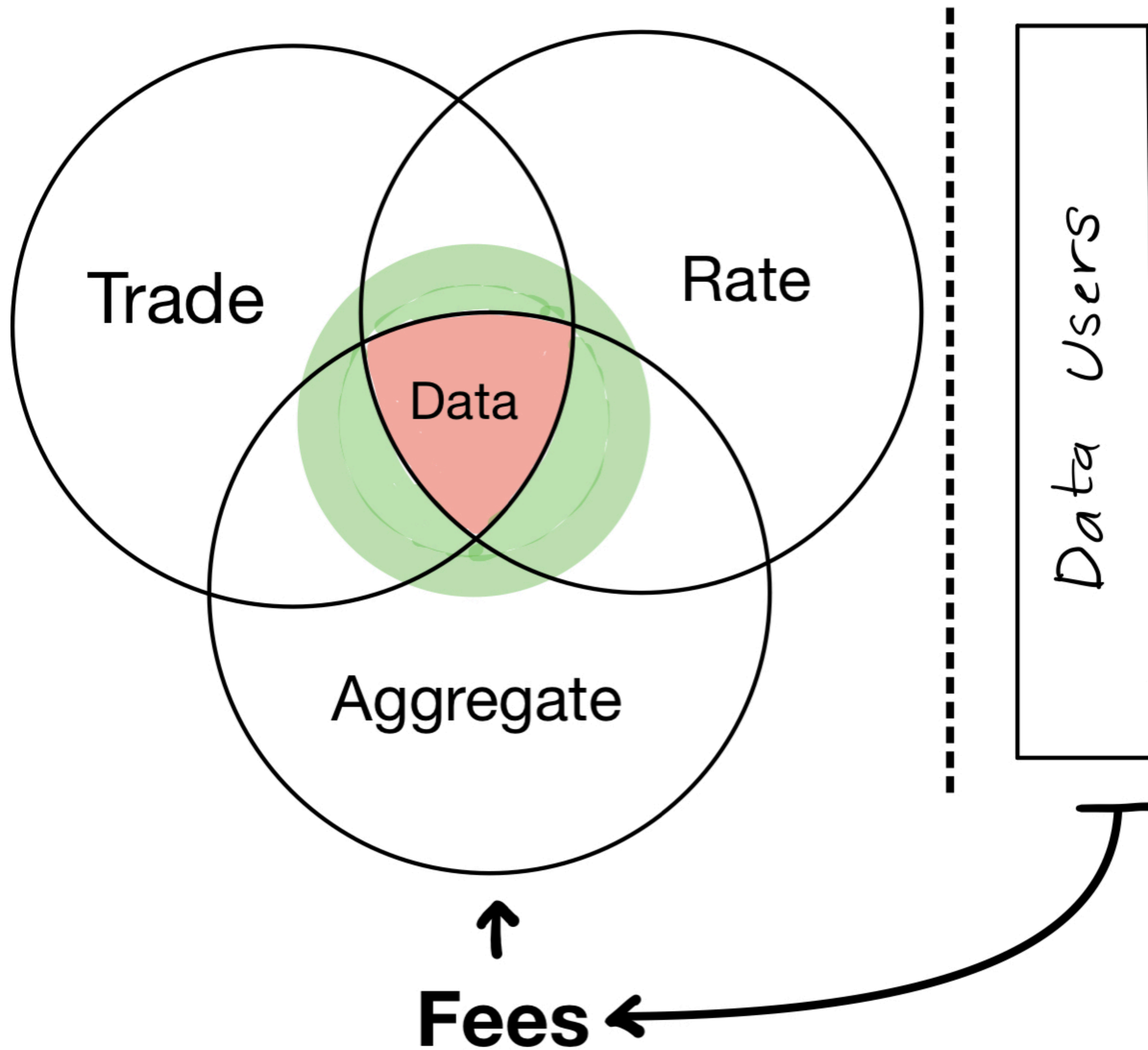
A blue-tinted image featuring a calculator, a line graph, and a pen. The calculator is in the upper left, showing buttons for '+', '-', '=', and '+'. A line graph is in the center, showing a fluctuating line. A pen is in the upper right, pointing towards the graph. The text 'Asset Managers?' is overlaid in the lower center.

Asset Managers?



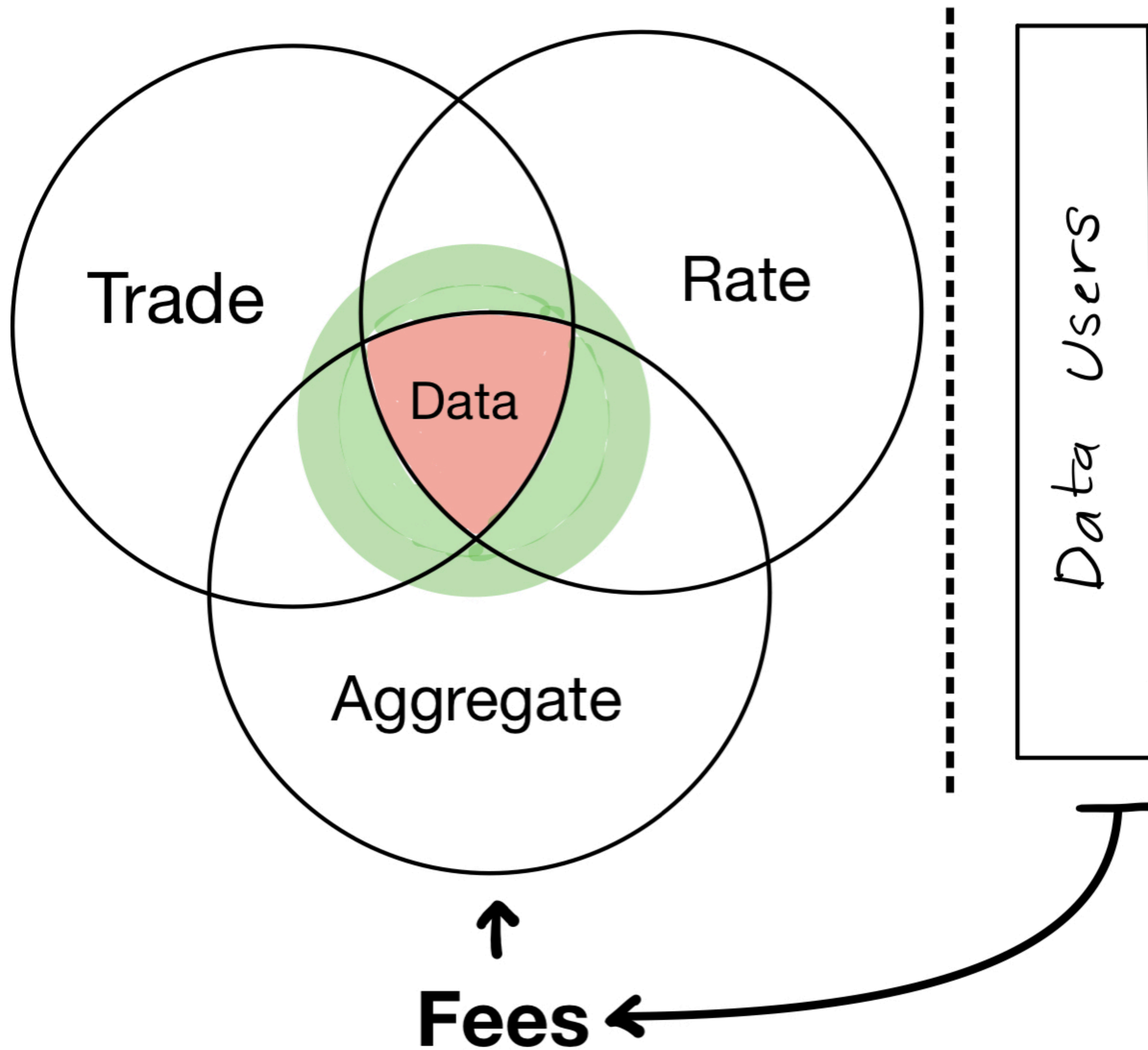
Intermediaries?

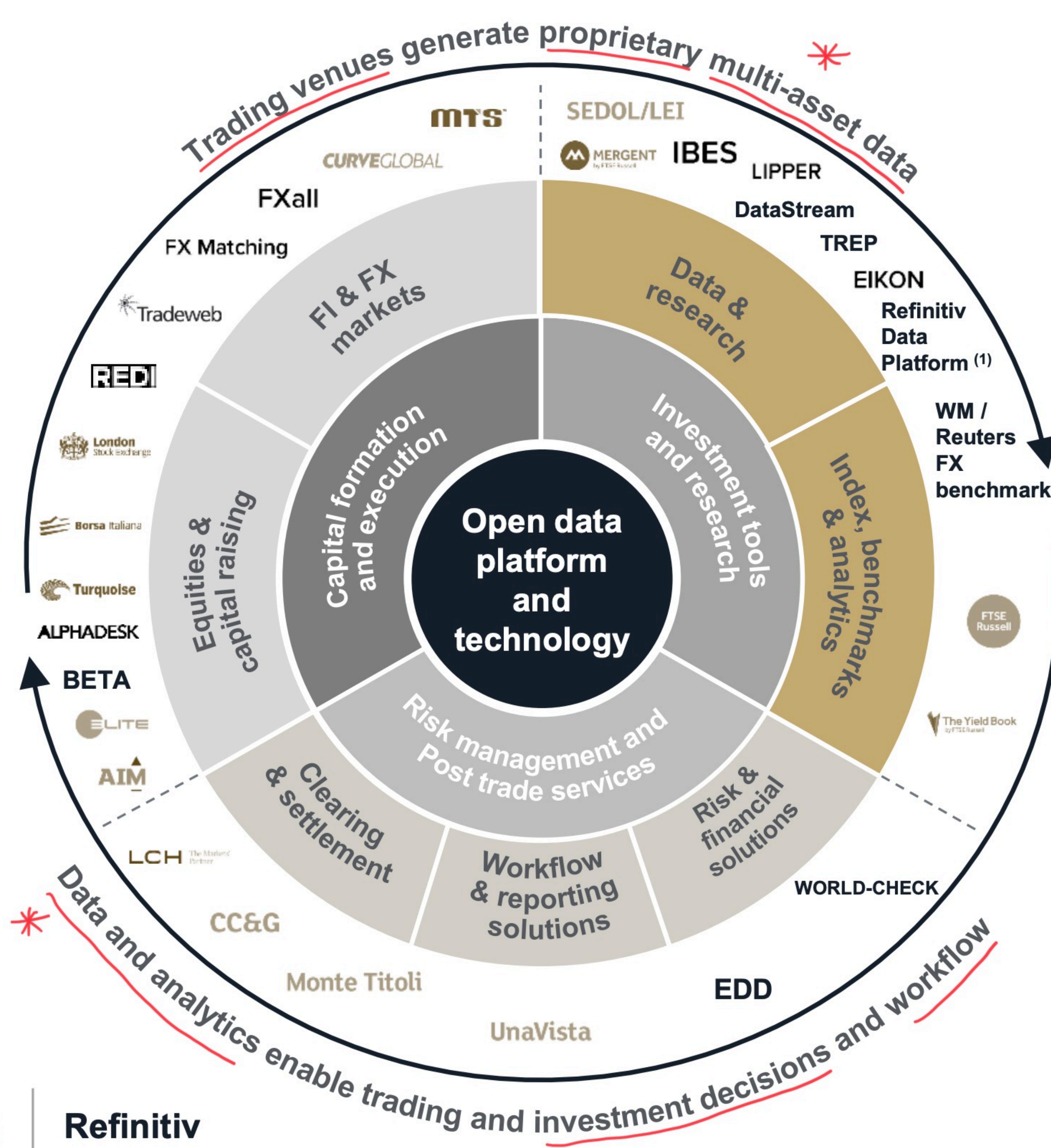


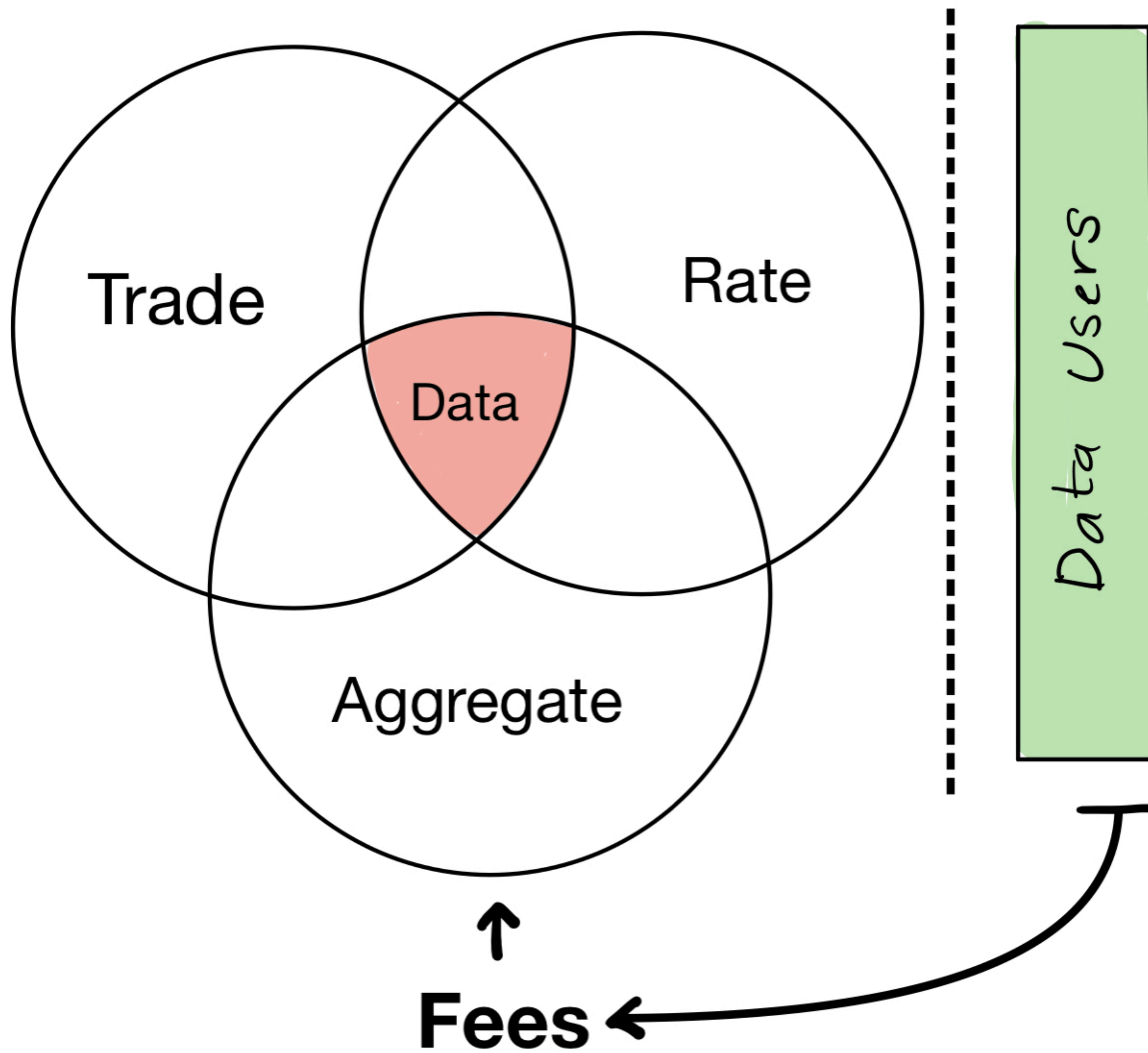


What is Financial Data?

- Tickers (Real-time Market Data)
- Transaction Data (Historical Price & Volume)
 - *Equities, Fixed Income, Currency, Commodities, Interest Rates*
- Indices & Portfolio Analytics
- Credit Ratings / Credit Scores
- Company Data (Regulatory Filings & Operating Metrics)
- Sectoral Data (Market & Supply Chain)
- News & Social Media







Who are the Data Users?

- Banks & Asset Managers
- Sell Side
- Independent Research Analysts (MiFID 2)
- Investment Bankers
- Governments
- Corporate
- Treasury
- Wealth Management & Advisory
- Individual Investors

Before that...

How big can an intermediary be?

Market Size

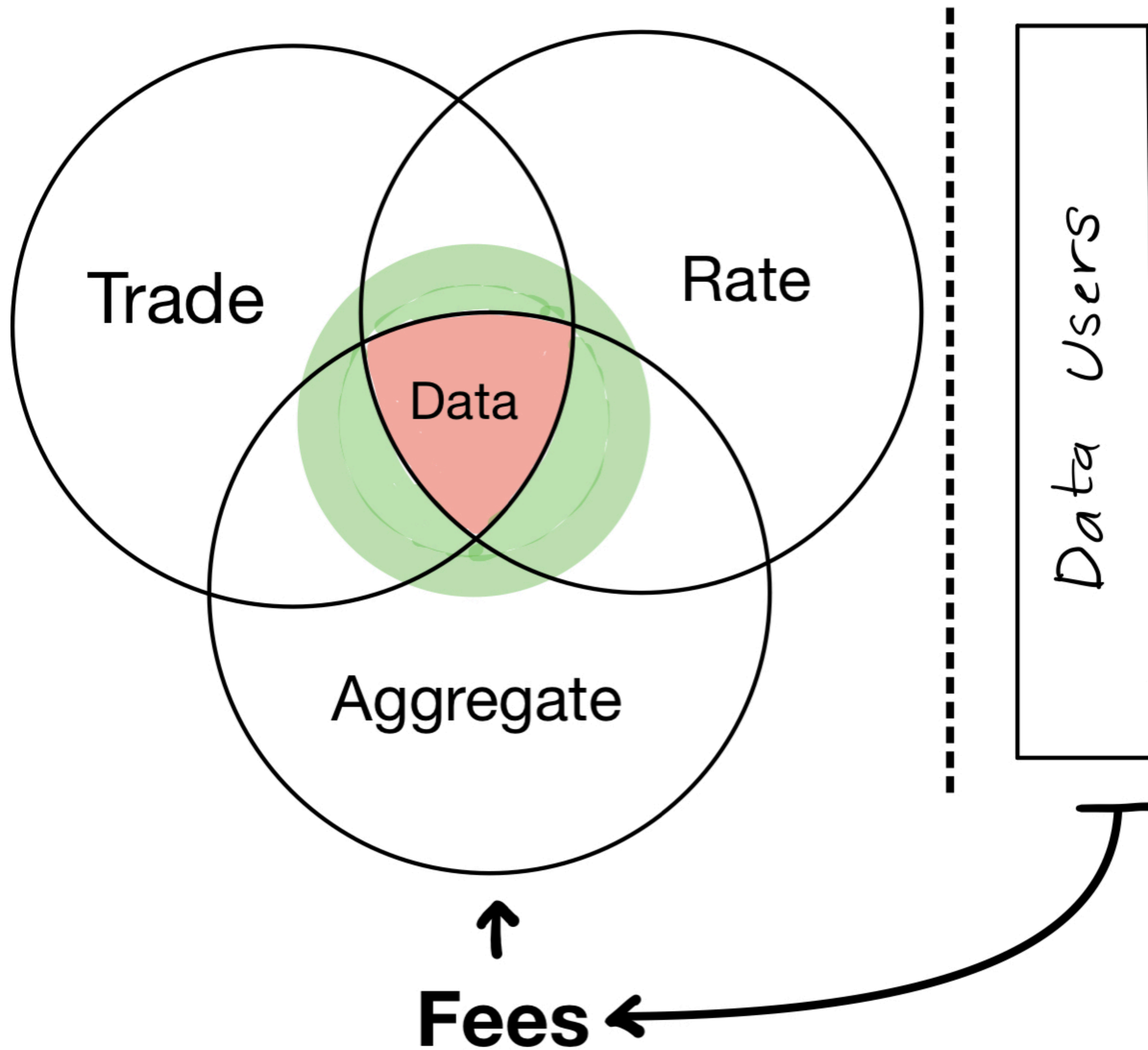
How big is the market for Financial Data & Analysis?

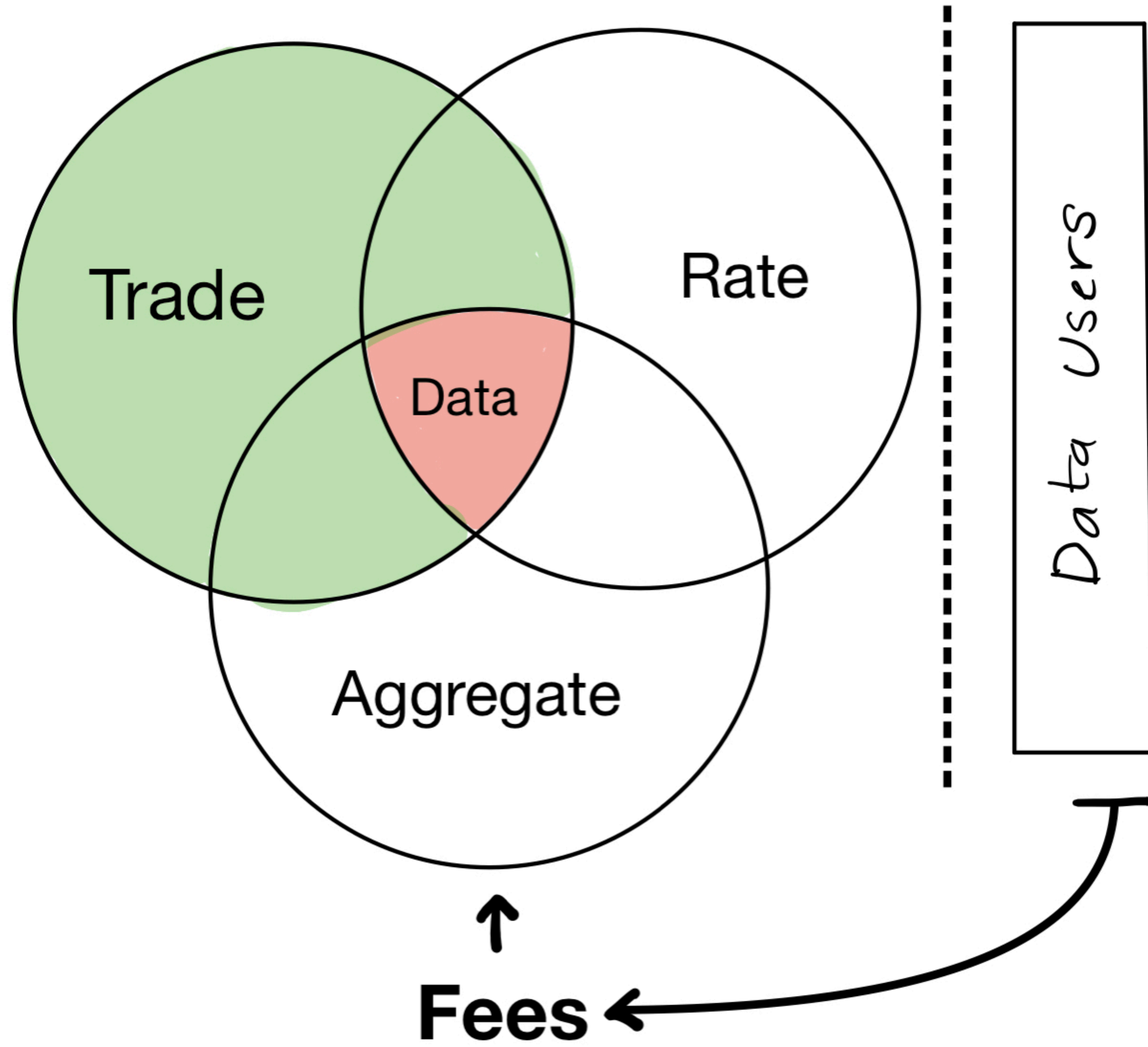
- **Exchanges**
 - + **Ratings**
 - + **Payment Processing**
 - + **Index Providers**
 - + **Data Aggregators**
 - = ~ *\$110 - \$120 Bn / per year*
- **Transactions + Subscriptions**

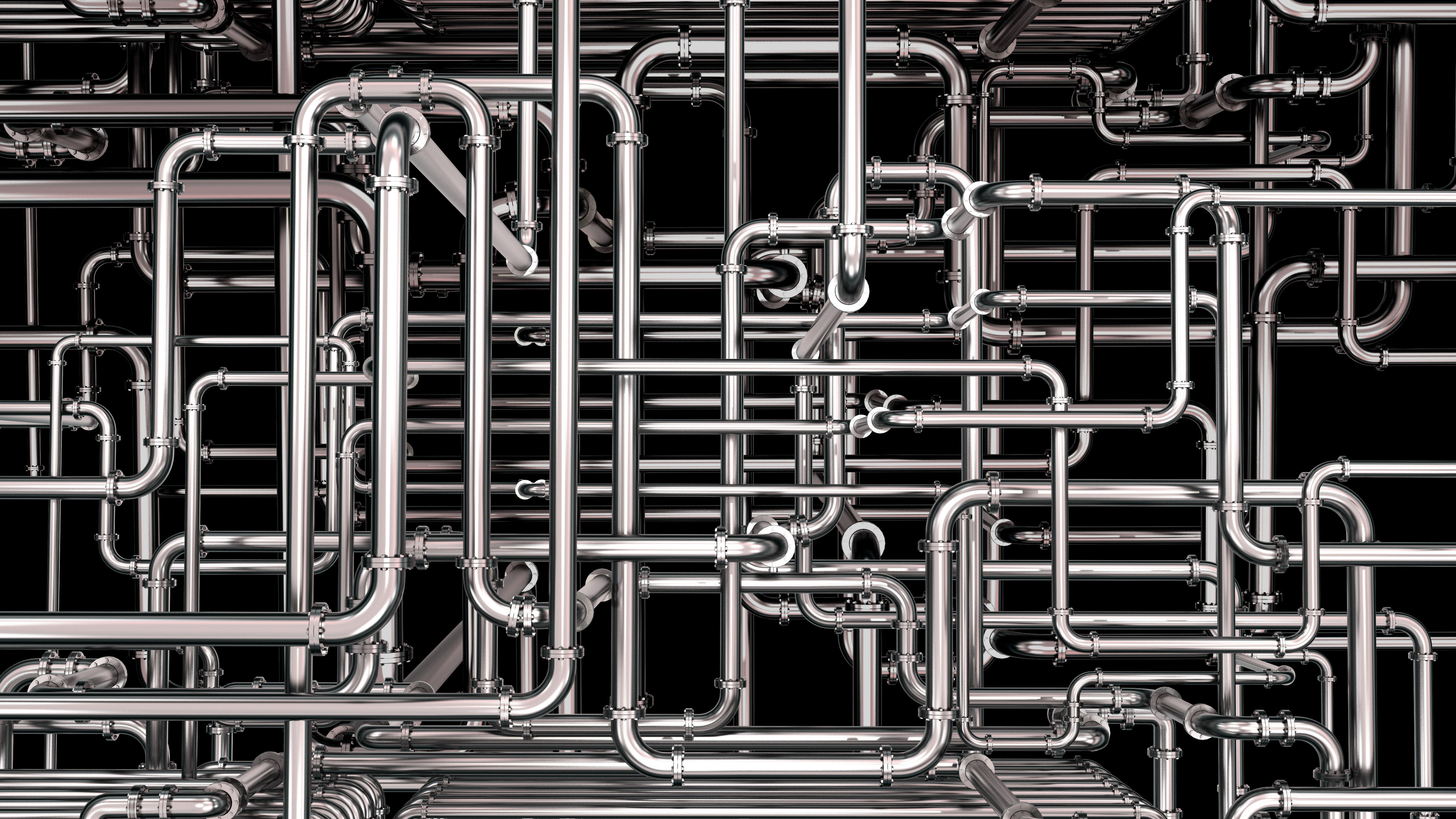
Performance

Is this activity profitable?

- Lowest RoCE (%) ~ 20%
- Lowest Net Margin (%) ~ 15%
- Capital Efficiency
- Some companies have negative net worth?

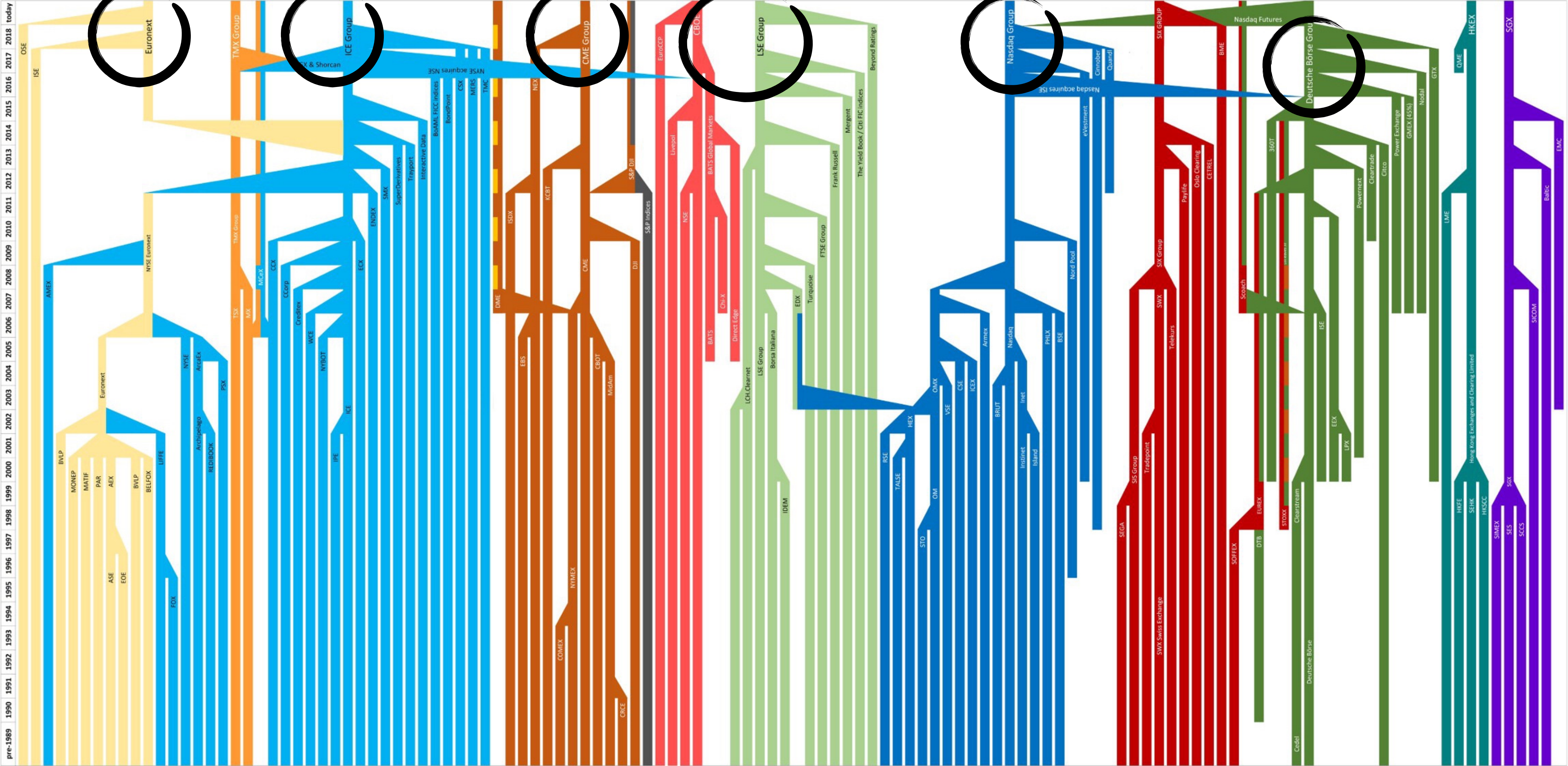






1980's

2020



exchanges/company	
Oslo Bors	
Irish Stock Exchange	
American Stock Exchange (US)	
Bolsa de Valores de Lisboa e Porto	
MONEP (options exchange, FR)	
MATIF (futures exchange, FR)	
Paris Bourse	
Amsterdam Stock Exchange	
European Options Exchange (NL)	
Belgium Stock Exchange	
gium Futures and Options Exchange	
International Financial Futures & Options	
London Fox (derivatives exchange)	
New York Stock Exchange	
Archipelago/ArcaEx (ECN, US)	
REDIBOOK (ECN, US)	
cific Exchange (stock exchange, US)	
Toronto Stock Exchange	
tr Exchange (derivatives exchange)	
Montreal Climate Exchange	
Chicago Climate Exchange	
The Clearing Corporation (CCP, US)	
Creditex (CCP, US)	
Winnipeg Commodities Exchange	
New York Board of Trade	
ernational Petroleum Exchange (UK)	
Intercontinental Exchange (US)	
European Climate Exchange (UK)	
Index (energy trading, NL)	
Singapore Mercantile Exchange	
uperDerivatives (data services, US)	
Trayport (energy trading, UK)	
Interactive Data (market data, US)	
America Merrill Lynch fixed income index	
BindPoint (fixed income platform)	
Chicago Stock Exchange	
erscorp (mortgage market data, US)	
C Bonds (fixed income platform, US)	
Dubai Mercantile Exchange	
curities and Derivatives Exchange (UK)	
EBS (FX trading platform)	
Group (former ICAP, trading platform)	
Kansas City Board of Trade	
New York Commodities Exchange	
New York Mercantile Exchange	
Chicago Mercantile Exchange	
Chicago Board of Trade	
MidAmerica Commodity Exchange	
Chicago Rice And Cotton Exchange	
Dow Jones Indices	
S&P Indices	
EuroCCP (CCP, EU)	
Livevol (market data, US)	
National Stock Exchange (US)	
Chicago Board Options Exchange	
BATS (ATS)	
Chi-X (ATS)	
Clearnet (CCP, FR)	
London Clearing House (CCP, UK)	
London Stock Exchange	
Italian Stock Exchange	
Italian Derivatives Market	
DX London (derivatives exchange)	
Turquoise (ATS)	
FTSE Group (index provider)	
k Russell Investment (index provider)	
Mergent (data services, UK)	
Yield Book / Citi fixed income indices	
beyond Ratings (ESG index provider)	
Riga Stock Exchange	
Tallinn Stock Exchange	
Helsinki Stock Exchange	
Stockholm Stock Exchange	
OM (futures exchange)	
Vilnius Stock Exchange	
Copenhagen Stock Exchange	
Iceland Stock Exchange	
Armenian Stock Exchange	
BRUT (ECN)	
Nasdaq	
Instinet/Inet (ECN/ATS)	
Island (ECN)	
Philadelphia Stock Exchange	
Boston Stock Exchange	
ard Pool (commodity exchange, NO)	
eVestment (market data, US)	
Cinnober (technology, SE)	
Quandl (market data)	
SEGA (CSD, CH)	
Intersettle (CSD, CH)	
Tradepoint (ECN, UK)	
Swiss Stock Exchange	
Telekurs Group (market data, CH)	
Paylife Bank (AT)	
Oslo Clearing (CCP, NO)	
CETREL (payment system, LU)	
ias y Mercados Espanoles (exchange, ES)	
SOFFEX (derivatives exchange, CH)	
Soach (derivatives exchange)	
tsche Terminbörse (derivatives exchange)	
360T (FX trading)	
STOXX (index provider)	
Cedel International (ICSD)	
Deutsche Börse (stock exchange, DE)	
ISE (derivatives exchange, US)	
ean Energy Exchange (energy trading, DE)	
zig Power Exchange (energy trading, DE)	
Powernext (energy trading, FR)	
Cleartrade (energy trading, SG)	
lobal Securities Services (custodian services)	
r Exchange Central Europe (energy trading)	
obal Market Exchange Group (ATS, UK)	
Nodal Exchange (energy trading, US)	
GTX (FX trading, US)	
London Metal Exchange	
Hong Kong Futures Exchange	
Stock Exchange of Hong Kong	
g Kong Securities Clearing Company (CSD)	
ngapore International Money Exchange	
Stock Exchange of Singapore	
es Clearing and Computer Services (CCP, SG)	
Singapore Commodity Exchange	
ie Baltic Exchange (index provider, UK)	
by Market Company (energy trading, SG)	

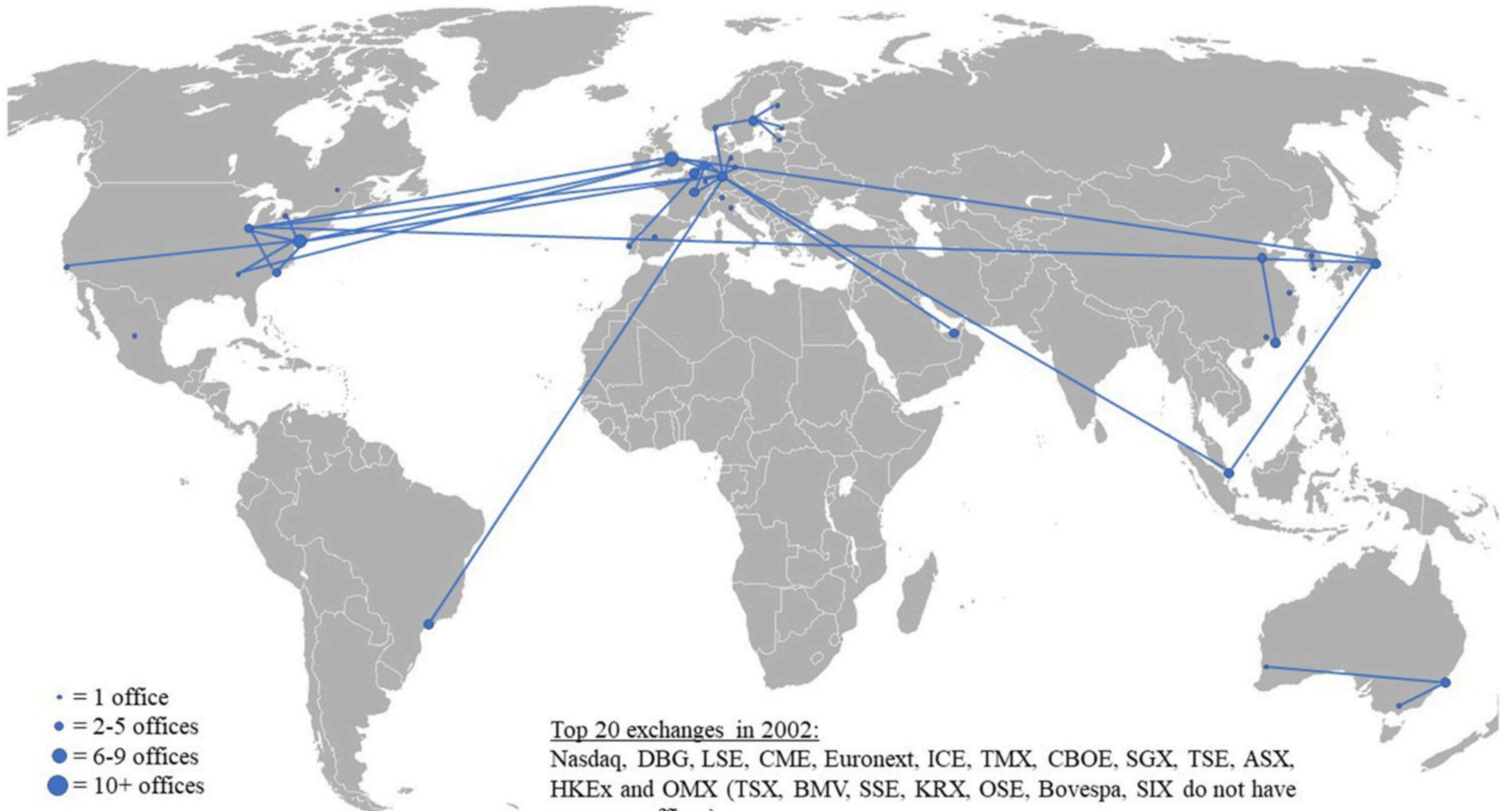
Source: Johannes Petry Paper from Taylor & Francis Online, July 2020

The Economist

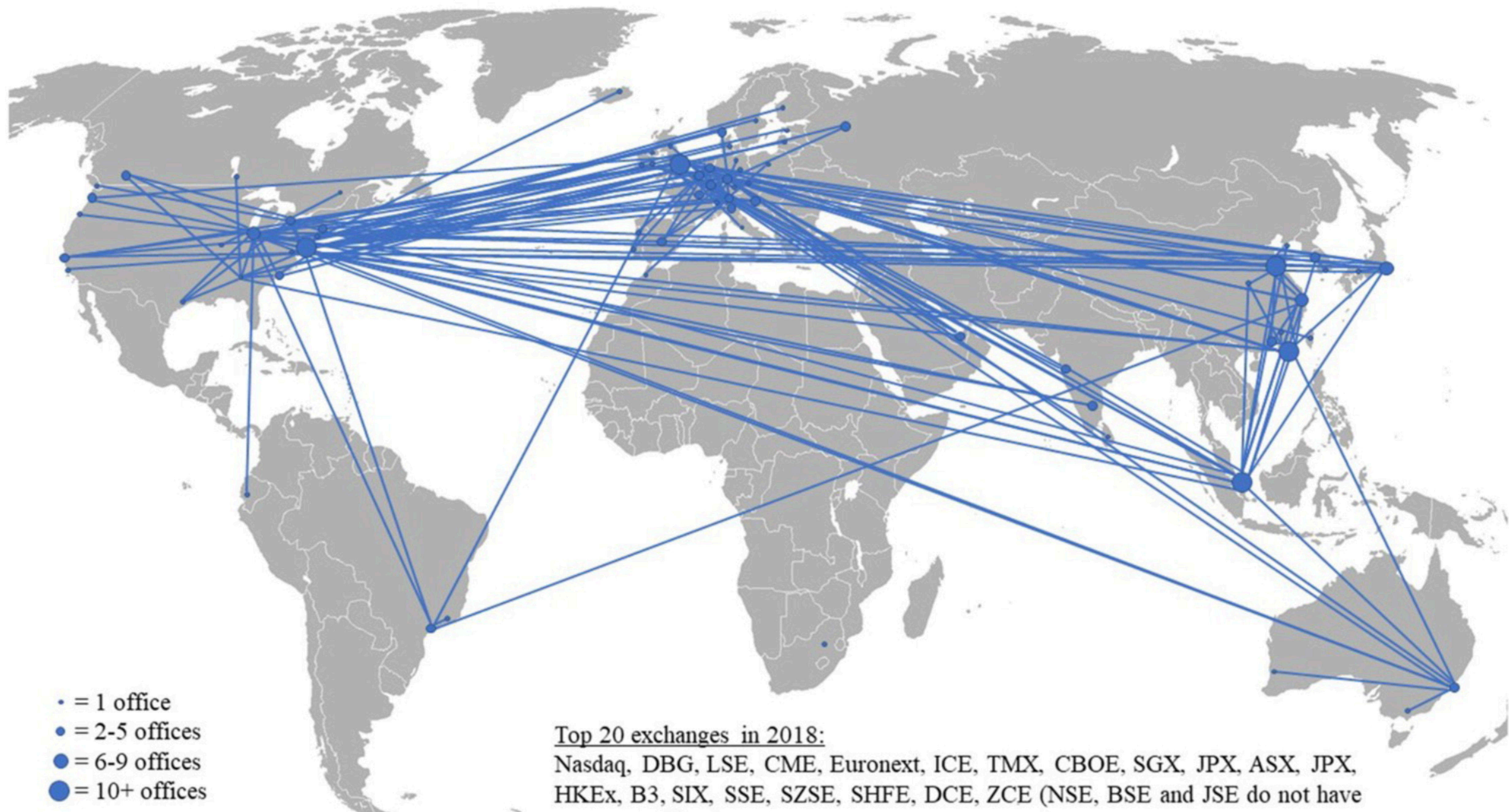
On the Exchange Business

- Scale
- Penetration
- Market Value

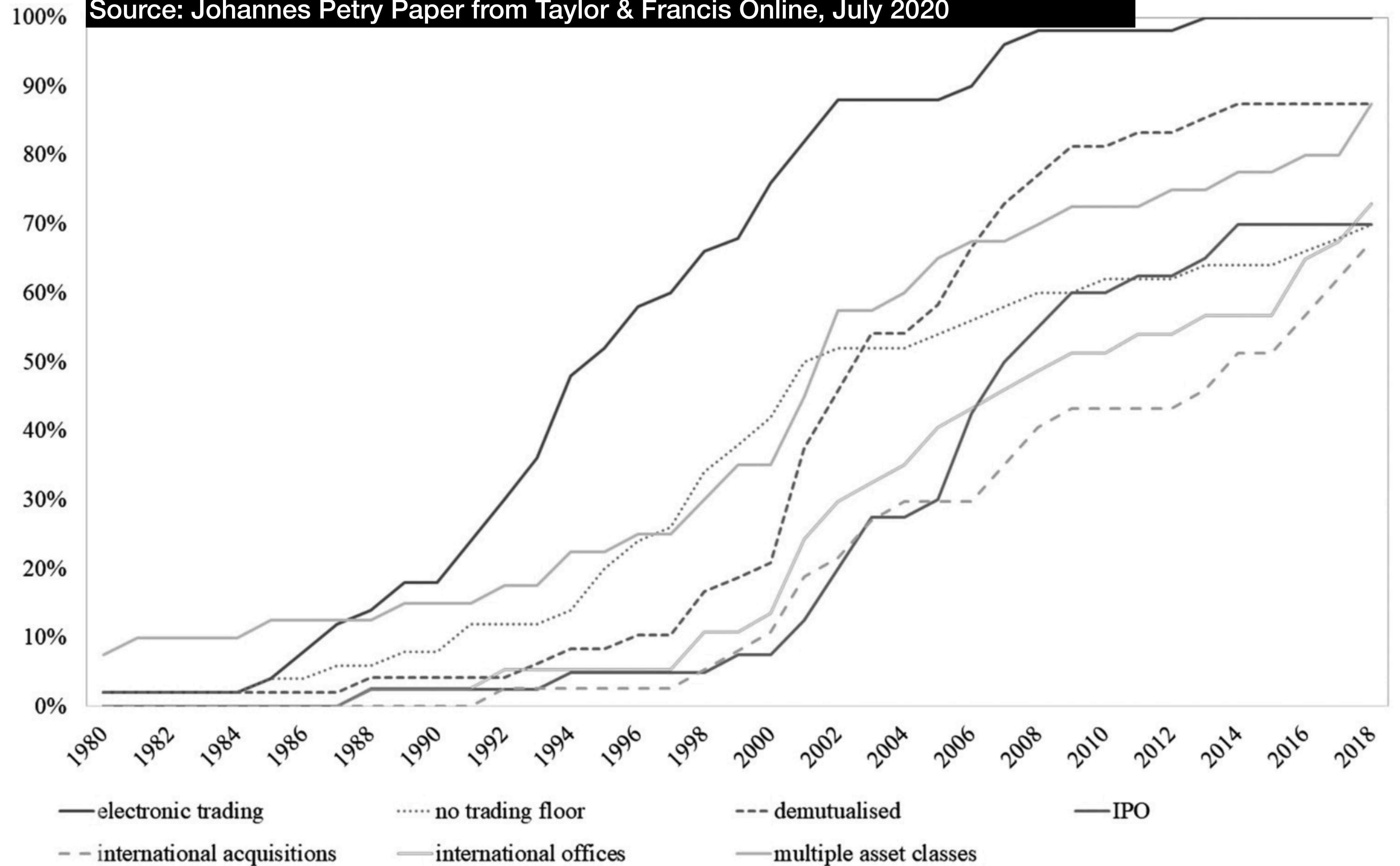




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Darkness by Design

Walter Mattli

DARKNESS BY DESIGN



THE HIDDEN POWER
in GLOBAL CAPITAL MARKETS

WALTER MATTLI

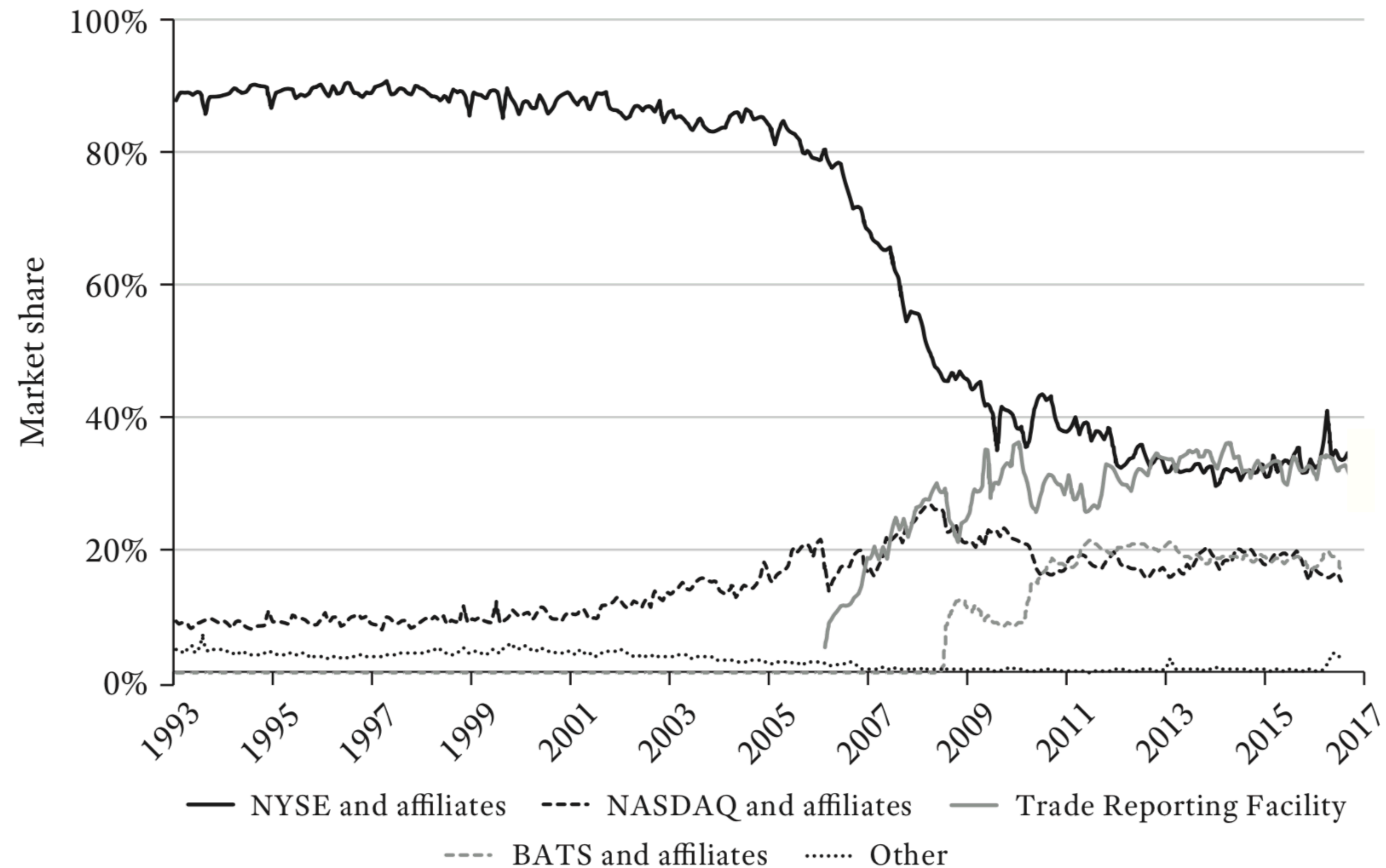
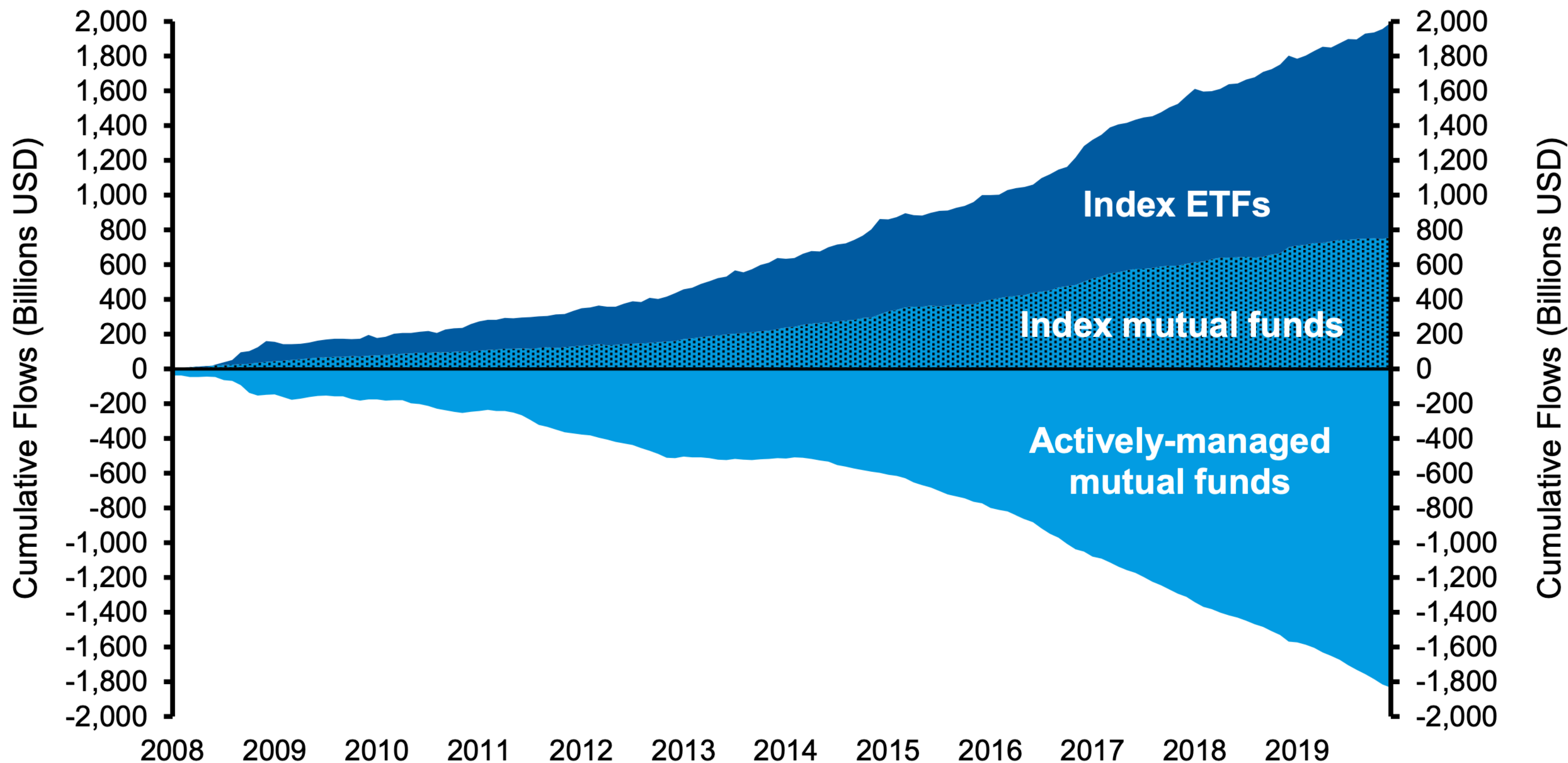


FIGURE 1.1. NYSE-listed equities trading on various markets. *Source:* Mnuchin, Steven, and Phillips, *A Financial System That Creates Economic Opportunities: Capital Markets*, Washington, DC: U.S. Department of the Treasury, 2017, 53.

Exhibit 2: Cumulative Flows from U.S. Active to Passive Funds, 2008-2019



Source: Investment Company Institute.

Note: U.S. domestic equity funds; Mutual fund data is net new cash flow plus reinvested dividends; ETF data is net share issuance and includes reinvested dividends.

The Rise of Passive Funds

How do ETF's & Passive Funds drive Financial Data Usage?

- Index Construction & Licensing
 - Rules / Formula driven portfolio
- Sectoral / Thematic Indices
- Create Flavours based on Trends
- Low cost alternative for Diversification
- Exclusivity & Brand

NSE Segments & Customers

Key products and services

Segments	Products and services	Customer group
Cash market	Products: Equities, ETF, MF, SLBS, OFS Services: Settlement Guarantee	Proprietary, retail and institutional participants - domestic and foreign
Derivatives	Products: Equity Derivatives (Index & Stock), Currency Derivatives, Interest Rate Derivatives, Derivatives on Global Indices and Volatility and Commodities Services: Settlement Guarantee	Proprietary, retail and institutional participants - domestic and foreign
Debt market	Products: Debt securities, Corporate bonds, Govt. securities & T bills Services: Clearing and Settlement, Risk Management, Connect to NSE, Corporate bond database	Proprietary, retail and institutional participants - domestic and foreign
Data and Information Vending	Products: NSE's online Real time Data Feed, 15-Min delayed, 5 minutes, 2 minutes and 1 minute Snapshot Data, EOD data, Historical Trade & order and Corporate Data Services: Providing data feed	Data vendors, researchers, TV channels, financial websites, software and algorithm developers
Index services	Products: Equity Index- NIFTY, NIFTY 100, NIFTY Bank indices etc. and Debt Index. Services: Index IP Licensing and Customised Index solution	AMCs, ETF issuers, insurers, NBFCs, investment banks, stock exchanges and AIF

Source: NSE FY2020 Annual Report

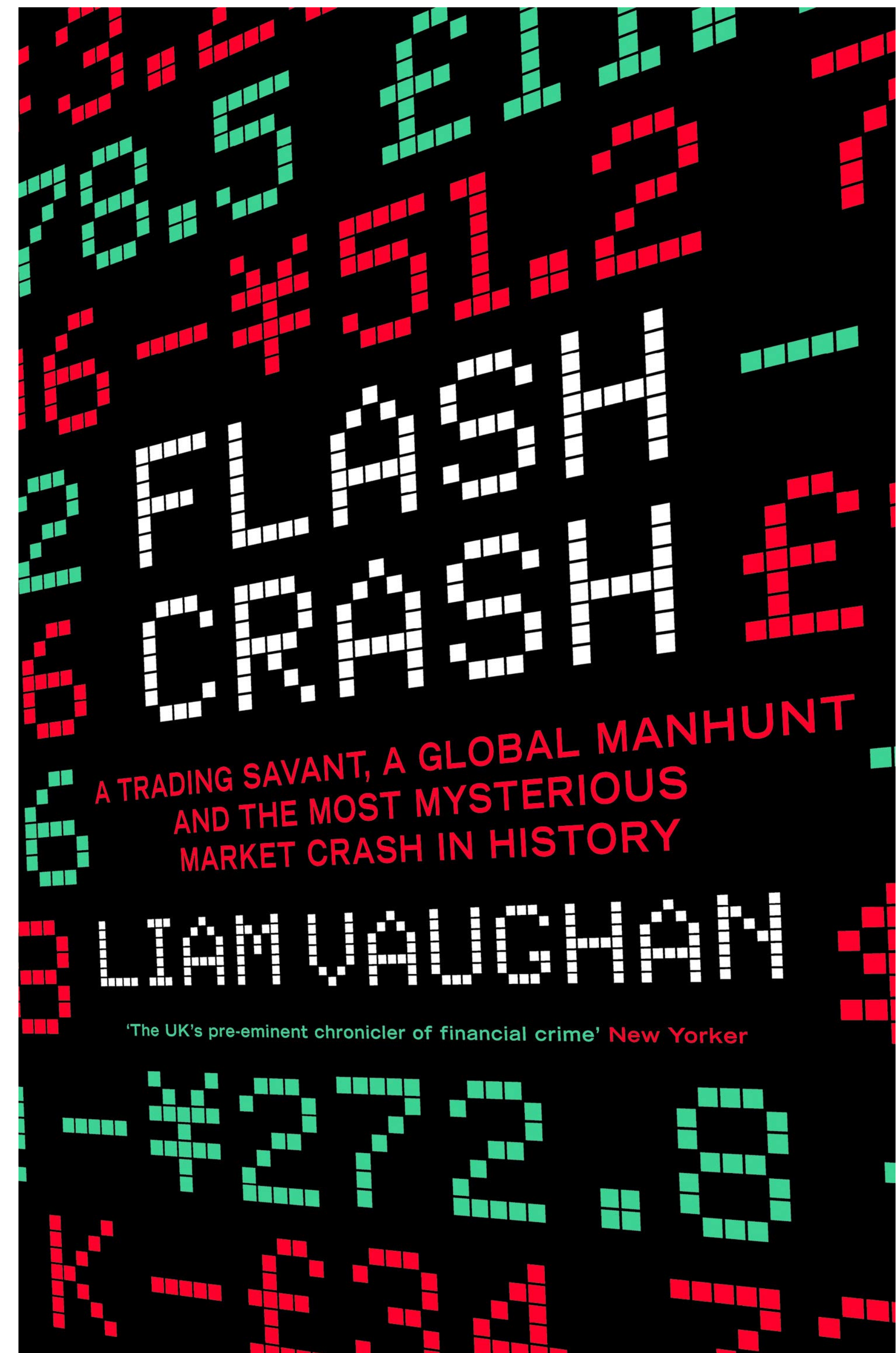
It's not a straight line

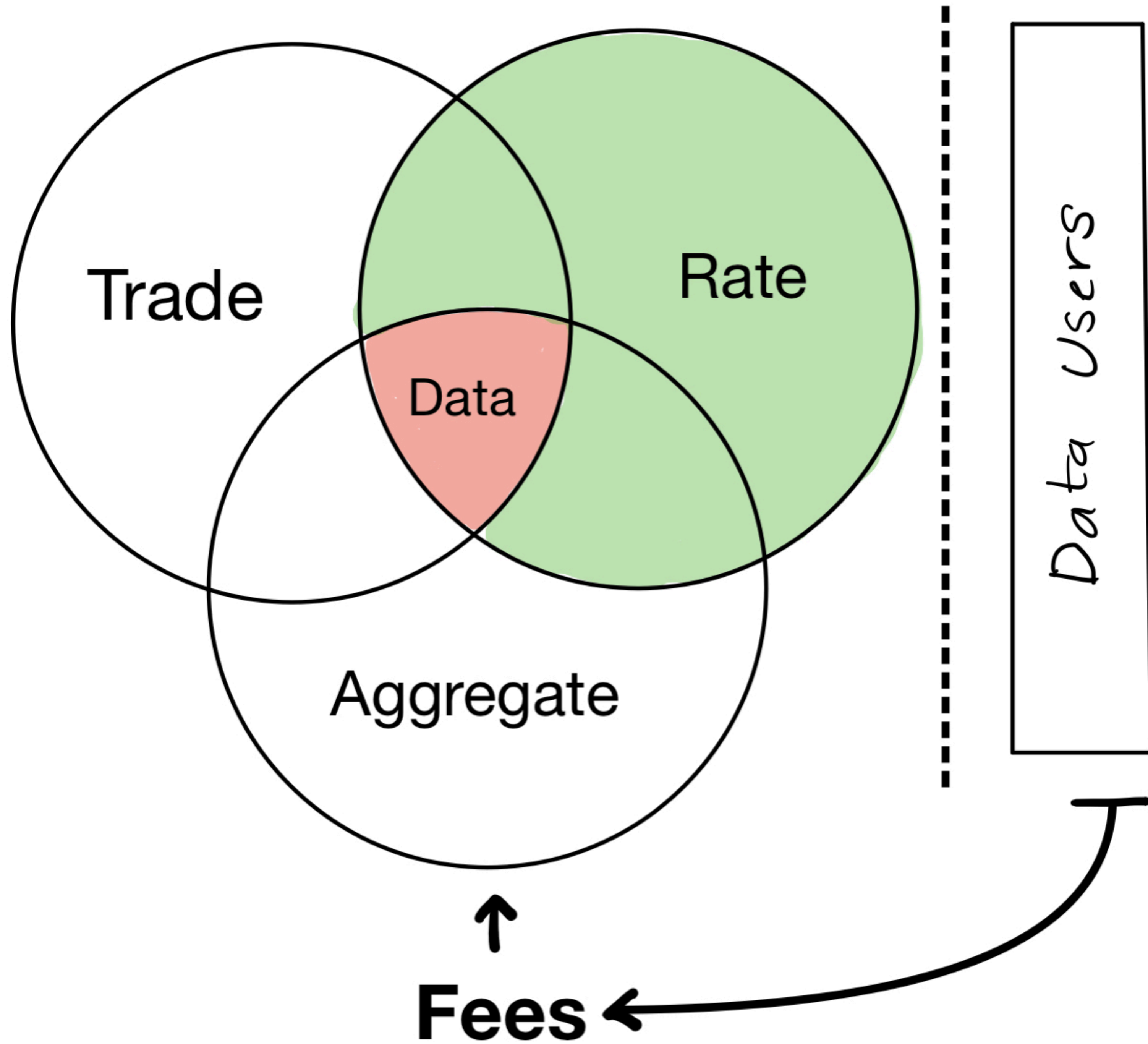
Murphy's Law

- Business combinations
- Anti-trust
- Freak Market Activity / Algo Glitches
- Information Security & Hacking
- Conflicts of Interest

Flash Crash

Liam Vaughan





Ratings

Validation & Justification as a Service

- Company / Person
- Find correlation in different data sets
- Tracking Behaviour
- Prediction Accuracy
- Transaction Oriented
- Global Scale



Data Provider by Design

Natural extension of Services

- Company financial data in one place
 - Public & Private Company Database
- Corporate Filings
- Integrated Data from Different Sources
- Multi Asset Class Index Services
- Analytics & Advisory
- A Flashlight in a Dark Room

Coronavirus: A Disruption to Global Supply Chains

As the effects of the coronavirus pandemic continue to develop, global supply chains continue to see disruption.

Amidst these challenging and uncertain times, Panjiva brings you unrivaled supply chain insights to help you identify alternative sources of supply and emerging risks as they unfold.

Leverage our data, research, and visualization tools to better understand:

- How to quantify your exposure to suppliers
- Which industries are most at risk
- How the logistics sector is responding
- What effect export restrictions might have
- Signs of recovery, and what might happen once it gets underway

THIS IS A TRUE STORY

THE BIG SHORT

WWW.ENTERTAINMENTWALLPAPER.COM







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THE BIG SHORT

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CCC

Tailwinds & Headwinds

Sometimes it works & Sometimes it doesn't

- Ratings fraud / Wilful Blindness
- Fines & Settlements
- Filter Bubble
- Transactional Tracking & Blindspots
 - Customers Duplicate the Effort
- Acquisitions improve ability to track data

Wilful Blindness

Margaret Heffernan

MARGARET HEFFERNAN

Wilful Blindness

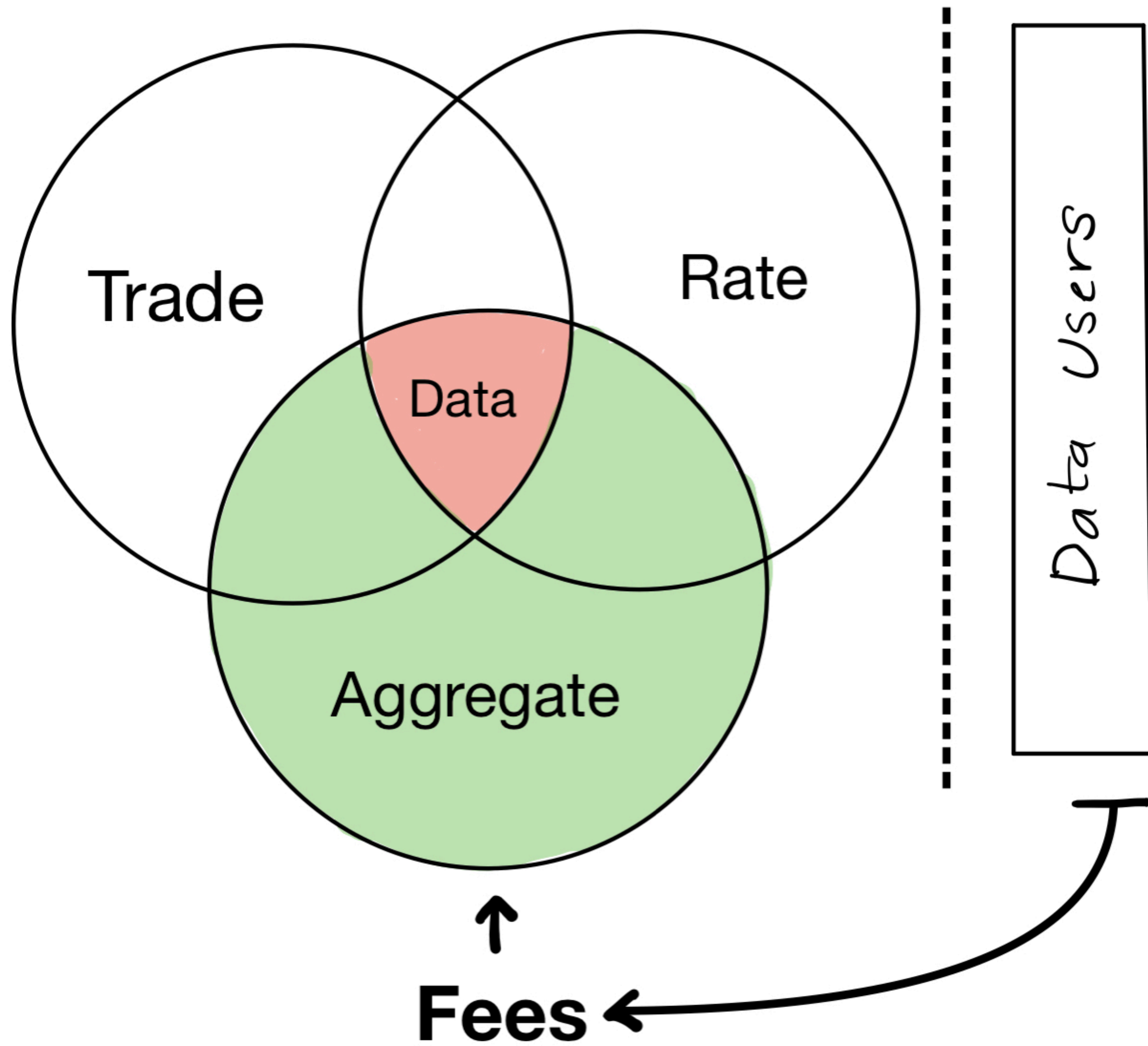
'A polemic against the dangers of
docility and "groupthink" in every walk of life'

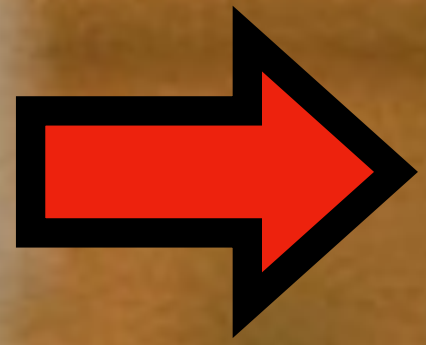
Financial Times



'Entertaining and compellingly argued'

Sunday Times

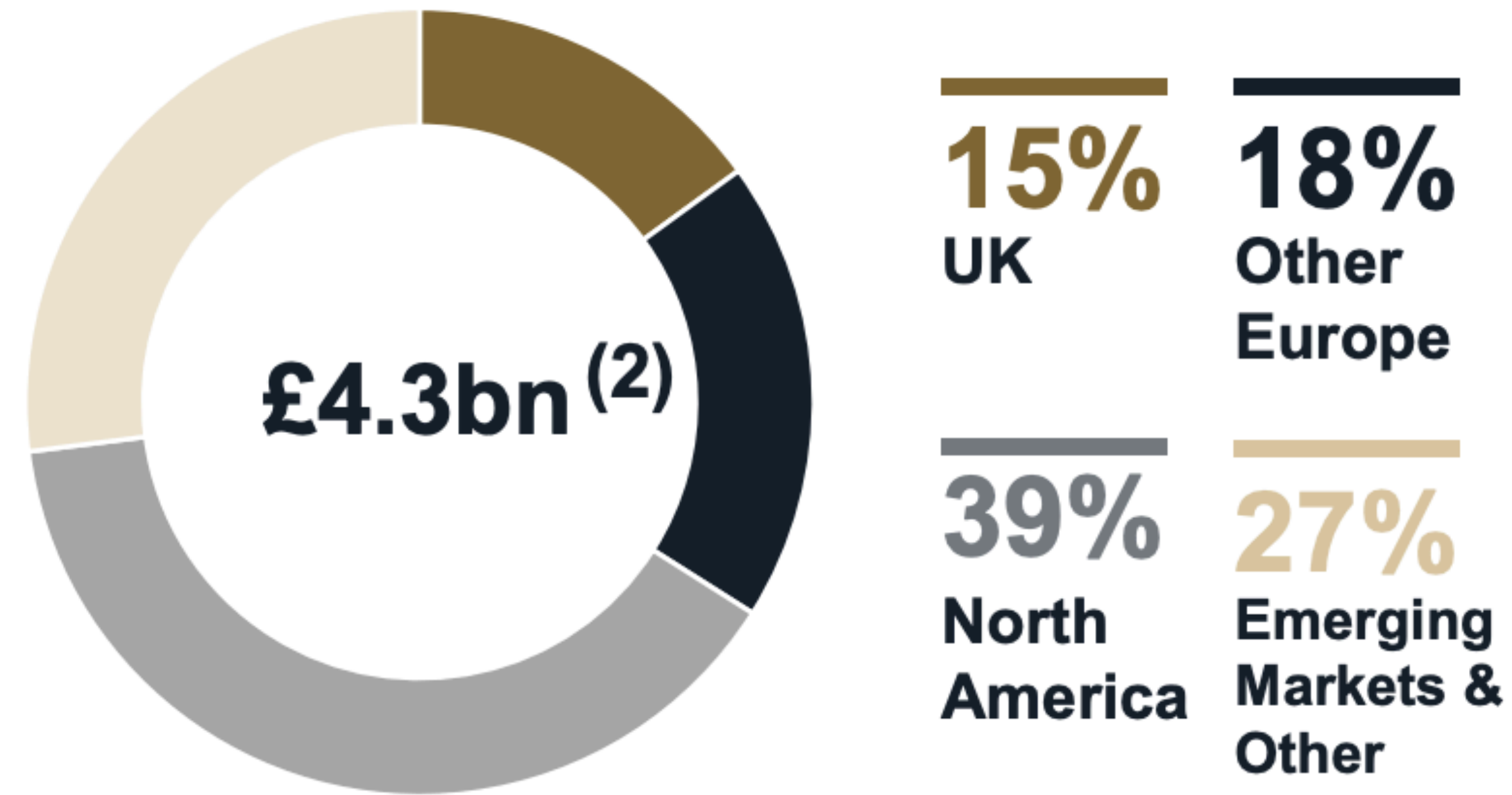
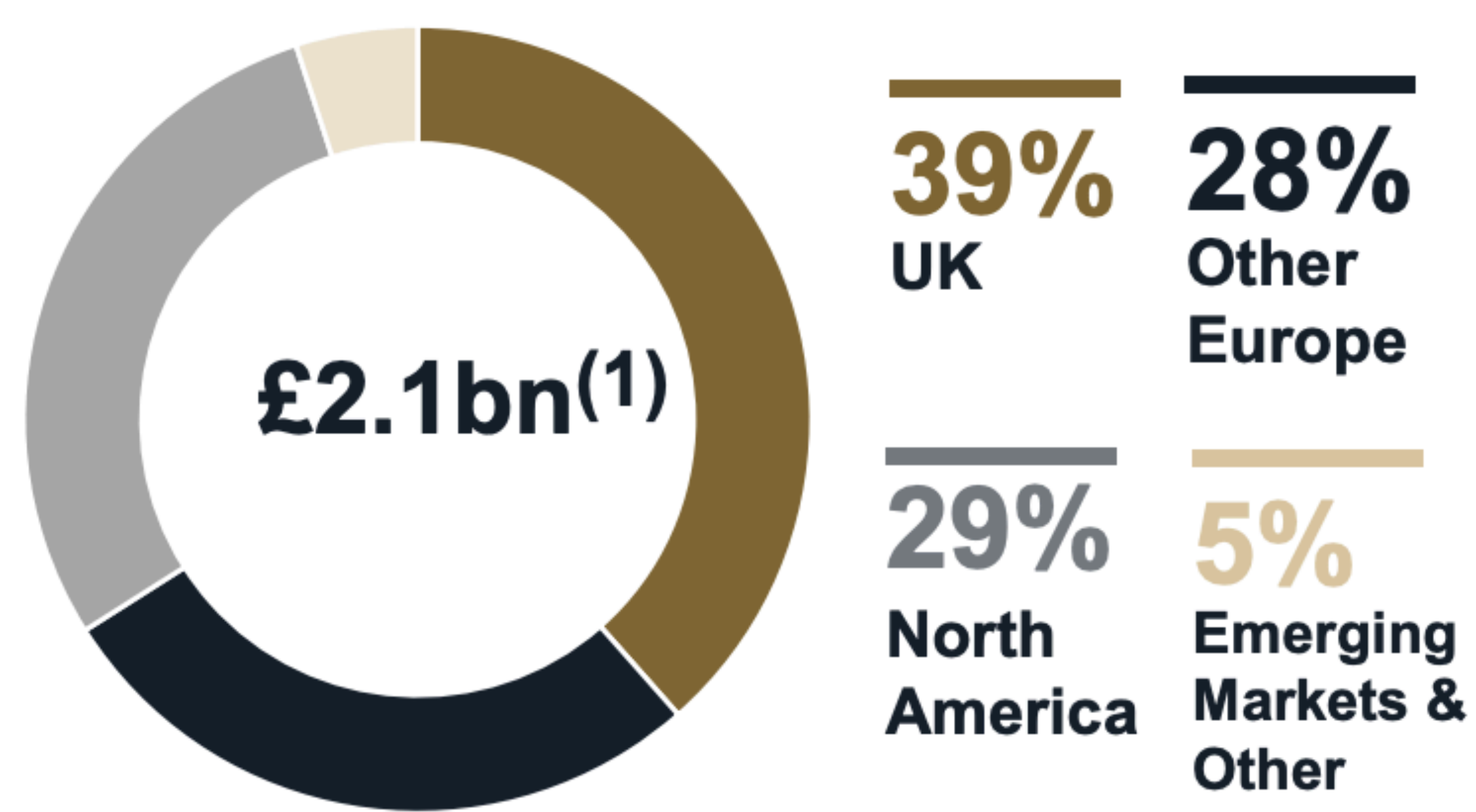








2018 Revenue diversification



Data Aggregators

How big are they?

- Bloomberg ~ \$10 bn Revenue
- Refinitiv ~ \$ 6 bn
- Factset ~ \$1.5 bn
- Morningstar
- & more...

Bloomberg Envy

Bundling & Unbundling

- Bloomberg Like & Bloomberg Lite
- Combine Data Sources into Simplified Services
 - AceEquity, Capitaline, TIKR, Koyfin, Ratestar, Trendlyne, Screener, many more.
- OMS + EMS (Order Management & Trade Execution)
- Portfolio Tracking & Analytics
- Specialised Services > Bundled Mediocrity
- \$ > \$\$\$

Wilfully Ignored

Interesting but challenging...

- Payment Processing
 - Transactional Data
 - Sectoral spending trends
 - Behaviour Prediction
 - Capacity to Borrow
- Peer-to-Peer payment & Fintech disruption

In conclusion

Long Live Data

- Interesting to track
 - Data Generation (Natural Language Processing?)
 - Data Tracking
 - Data bundling
- Clear Separation between Data Provider & Customer
- The ground keeps shifting...

Sources

For further reading

- Company Filings were enormously useful
- Research Papers
 - Taylor & Francis
 - SSRN
- Marc Rubenstein's Substack - Net Interest
- Regulatory Actions
- ETF Market Trends

Thank you