



# Wharton Research Data Services

An Introduction to Outlander

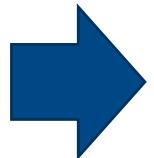
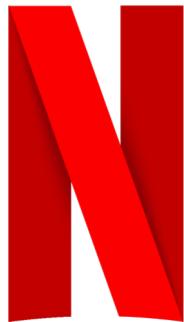
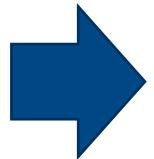
Rui Dai

# Wharton Research Data Services (WRDS)

“A leading business intelligence, data analytics, and research platform to global institutions.”

— WHARTON WEB

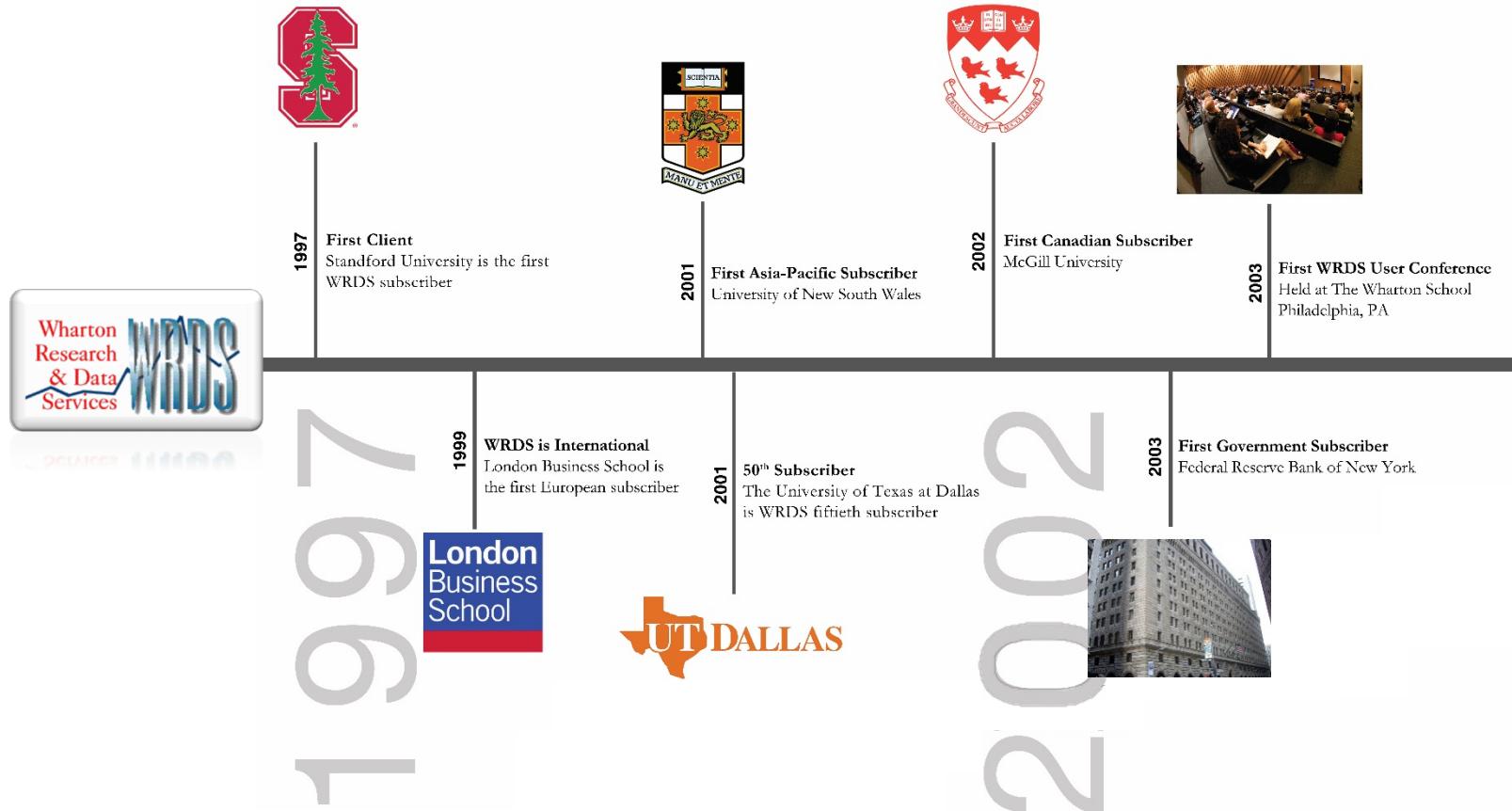
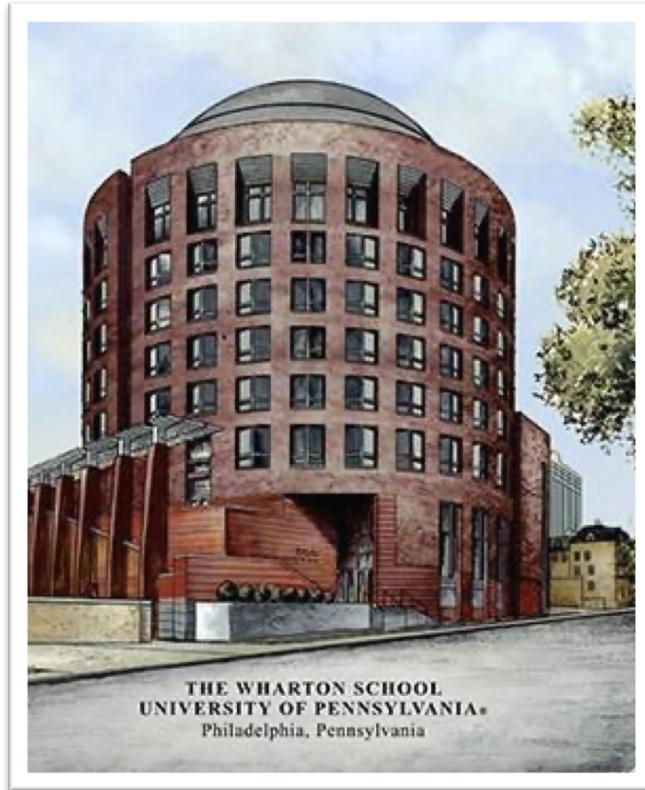
# A Familiar Business Model



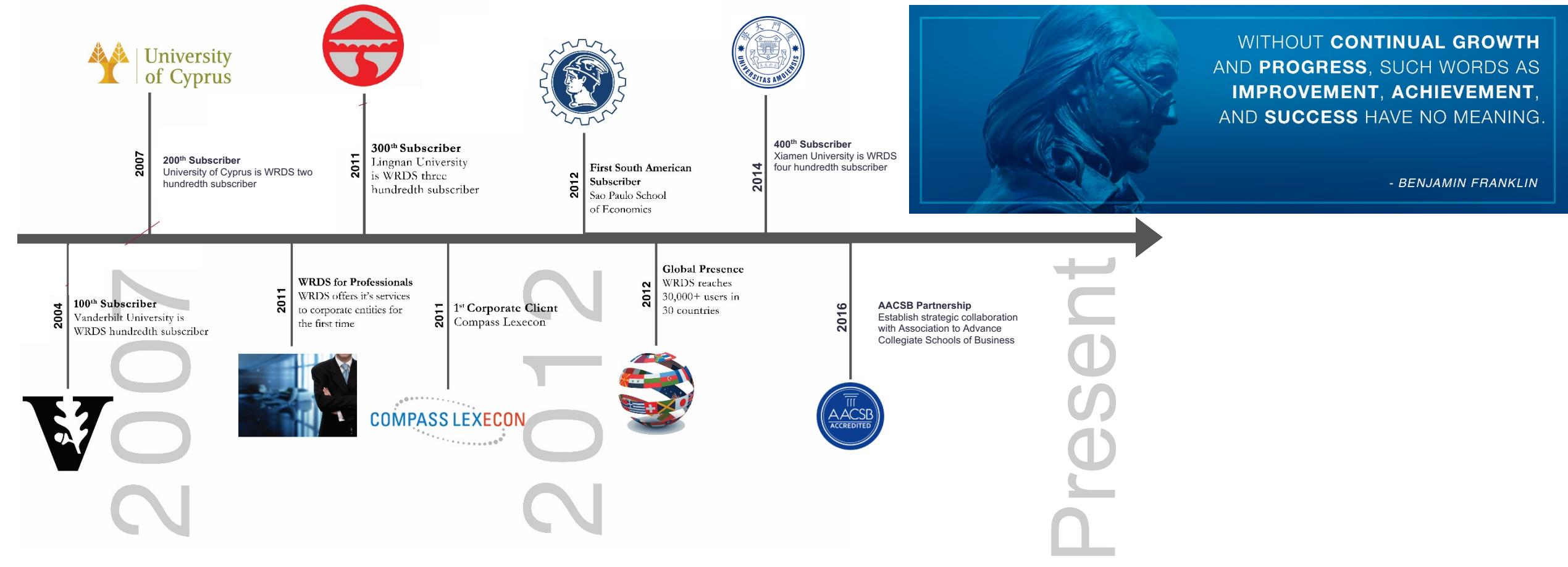
wrds



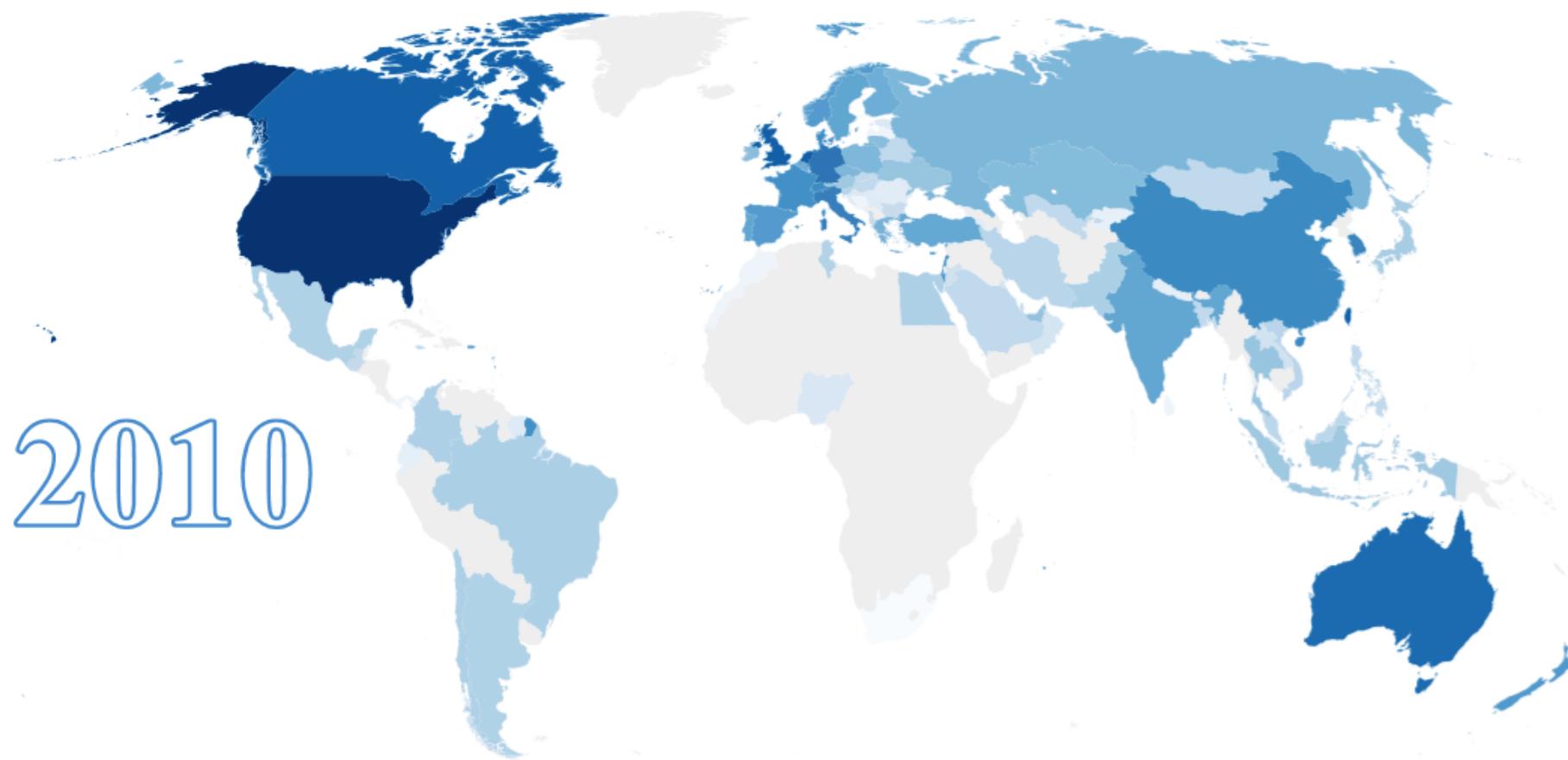
# A Little Bit of WRDS History



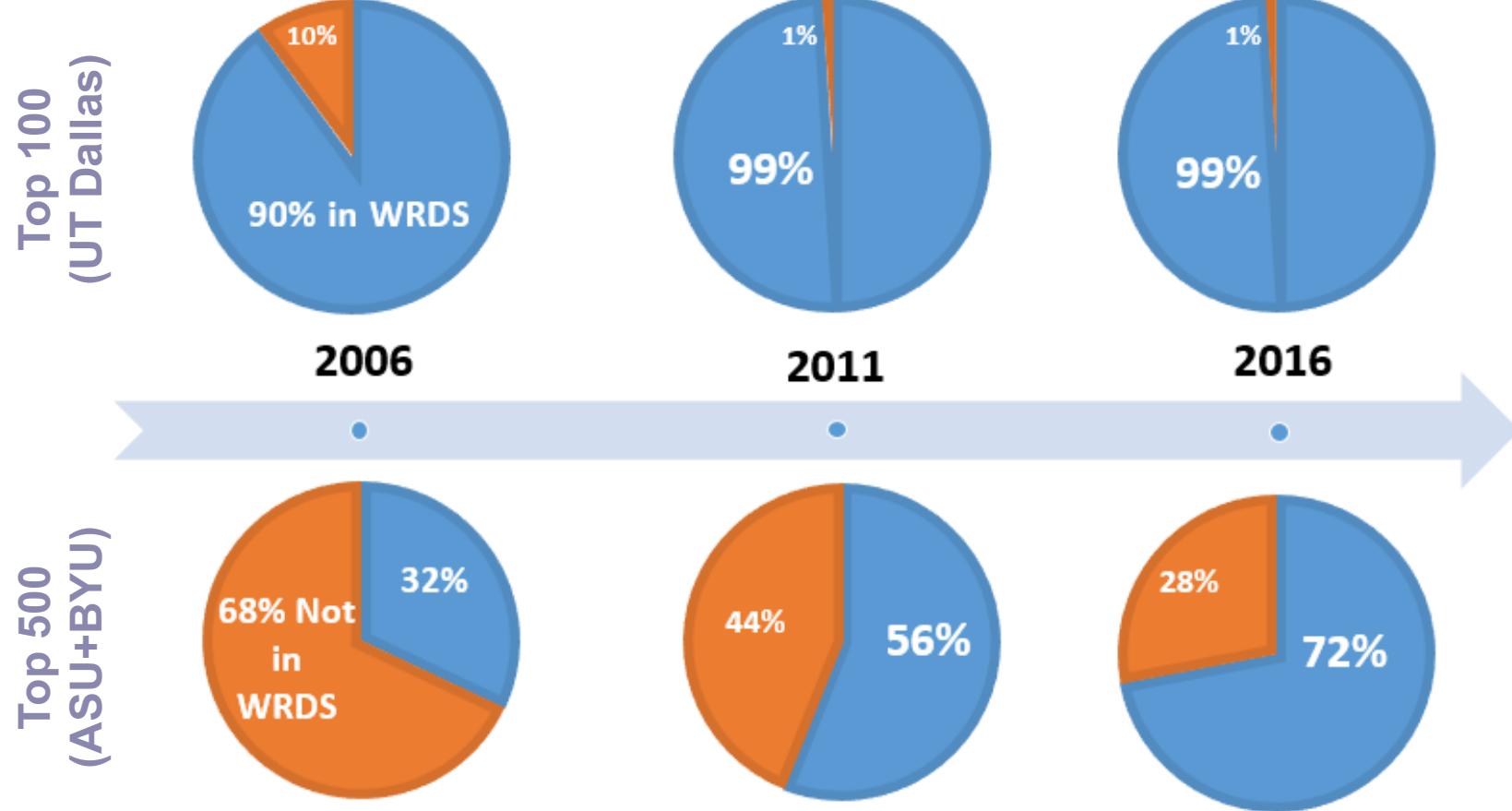
# A Little Bit of WRDS History



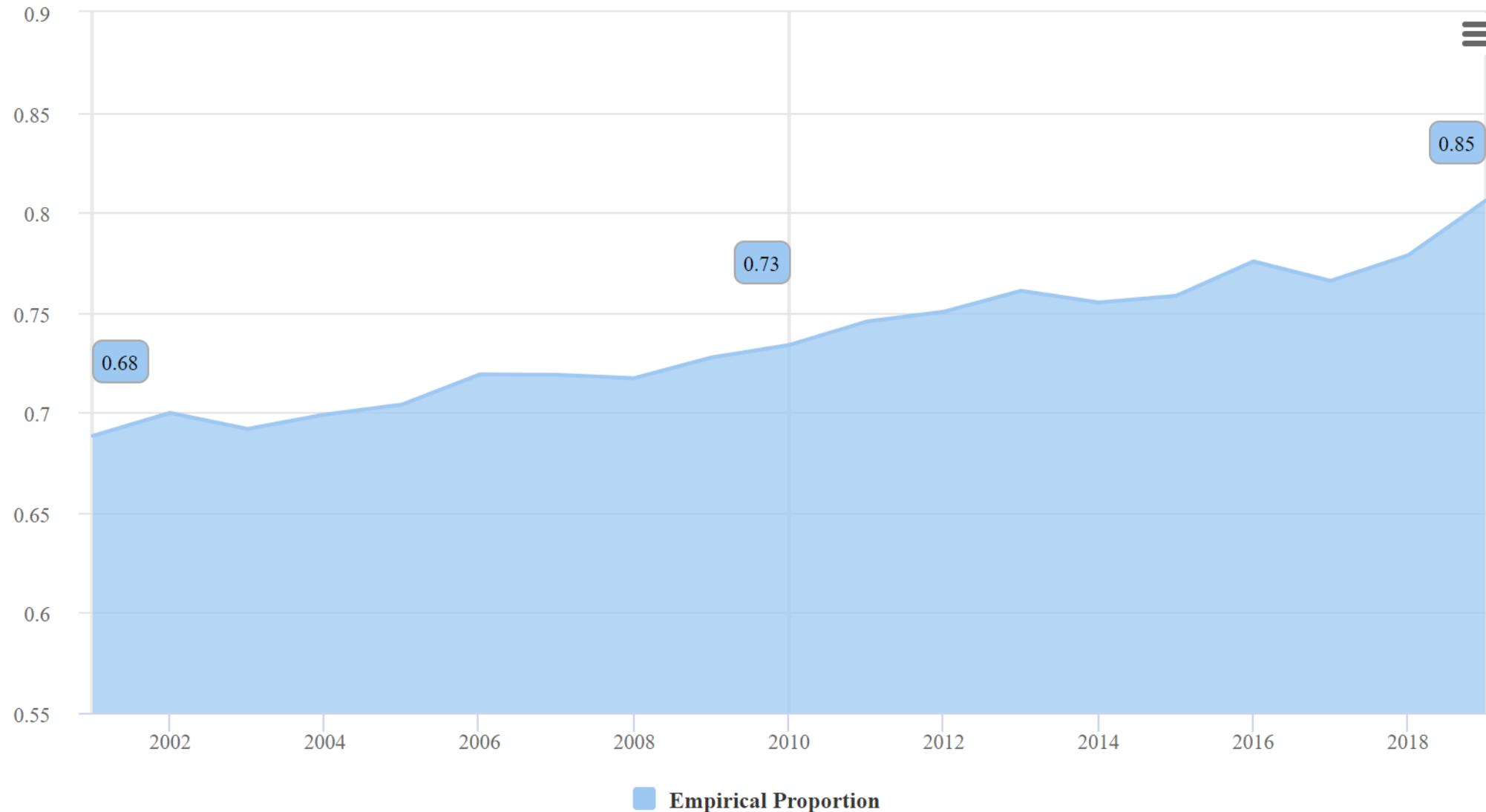
# Global Usages



# WRDS Community



# Empirical Proportion of Finance Articles



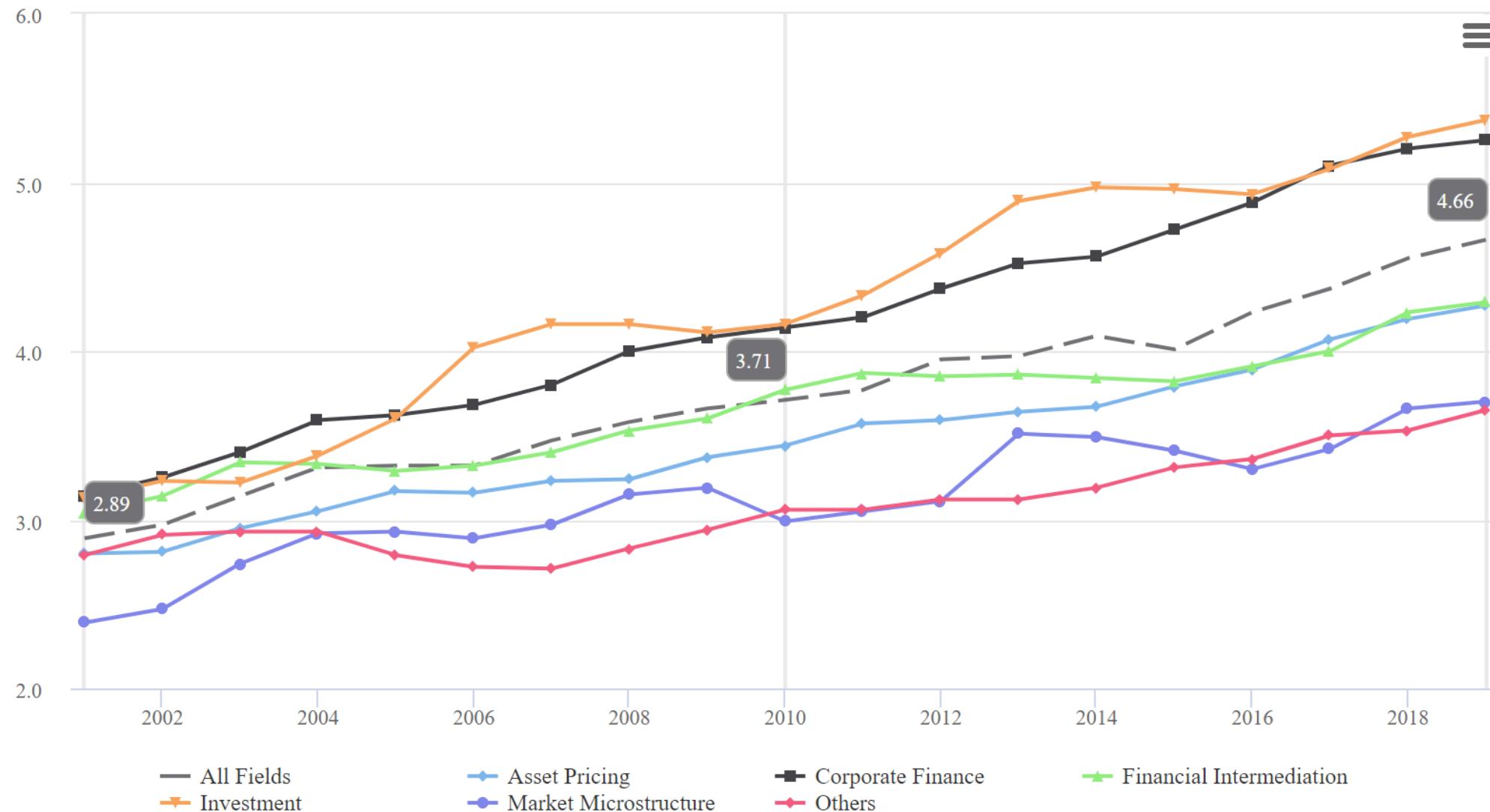
# Empirical Work?

## 2. Data

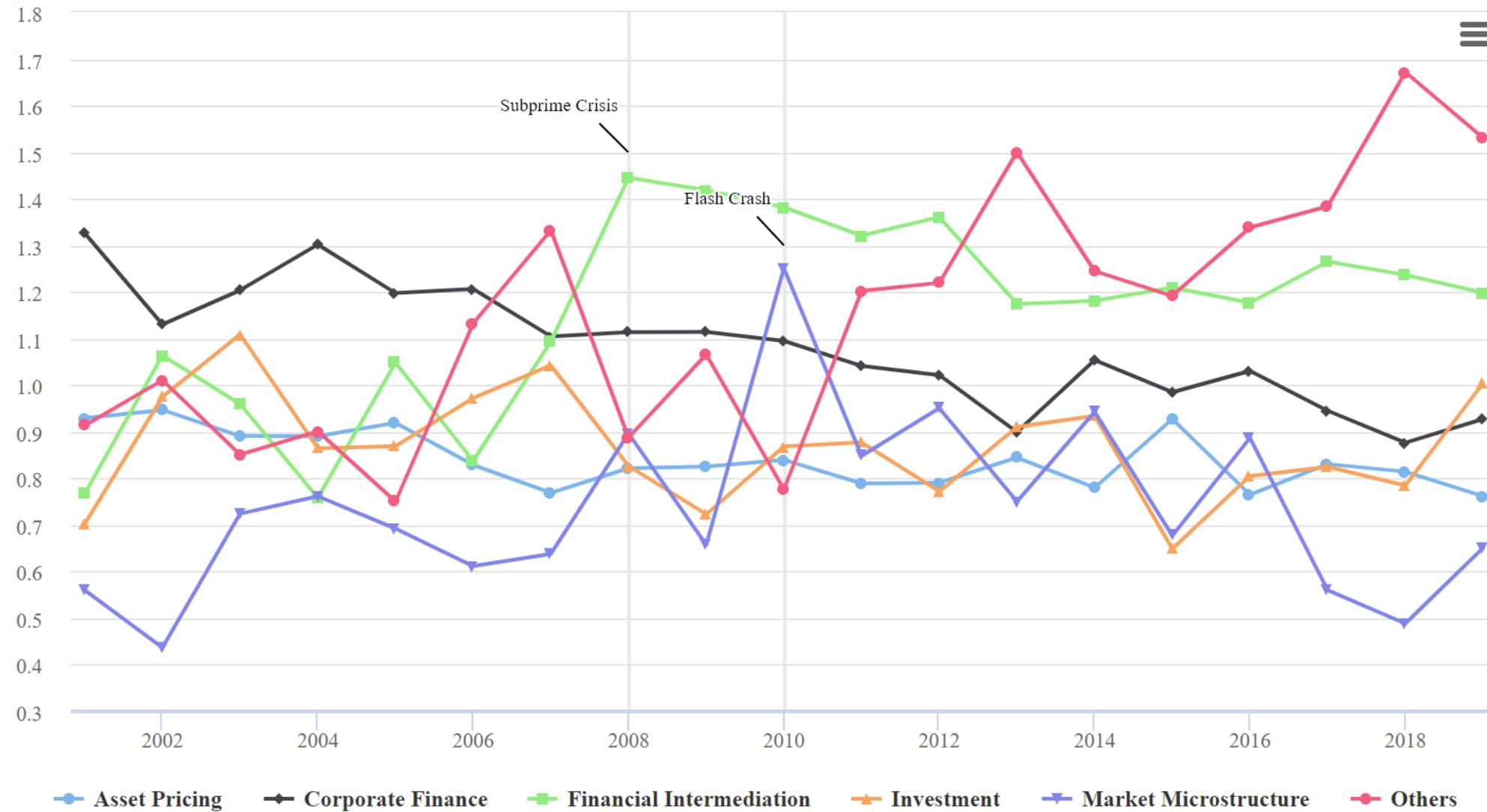
This study employs data from several different sources: (i) information on the global network of customer-supplier relationships from the FactSet Revere ('Revere') global supply chain data obtained through the Wharton Research Data Services (WRDS); (ii) information on firm-level CSR ratings provided by Thomson Reuters ASSET4 ESG (i.e., Environment, Social, and Governance) database, together with alternative ratings information from MSCI Intangible Value Assessment, and Sustainalytics; country-level CSR ratings are obtained from Vigeo Sustainability data; (iii) M&A information from SDC Platinum from Thomson Reuters; (iv) R&D and sales information for computing a firm's industry concentration intensity from Worldscope, and patent data from the European Patent Office's worldwide Patent Statistical Database (PATSTAT); (v) international ownership information from the FactSet Global Ownership data; (vi) records of interlocking directorates from BoardEx company-level networks data from WRDS, which covers over 550,000 interlocking individuals worldwide; (vii) voting data from Institutional Shareholders Services (ISS) Global and US Voting Outcomes databases; (viii) information on firm-level reputation risk index is available from RepRisk data; (ix) news records from Ravenpack, Factiva, and Lexi-Nexis Bulk API, and (x) control variables from Datastream Worldscope. The definitions of all key variables are depicted in Appendix Table A.3.

- Stock Market Data
- Accounting Data
- Corporate Event Data
- ESG Data
- Equity Ownership Data
- Patent Data
- News Data
- ...

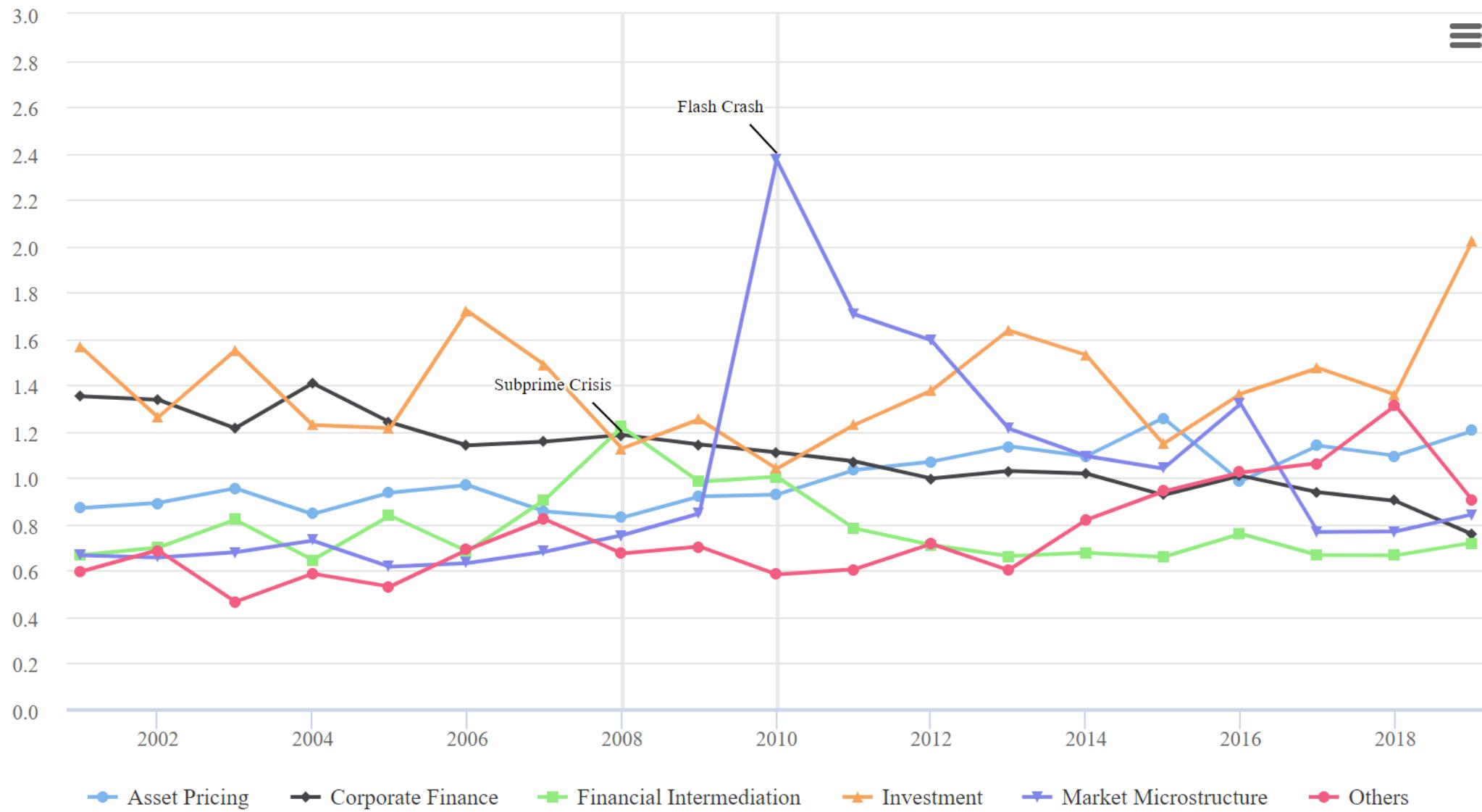
# Number of Databases Used in Empirical Work



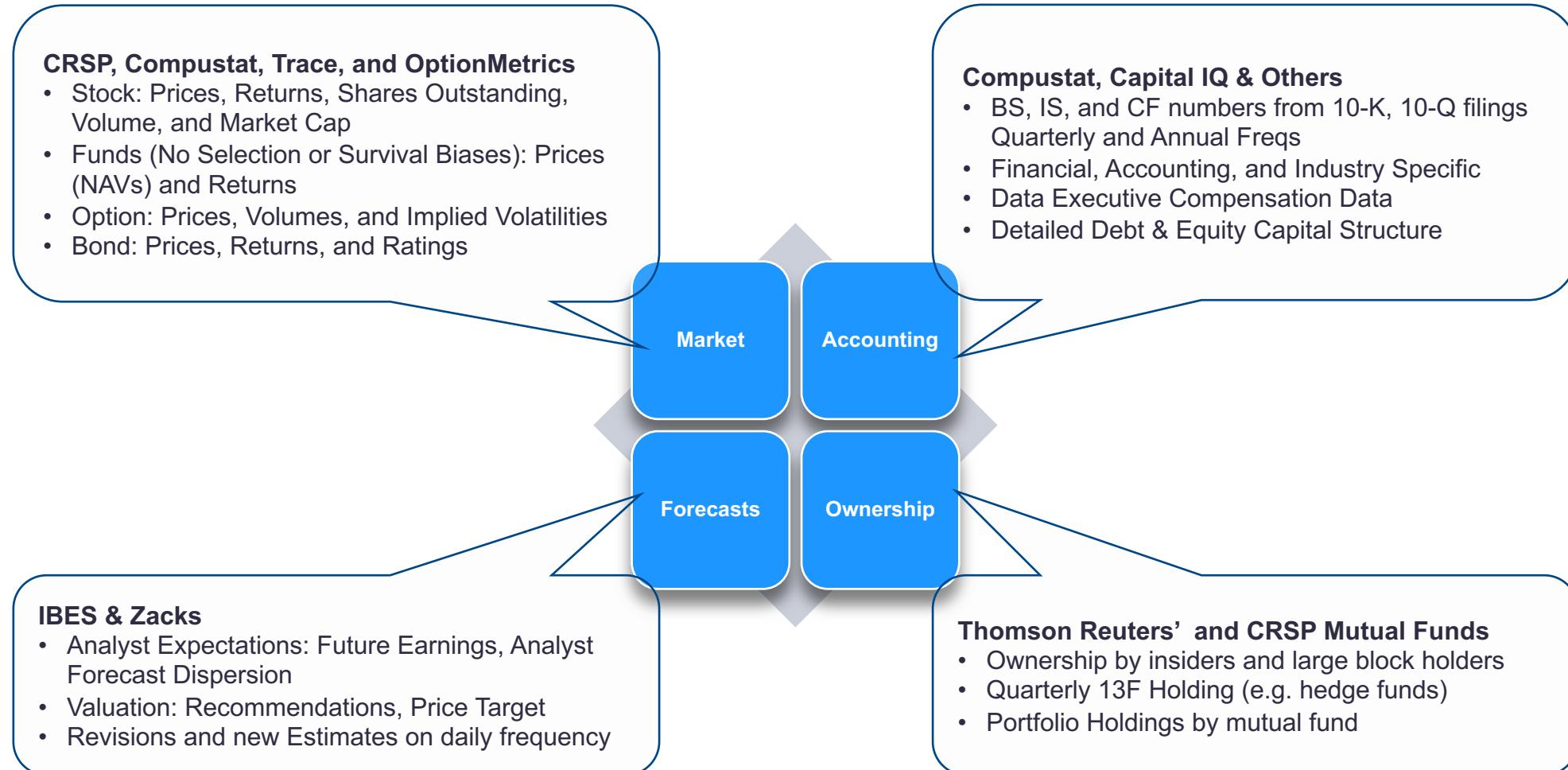
# How Does Research Help Researchers



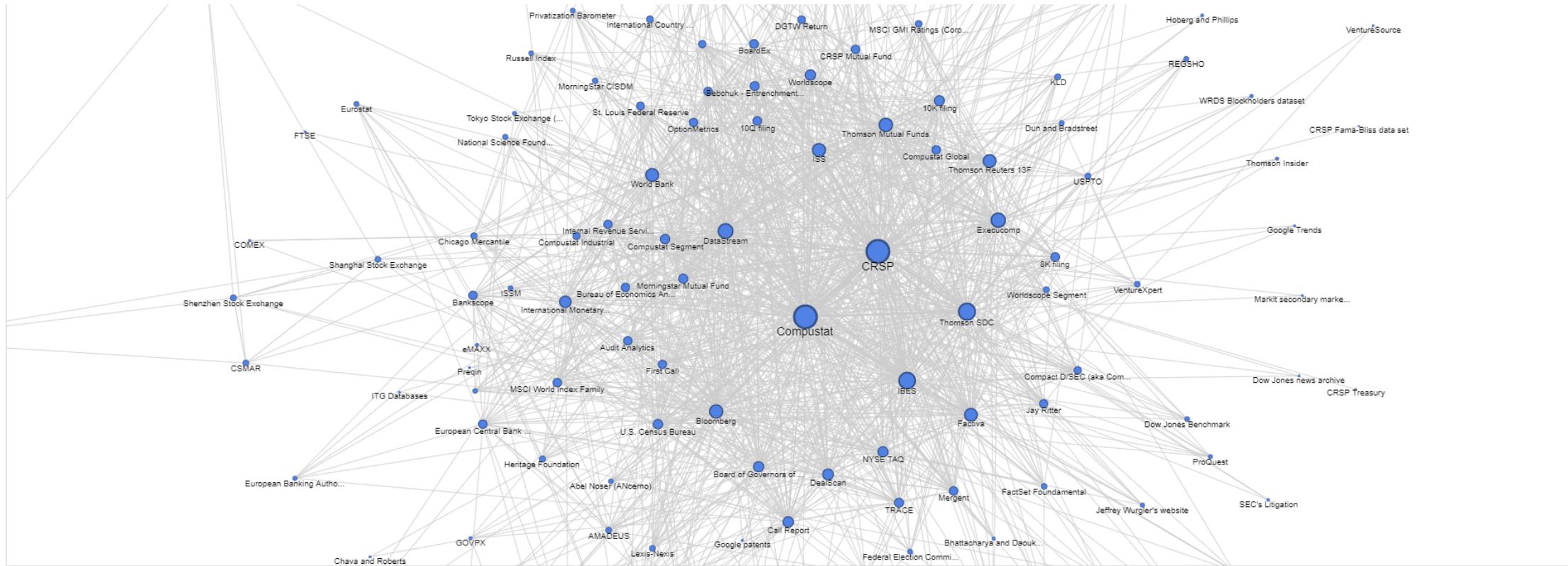
# How Does Research Help Society?



# WRDS: Financial Information Platform

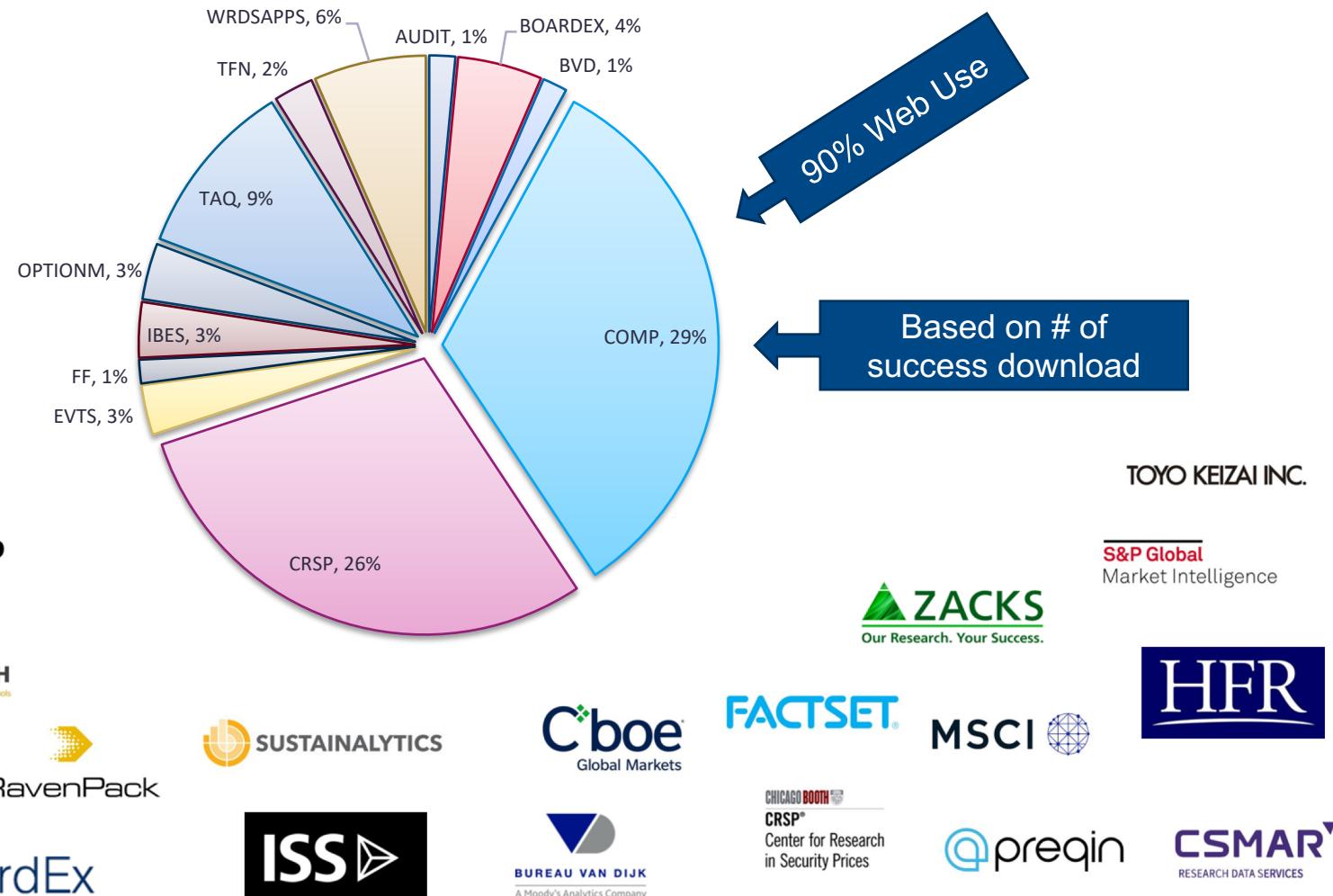


# How Researchers Use Data



# Where to Start?

## Usage by clicks (2018.9-2019.8)



# Infrastructure at WRDS



**S&P Global  
FACTSET**

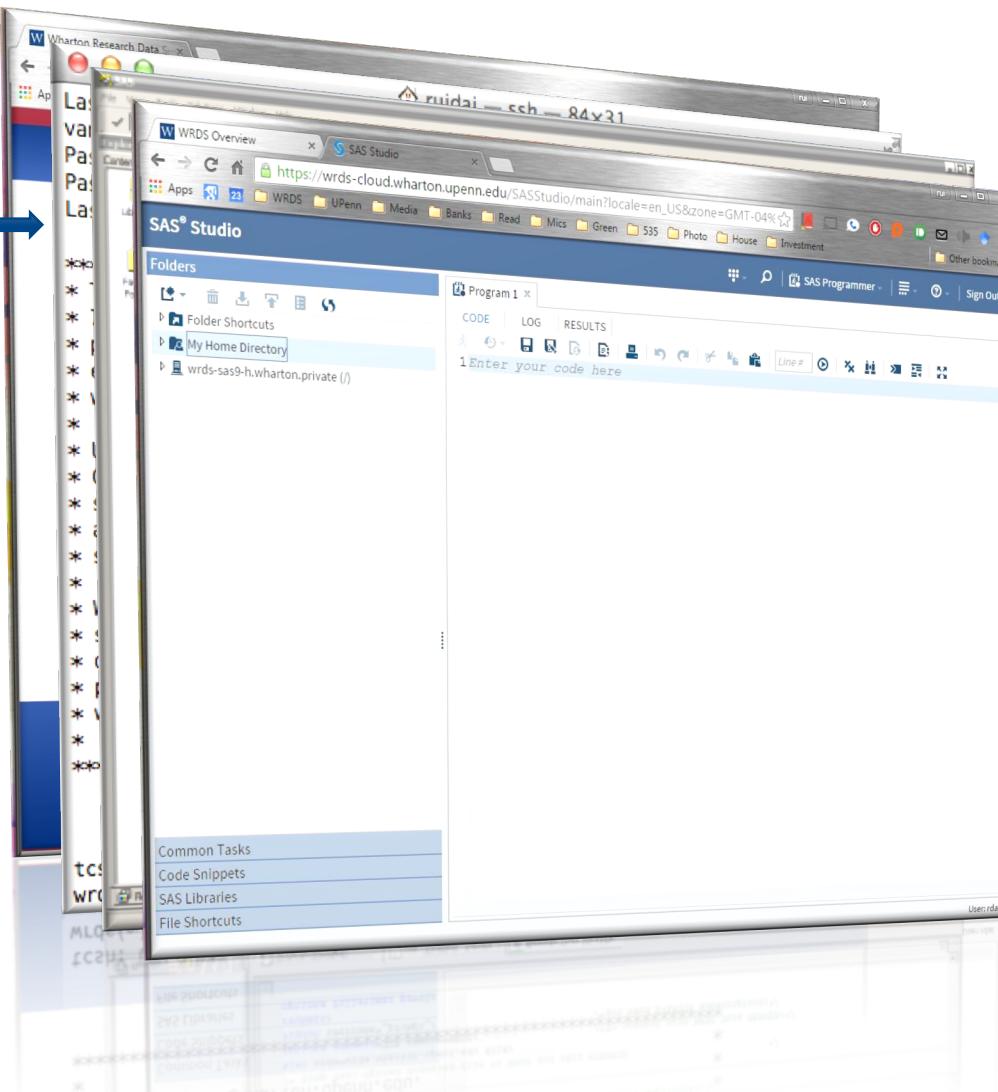


# Classic WRDS Solution



Internet

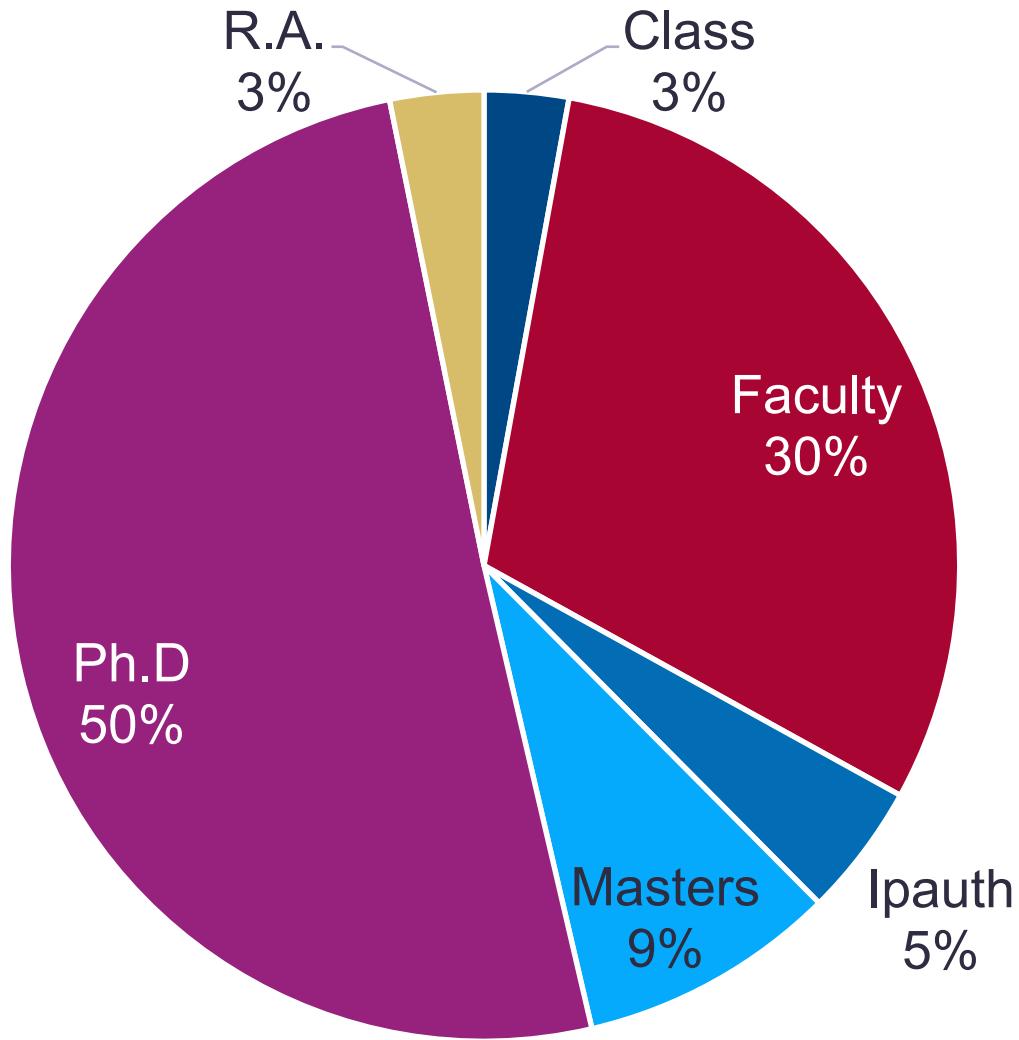
- **Web Queries:**  
Most Browsers and OS
- **Unix Patching:**  
Large Data Crunch
- **PC SAS/CONNECT:**  
Interactive Interface
- **SAS Studio**  
Browser Based



# Current WRDS Solution

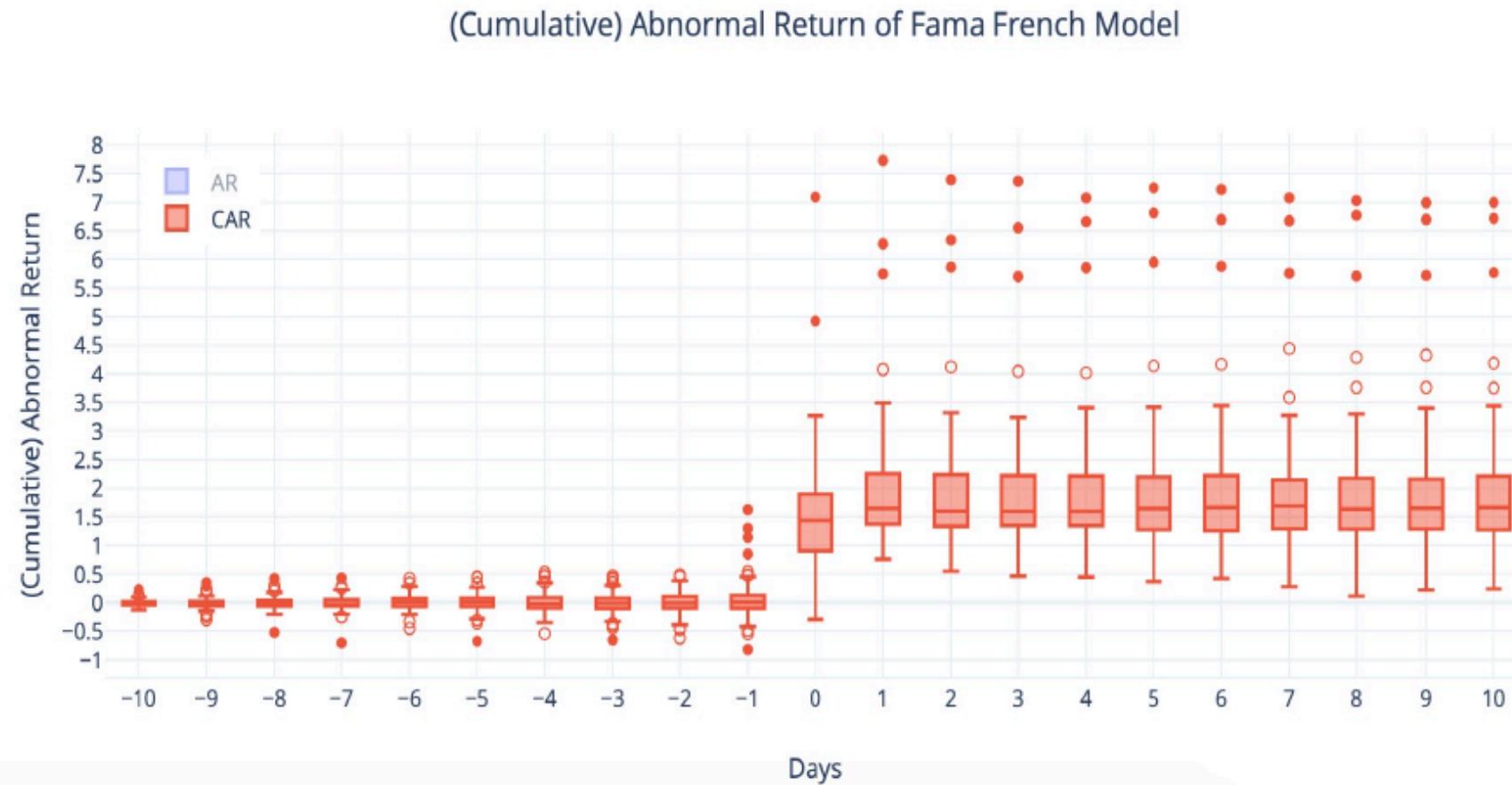


# What Can Students Do?



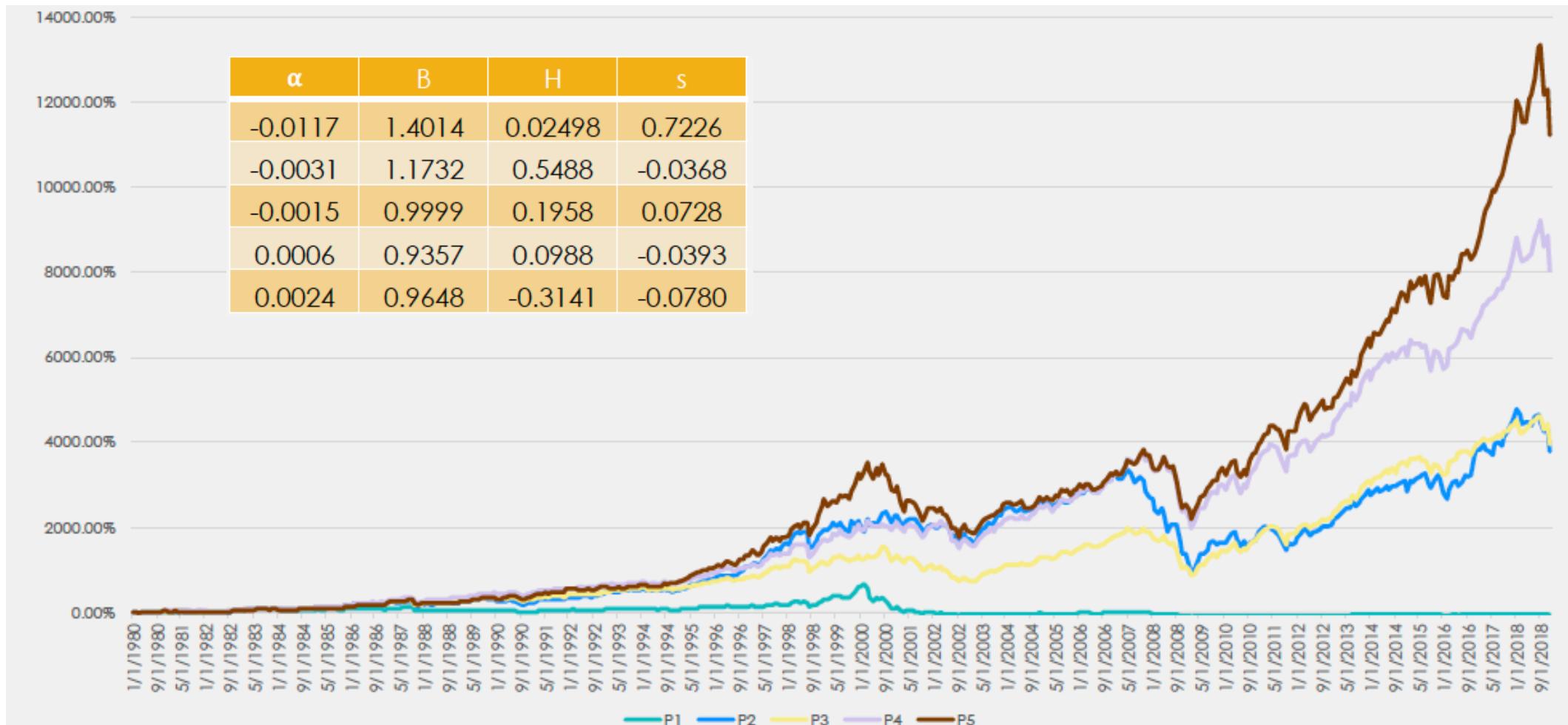
# Case I: Event Studies

Product-related announcement (Mostly Pharmaceutical Products)



# Case II: Quantitatively Models

## Operating Profitability Anomaly



# Some Demonstration of Data Retrieval

- Web Query
- SAS Studio

```
proc sql;  
create table example as  
select distinct a.permno, ticker, a.date, prc, ret, vol  
from crsp.msf as a, crsp.msenames as b  
where a.permno=b.permno and namedt<=date<=nameendt and ticker='IBM';  
quit;
```

- Jupyter Notebook
- Other Interfaces