

Co-searching for Alpha

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Which connections matter for firm value?

Firms do not operate in isolation.

- Developments at other firms affect a focal firm's cash flows and value.
- Information about those firms also helps investors value the focal firm.

We often study familiar connections: suppliers, customers, competitors, and industries.

But economically relevant connections can be **less visible and change over time**.

Our approach: observe which firms hedge funds research together.

Do those revealed connections predict returns?

Hedge-fund research reveals predictive connections

Main finding

Past returns of co-searched firms predict a focal firm's subsequent return.

A long-short strategy earns **68 basis points per month** in five-factor alpha — **about 2% over a quarter**.

Interpretation

Hedge funds recognize how information about one firm matters for another.

Contribution

- Reveal that fluid firm connections are relevant for price discovery.
- Document a dimension of hedge funds' information advantage: interpreting information across firms with hidden links.

Example: Linking Tesla and MGM

Tesla

Automobiles

California headquarters

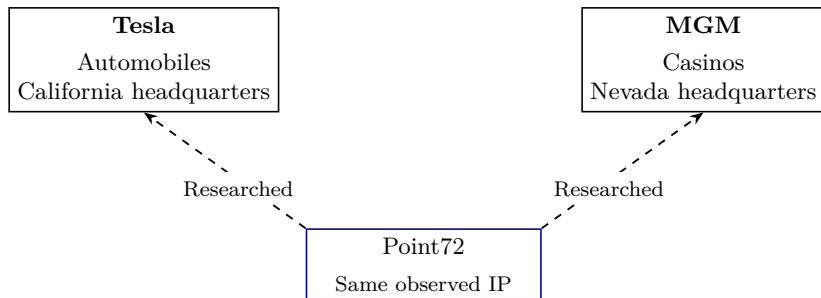
MGM

Casinos

Nevada headquarters

Example: Linking Tesla and MGM

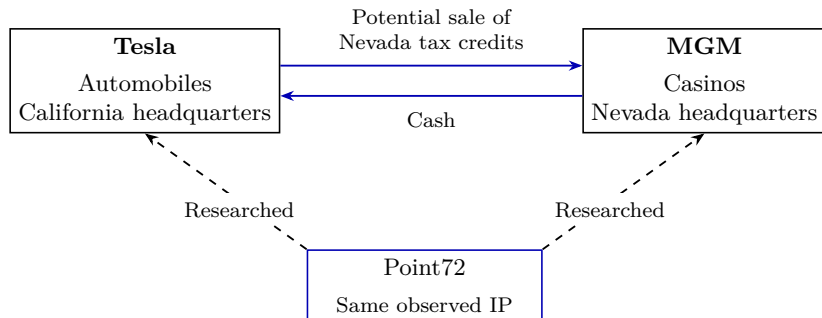
EDGAR filing requests reveal which firms investors research together.



Filing requests four days apart in May 2015

Example: Linking Tesla and MGM

EDGAR filing requests reveal which firms investors research together.



Filing requests four days apart in May 2015

Why the link? Tesla could turn its factory incentives into cash; MGM could use the credits against Nevada gaming taxes.

Different industries and headquarters; a shared economic interest.

How do co-searches become a return signal?

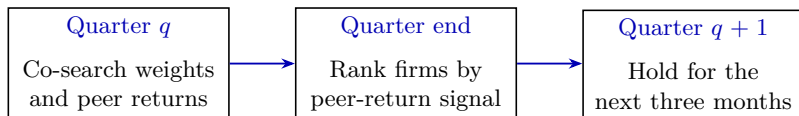
Illustrative numbers of co-searches with Tesla.

MGM	Peer B	Peer C
4 of 8 co-searches	2 of 8 co-searches	2 of 8 co-searches
50% weight	25% weight	25% weight
Past-quarter return	Past-quarter return	Past-quarter return
+10%	-4%	+2%

$$\underbrace{0.50(10\%) + 0.25(-4\%) + 0.25(2\%)}_{\text{Tesla's peer-return signal}} = 4.5\%$$

An attention-weighted summary of how Tesla's peers performed last quarter.

Do peer returns predict what happens next?



Buy the highest peer-return quintile; sell the lowest.

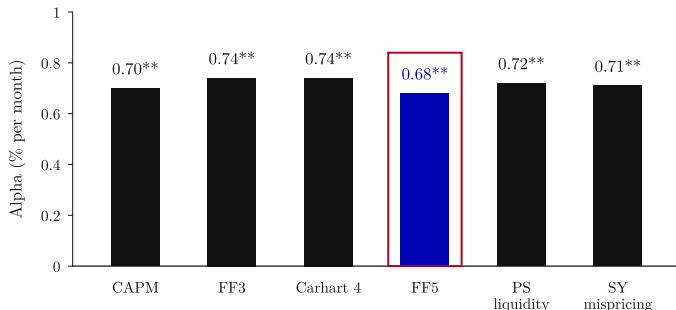
Estimate monthly alpha using standard factor models:

$$r_t^{\text{High-Low}} = \alpha + \beta' \mathbf{f}_t + \varepsilon_t.$$

Alpha: the average monthly strategy return left after factor adjustment.

Measure the connections first. Test the focal firms' returns afterward.

Main finding: Co-searched peers predict returns



68 basis points per month — about 2% over a quarter.

When peers identified by hedge-fund attention do well last quarter, the focal firm tends to do well this quarter.

What else do we learn about the signal?

Beyond own-stock and industry momentum

Peer returns remain predictive in Fama–MacBeth regressions controlling for both the focal firm's and its industry's prior returns.

Complex disclosures

Prediction is stronger when focal-firm disclosures are more complex.

Hedge-fund trading

Higher peer returns are followed by more buying and less selling in aggregate.

Changing connections

Current links predict returns; the stale-link estimate is insignificant. 26.4% of the strongest links disappear the next quarter.

Concern: Are we simply recovering news links?

News co-coverage identifies economically relevant firm links.

Ge, Li, and Linton (2023); Ge, Li, and Zheng (2025).

Co-coverage

Which firms appear together in news?

Co-search

Which firms do hedge funds research together?

We show that they are related: more co-coverage accompanies more co-search.

Does observing investors' research add anything?

Look inside the news: what requires interpretation, and which connections do hedge funds investigate?

Measuring hard versus soft news

We proxy for hard versus soft information using **quantitative content**.

Hard/soft distinction: [Liberti and Petersen \(2019\)](#).

News sources

Full-text WSJ, MarketWatch, and Barron's articles, 2009–2017.

Accessed through ProQuest TDM Studio.

An **information unit** pairs an economic subject with a description.

Numerical: explicit number

“Revenue increased 12%.”

Nonnumerical: no explicit number

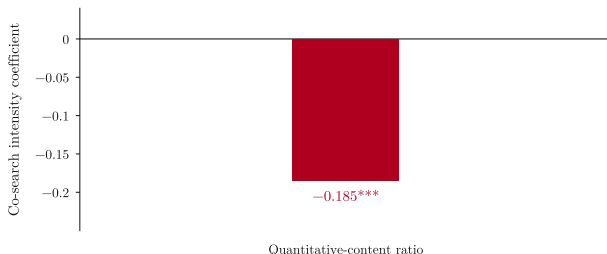
“Demand is expected to stay strong.”

$$Q = \frac{\text{numerical units}}{\text{numerical} + \text{nonnumerical units}}.$$

Lower Q : more qualitative content, our proxy for softness.

More qualitative news, more co-search

Relationship between quantitative content and co-search intensity.



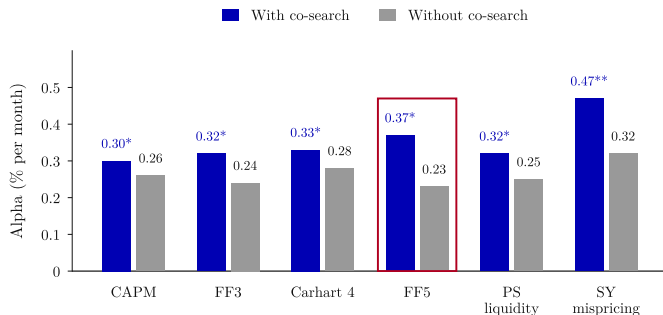
Less numerical content accompanies more intensive research.

Consistent with hedge funds investigating information that needs interpretation.

Do the soft-news links that hedge funds co-search also predict returns?

Co-searched soft-news links predict returns

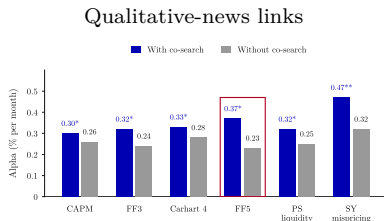
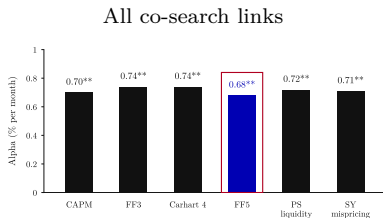
News-covered peer links in the lowest quantitative-content tercile.



Higher alpha estimates for the links hedge funds also research.

Consistent with research identifying the return-relevant connections in qualitative news.

Research reveals connections that matter for prices



Finding

Co-searched peers predict focal-firm returns: **68 basis points per month — about 2% over a quarter.**

Interpretation

Hedge funds' information advantage extends across firms: they recognize and interpret economically relevant connections.

Contribution

A window into price discovery across connected firms: **who identifies the connections, and which information prices have yet to reflect.**

From filing requests to a return signal

1. Measure joint research

Link firms when the same hedge fund requests their 10-K/Q filings within seven days. Each pair contribution is the smaller daily request count. Aggregate across dates and funds within quarter q to obtain co-search weight $c_{ij,q}$.

2. Summarize peer performance

$$w_{ij,q} = \frac{c_{ij,q}}{\sum_{k \neq i} c_{ik,q}}, \quad S_{i,q} = \sum_{j \neq i} w_{ij,q} r_{j,q}.$$

For focal firm i , $w_{ij,q}$ is peer j 's share of total co-search weight and $r_{j,q}$ is that peer's quarterly return. Their weighted average, $S_{i,q}$, is the return signal.

3. Test subsequent returns

Rank firms into quintiles by $S_{i,q}$. Buy the highest quintile and sell the lowest for quarter $q + 1$, weighting stocks within each quintile by market value. Estimate factor-model alphas from the monthly long-short returns.

Joint research defines the peers; their past returns define the signal.

Tesla–MGM: the economic link and its timing

Why both firms could benefit: Tesla could turn transferable Gigafactory tax credits into cash; MGM could use the credits against Nevada gaming fees.

- **October 17, 2014:** Nevada officials discuss MGM's willingness to buy Tesla's credits at par. The arrangement is prospective.
- **May 1, 2015:** Officials state that Tesla's credits have not yet been awarded or sold.
- **May 7–11, 2015:** Tesla signs its Nevada incentive agreement on May 7 and discloses it in its 10-Q, [filed May 11](#). The disclosure does not name MGM.
- **May 18 and 22, 2015:** The same Point72 IP address requests MGM filings twice on May 18 and Tesla filings twelve times on May 22.
Co-search contribution: $\min(2, 12) = 2$.
- **June 2016 reporting:** Tesla confirms completed sales of roughly \$20 million in credits to MGM.

The searches reveal joint attention to an economic connection; they do not identify the fund's motive.