Social Media Livestreaming: Investor Information or Persuasion?

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Motivation

Mutual funds comprise a majority of household savings

- US: $22.5T in mutual funds (ICI 2024);
- China: ~$4T in AUM across 10,000+ mutual funds.

Households struggle to make well-informed choices

- Many funds underperform (e.g., Fama & French 2010)
- Dispersion in fees even among identical index funds (e.g., Elton et al. 2004)
- Complexity & obfuscation drive poor decisions (e.g., deHaan et al. 2021)

Motivation

Decades of regulation aim to mitigate information frictions and improve investors' decisions

FINRA Communications and Disclosure Rules

- 2210. Communications with the Public
- 2211. Communications with the Public About Variable Life Insurance and Variable Annuities
- 2212. Use of Investment Companies Rankings in Retail Communications
- 2213. Requirements for the Use of Bond Mutual Fund Volatility Ratings
- 2214. Requirements for the Use of Investment Analysis Tools
- 2215. Communications with the Public Regarding Security Futures
- 2216. Communications with the Public About Collateralized Mortgage Obligations (CMOs)
- 2220. Options Communications
- 2230. Customer Account Statements and Confirmations
- 2241. Research Analysts and Research Reports
- 2242. Debt Research Analysts and Debt Research Reports
- 2264. Margin Disclosure Statement
- 2266. SIPC Information
- 2267. Investor Education and Protection
- 2270. Day-Trading Risk Disclosure Statement
- 3310. Anti-Money Laundering Compliance Program

SEC Advertising Rules

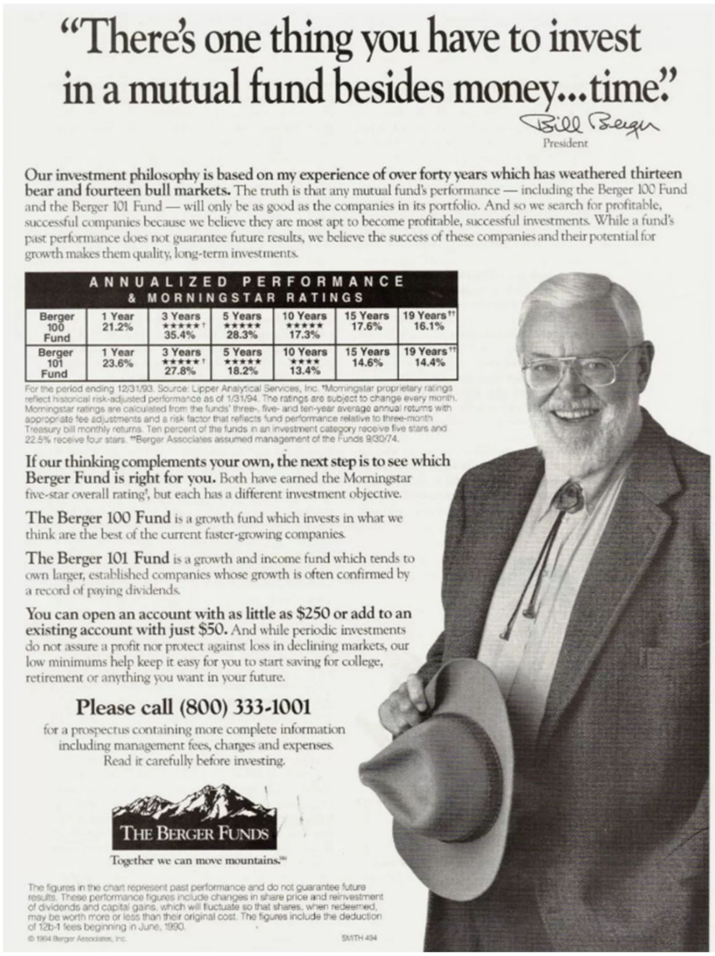
- 230.134 Communications not deemed a prospectus.
- 230.134a Options material not deemed a prospectus.
- 230.135a Generic advertising.
- 230.156 Investment company sales literature
- 230.433 Conditions to permissible post-filing free writing prospectuses.
- 230.482 Advertising by an investment company as satisfying requirements of section 1
- 270.34b-1 Sales literature deemed to be misleading.

Motivation

Usually, funds have limited communication with investors

- IPO prospectus, annual & quarterly reports, once/twice-a-year shareholder letters
- Fund advertisement (usually newspaper and magazines)
  - Presented in short format and highlight past performance

1995


"There's one thing you have to invest in a mutual fund besides money...time."
Bill Berger
President
Our investment philosophy is based on my experience of over forty years which has weathered thirteen bear and fourteen bull markets. The truth is that any mutual fund's performance — including the Berger 100 Fund and the Berger 101 Fund — will only be as good as the companies in its portfolio. And so we search for profitable, successful companies because we believe they are most apt to become profitable, successful investments. While a fund's past performance does not guarantee future results, we believe the success of these companies and their potential for growth makes them quality, long-term investments.
ANNUALIZED PERFORMANCE & MORNINGSTAR RATINGS
Berger 100 Fund | 1 Year 21.2% | 3 Years ★★★★★† 35.4% | 5 Years ★★★★★ 28.3% | 10 Years ★★★★★ 17.3% | 15 Years 17.6% | 19 Years†† 16.1%
Berger 101 Fund | 1 Year 23.6% | 3 Years ★★★★★† 27.8% | 5 Years ★★★★★ 18.2% | 10 Years ★★★★ 13.4% | 15 Years 14.6% | 19 Years†† 14.4%
For the period ending 12/31/93. Source: Lipper Analytical Services, Inc. †Morningstar proprietary ratings reflect historical risk-adjusted performance as of 1/31/94. The ratings are subject to change every month. Morningstar ratings are calculated from the funds' three-, five- and ten-year average annual returns with appropriate fee adjustments and a risk factor that reflects fund performance relative to three-month Treasury bill monthly returns. Ten percent of the funds in an investment category receive five stars and 22.5% receive four stars. ††Berger Associates assumed management of the Funds 9/30/74.
If our thinking complements your own, the next step is to see which Berger Fund is right for you. Both have earned the Morningstar five-star overall rating†, but each has a different investment objective.
The Berger 100 Fund is a growth fund which invests in what we think are the best of the current faster-growing companies.
The Berger 101 Fund is a growth and income fund which tends to own larger, established companies whose growth is often confirmed by a record of paying dividends.
You can open an account with as little as $250 or add to an existing account with just $50. And while periodic investments do not assure a profit nor protect against loss in declining markets, our low minimums help keep it easy for you to start saving for college, retirement or anything you want in your future.
Please call (800) 333-1001
for a prospectus containing more complete information including management fees, charges and expenses. Read it carefully before investing.
THE BERGER FUNDS
Together we can move mountains.℠
The figures in the chart represent past performance and do not guarantee future results. These performance figures include changes in share price and reinvestment of dividends and capital gains, which will fluctuate so that shares, when redeemed, may be worth more or less than their original cost. The figures include the deduction of 12b-1 fees beginning in June, 1990.
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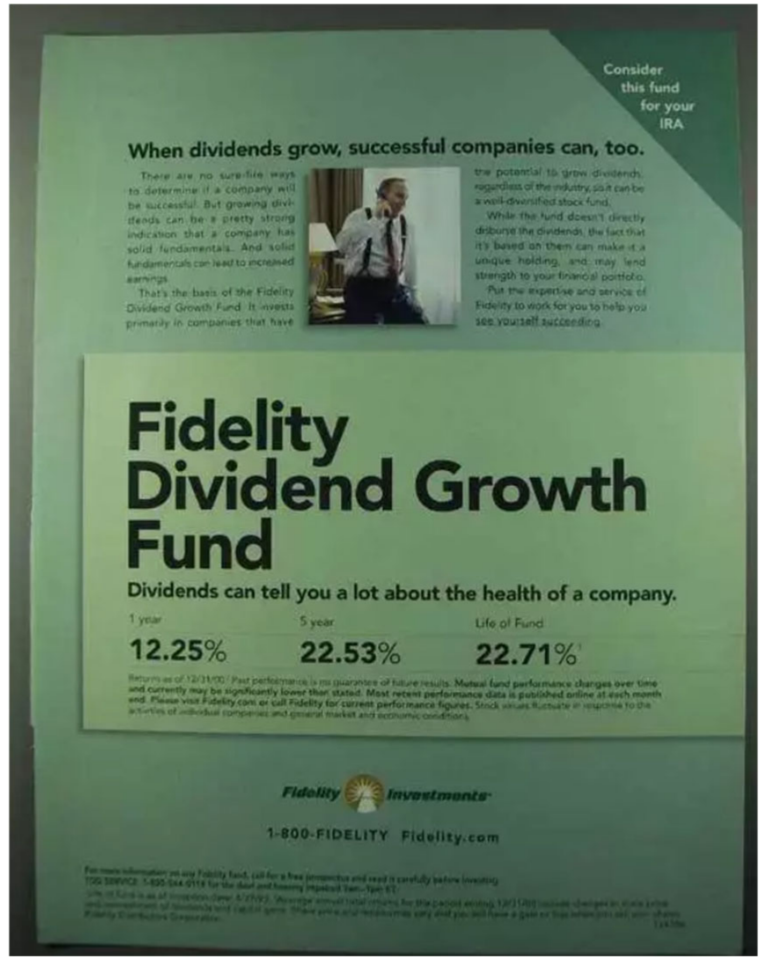
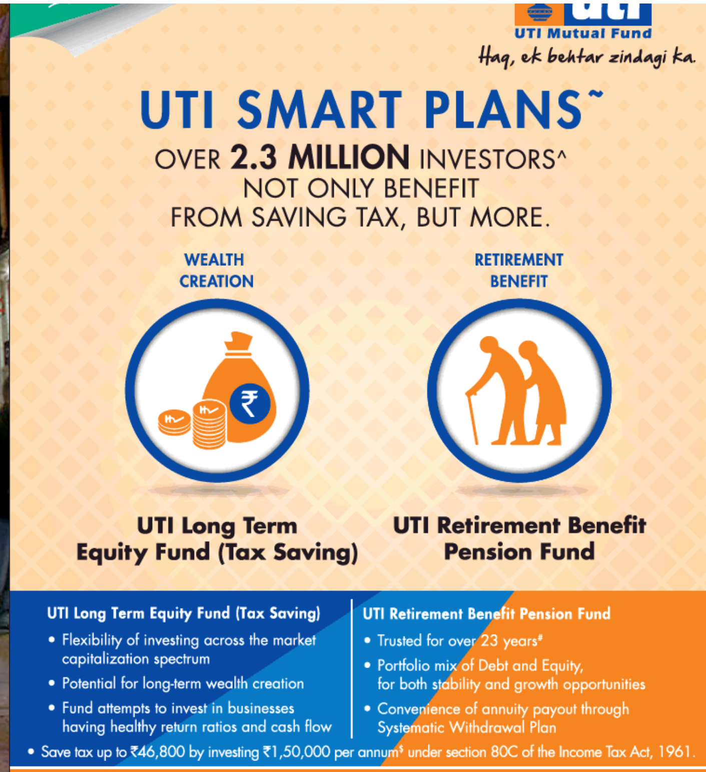
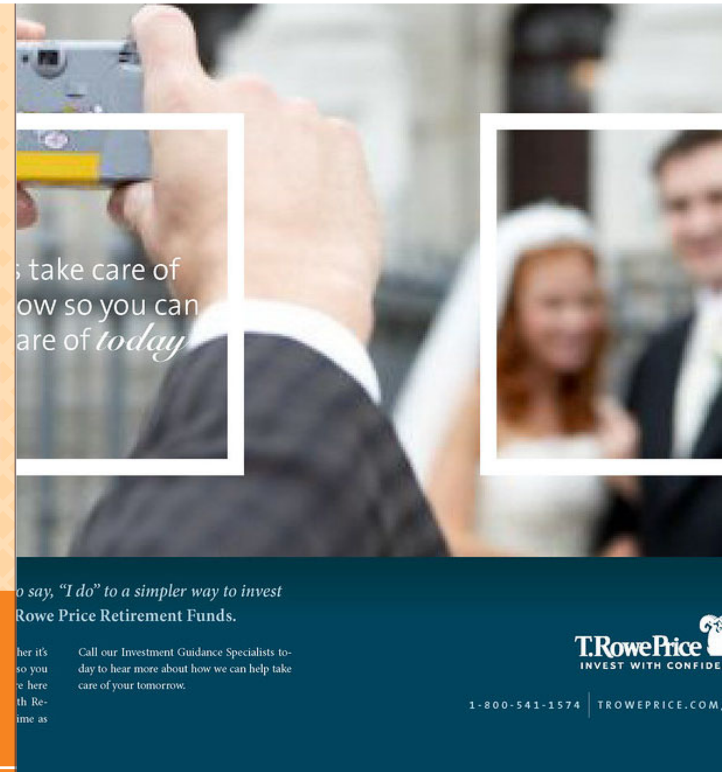
SMITH 494

2001


Consider this fund for your IRA
When dividends grow, successful companies can, too.
There are no sure-fire ways to determine if a company will be successful. But growing dividends can be a pretty strong indication that a company has solid fundamentals. And solid fundamentals can lead to increased earnings.
That's the basis of the Fidelity Dividend Growth Fund. It invests primarily in companies that have the potential to grow dividends, regardless of the industry, so it can be a well-diversified stock fund.
While the fund doesn't directly disburse the dividends, the fact that it's based on them can make it a unique holding, and may lend strength to your financial portfolio.
Put the expertise and service of Fidelity to work for you to help you see yourself succeeding.
Fidelity Dividend Growth Fund
Dividends can tell you a lot about the health of a company.
1 year 12.25%
5 year 22.53%
Life of Fund 22.71%
Fidelity Investments
1-800-FIDELITY Fidelity.com


T.RowePrice
INVEST WITH CONFIDENCE
Growth opportunities
PREPARATION
IS EVERYTHING.


UTI Mutual Fund
Haq, ek behtar zindagi ka.
UTI SMART PLANS
OVER 2.3 MILLION INVESTORS^
NOT ONLY BENEFIT
FROM SAVING TAX, BUT MORE.
WEALTH CREATION
RETIREMENT BENEFIT
UTI Long Term Equity Fund (Tax Saving)
UTI Retirement Benefit Pension Fund
UTI Long Term Equity Fund (Tax Saving)
• Flexibility of investing across the market capitalization spectrum
• Potential for long-term wealth creation
• Fund attempts to invest in businesses having healthy return ratios and cash flow
UTI Retirement Benefit Pension Fund
• Trusted for over 23 years#
• Portfolio mix of Debt and Equity, for both stability and growth opportunities
• Convenience of annuity payout through Systematic Withdrawal Plan
• Save tax up to ₹46,800 by investing ₹1,50,000 per annum$ under section 80C of the Income Tax Act, 1961.


take care of
ow so you can
are of today
o say, "I do" to a simpler way to invest
Rowe Price Retirement Funds.
Call our Investment Guidance Specialists to-day to hear more about how we can help take care of your tomorrow.
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Investment return and principal value will fluctuate, so you may have a gain or loss when shares are sold.
Current performance may be higher or lower than that quoted.
Fidelity
INVESTMENTS

Motivation

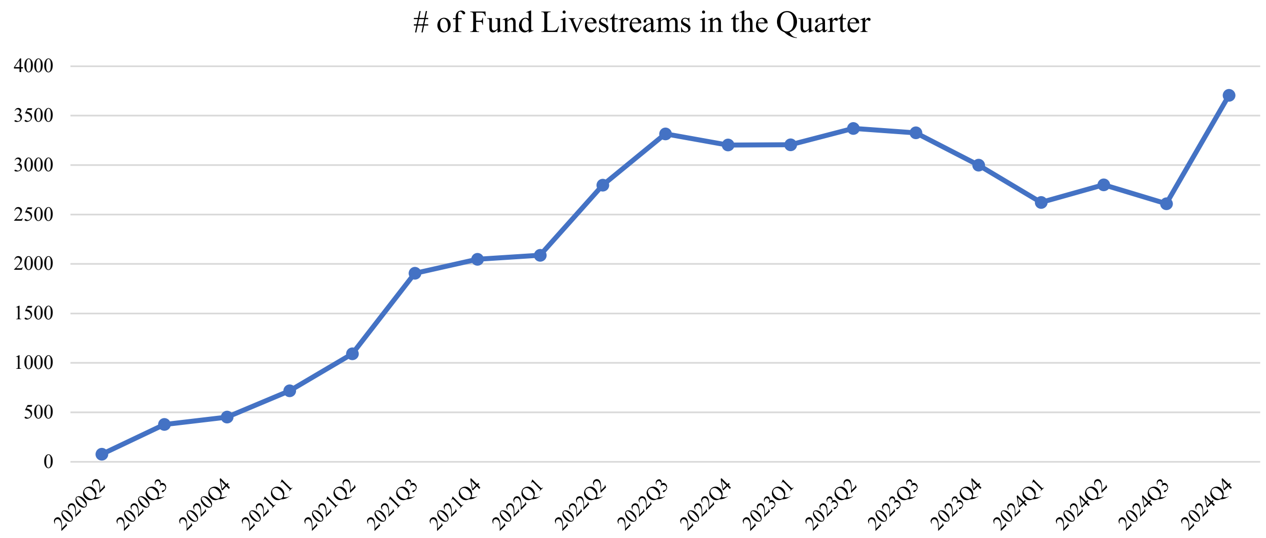
Usually, funds have limited communication with investors

- IPO prospectus, annual & quarterly reports, once/twice-a-year shareholder letters
- Fund advertisement (usually newspaper and magazines)
  - Minimal content other than past performance
  - Usually have poor future performance (Jain & Wu 2000)

China Mutual Fund Livestreams

Started on fund sales platforms in 2020 Q2

Widely adopted to communicate with retail investors.



China Mutual Fund Livestreams

Key Features

- Well-organized: Channels run by a fund family, with regular hosts and dedicated studios.

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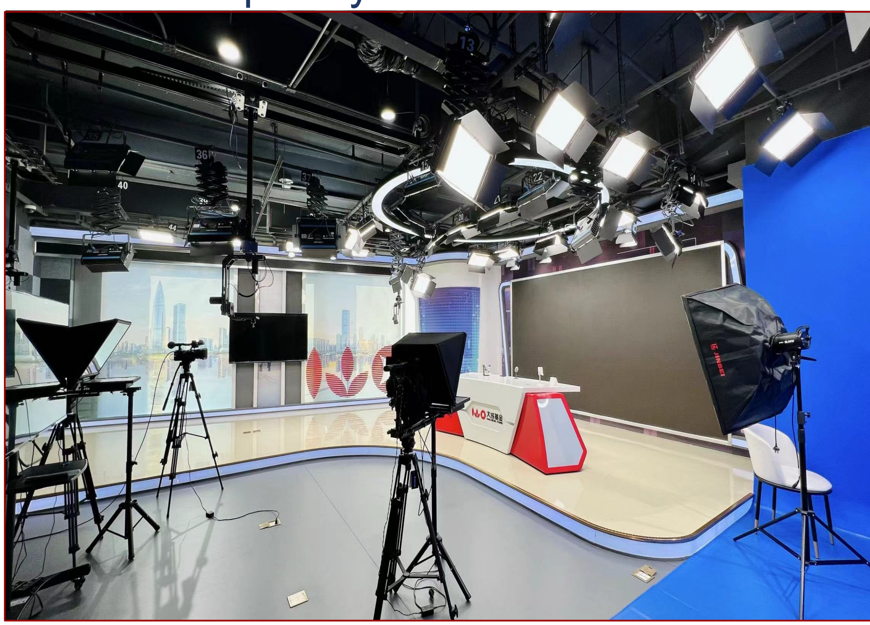

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- Long format: ~1 hour long
- Wide range of topics: market/sector performance, momentary policy, asset allocation strategy, global economy, technological trends, etc.
- Interactive: Speakers answer questions submitted in advance or live
- Popular: Average ~47,000 viewers each

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- Popular: Average ~47,000 viewers each
- Showcase selected funds, with option to buy

China Mutual Fund Livestreams

Livestream title

Speakers' name & job function

14 funds in the shopping cart

Here is the translation of text in the screenshot:

Header in Small Front:

(App name) *Tiantian Fund*

(Channel name) Nanfang Fund Family

(Orange icon on the top left) Follow the Channel

(Livestream viewership) 83,000 Participants

(Livestream speakers) Xiaoxi Zheng || Tang Tang

(Livestream title) Will Global Semiconductor Sector Hit the Bottom in the Second Half of the Year?

Header in Large Front:

(Fund name) Nanfang Information Innovation Fund

(Fund class & purchase code) Class A 007490 || Class C 007491

Text in the Middle:

(Female speaker on the left) Tang Tang, fund selector

(Female speaker on the right) Xiaoxi Zheng, fund manager of Nanfang Information Innovation Fund

Text at the Bottom:

- (User comment) [Muxin] 23456: 6
- (Disclaimer) [Notice: The content of the livestream does not constitute investment advice. It is for reference only. The content is suitable for users with high risk tolerance. Please make your own judgment. Past performance of the fund does not represent future performance. Please carefully read the fund contract and risk disclosure materials. Fund investment is risky and requires caution.]
- (Orange shopping cart icon on the bottom left) 14 funds ← "Check out the fund details"
- (Icon with arrow) Share the livestream

(Icon with heart) Like the livestream || "57,000 likes"

China Mutual Fund Livestreams

Viewers can purchase with one click.

Here is the translation of text in the image:

Related Funds

Fund Name: Nanfang Information Innovation Mixed Fund Class A

- **Risk Level**: Equity-Oriented Mixed Fund, Mid-to-High Risk
- **Performance Since Inception**: 59.03%
- **Orange Bar**: Purchase
- **Icon with Star**: Add to Favorite

Fund Name: Nanfang Information Innovation Mixed Fund Class C

- **Risk Level**: Equity-Oriented Mixed Fund, Mid-to-High Risk
- **Performance Since Inception**: 52.16%
- **Orange Bar**: Purchase
- **Icon with Star**: Add to Favorite

Fund Name: Nanfang Artificial Intelligence Mixed Fund

- **Risk Level**: Equity-Oriented Mixed Fund, Mid-to-High Risk
- **Performance Since Inception**: 111.37%

(More Funds on Scroll)

China Mutual Fund Livestreams

Key Features

- Well-organized: Channels run by a fund family, with regular hosts and dedicated studios.
- Professional: Speakers must have asset management certificate. Fund managers and analysts attend frequently.
- Frequent: >27,000 livestreams held by 91% of fund families
- Long format: ~1 hour long
- Wide range of topics: market/sector performance, momentary policy, asset allocation strategy, global economy, technological trends, etc
- Interactive: Speakers answer questions submitted in advance or live
- Popular: Average ~47k viewers each
- Showcase select funds, with option to buy

Permitted as “investor education” (AMAC, 2021)

China Mutual Fund Livestreams

Question & Theory

RQ: Are livestreams informative or persuasive to retail investors?

Information Hypothesis:

- **Theory**: livestreams are by high-type managers, can signal future out-performance
  - Managers carry significant livestreaming cost: preparation efforts; risk of poor Q&A; implicit commitment to fund performance
    - Separating equilibrium if costs are lower for high-type managers
  - Investors can infer the manager's skills from discussions
  - If investors sell after poor performance, then only high-type managers will incur the cost of livestreaming
  - Especially plausible given the effects of social media in equity markets
- **Prediction**: Livestreaming funds demonstrate **superior** subsequent return.

Question & Theory

RQ: Are livestreams informative or persuasive to retail investors?

Persuasion Hypothesis:

- **Theory**: livestreams are intended to persuade investors to purchase regardless of expected future performance
  - Could be due to spurious differentiation or attention effects
  - Consistent with findings for standard fund advertising (e.g., Jain & Wu 2000)

- **Prediction**: Livestreaming funds demonstrate **inferior** subsequent return.

Preview of Findings

1) Livestreams follow bouts of strong performance
   - Potentially consistent with both informativeness and persuasion

2) Livestreams drive fund flows
   - Consistent with both hypotheses

3) Buying decisions worsen & livestream funds underperform
   - Only consistent with **persuasion**
   - Effects are stronger when managers attend and with more persuasive delivery (e.g., speakers are more attractive and sound more excited)

Sample

Livestream Collection

- Livestreams from *Tiantian Fund* mobile app.
- 27,000 livestreams for active equity funds from 2020Q2-2024Q4.

	# Fund-Classes	**# Fund-Class-Months**
All predominantly equity fund-classes during May 2020 – Dec 2024	9,116	328,083
	# Funds	**# Fund-Months**
Consolidate to the fund level	5,599	219,367
Remove index, closed-end, Qualified Domestic Institutional Investor, and umbrella funds	4,413	179,385
Remove funds launched within the past 12 months	4,130	156,908
Remove fund-months with missing key variables	**3,970**	**147,151**
Including:		
Mutual funds in livestreams in the month	**2,243**	**18,926**

Sample

Panel B: Livestreaming adoption over time

Period	Families that livestream during quarter	Cumulative families that livestream through quarter	Funds that livestream during quarter	Cumulative funds that livestream through quarter
(1)	(2)	(3)	(4)	(5)
2020Q2	29 (21%)	29 (21%)	44 (1%)	44 (1%)
2020Q3	59 (43%)	64 (46%)	182 (5%)	206 (5%)
2020Q4	61 (44%)	74 (54%)	227 (6%)	347 (9%)
2021Q1	71 (51%)	84 (61%)	319 (8%)	519 (13%)
2021Q2	63 (46%)	87 (63%)	308 (8%)	637 (16%)
2021Q3	84 (61%)	95 (69%)	509 (13%)	866 (22%)
2021Q4	83 (60%)	100 (72%)	542 (14%)	1,033 (26%)
2022Q1	86 (62%)	104 (75%)	566 (14%)	1,168 (30%)
2022Q2	90 (65%)	106 (77%)	615 (16%)	1,292 (33%)
2022Q3	90 (65%)	107 (78%)	671 (17%)	1,408 (36%)
2022Q4	94 (68%)	111 (80%)	687 (17%)	1,520 (38%)
2023Q1	103 (75%)	115 (83%)	816 (21%)	1,688 (43%)
2023Q2	104 (75%)	118 (86%)	799 (20%)	1,804 (46%)
2023Q3	97 (70%)	119 (86%)	765 (19%)	1,906 (48%)
2023Q4	100 (72%)	122 (88%)	707 (18%)	1,976 (50%)
2024Q1	90 (65%)	124 (90%)	651 (16%)	2,090 (53%)
2024Q2	90 (65%)	124 (90%)	598 (15%)	2,156 (54%)
2024Q3	86 (62%)	124 (90%)	487 (12%)	2,180 (55%)
2024Q4	100 (72%)	125 (91%)	625 (16%)	2,243 (56%)

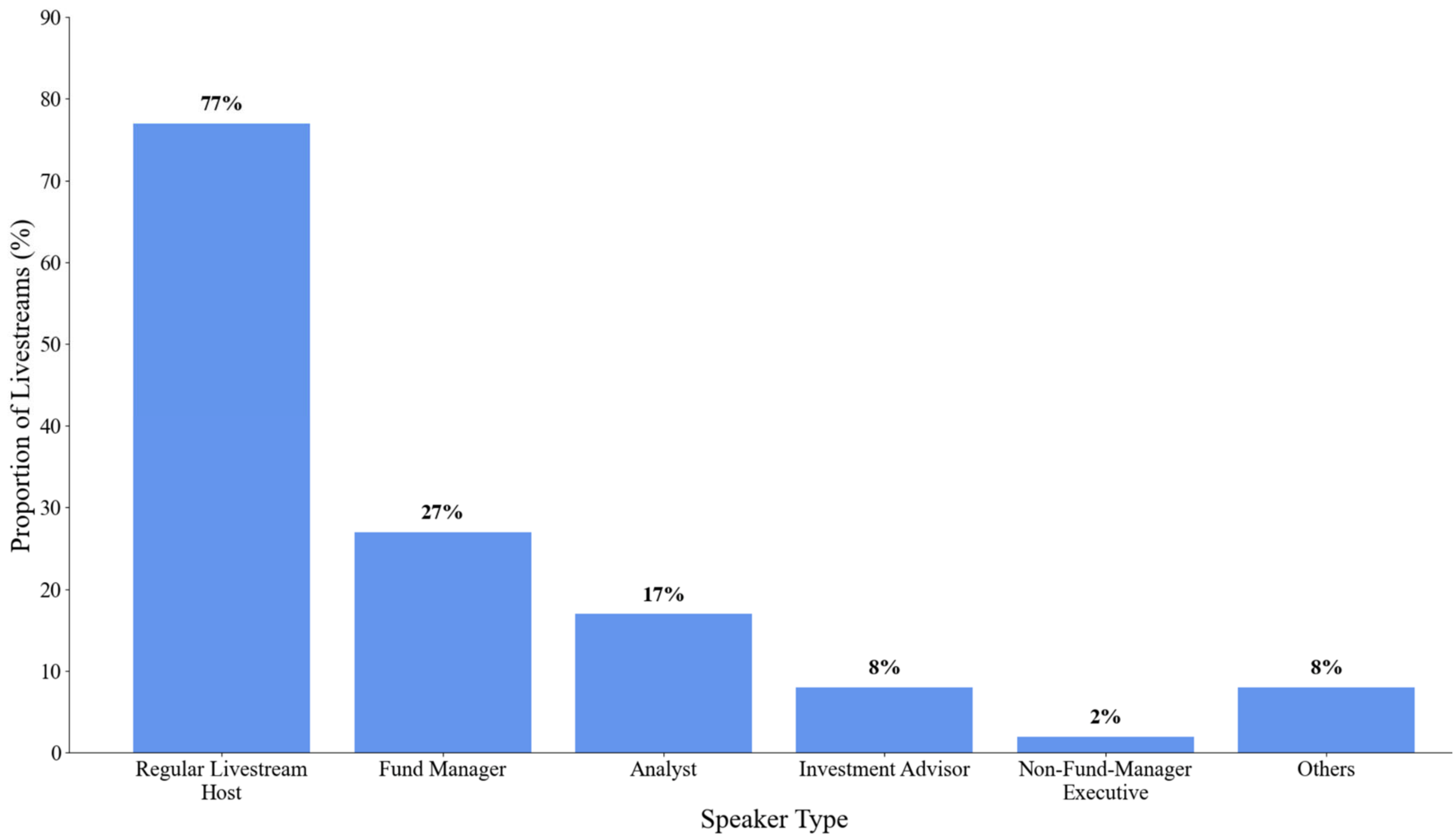
Sample

Panel A: Descriptive statistics

Variables	**# of Livestreams**	**Mean**	**S.D.**	**25%**	**Median**	**75%**
Length (minutes)	27,046	53	32	39	56	60
# of Viewers	27,046	47,076	52,700	22,220	35,956	50,090
# of Sample Funds Featured	27,046	3.88	2.61	2	3	5
# of Speakers	26,103	1.73	0.91	1	2	2
# of Topics in Livestream	26,103	7.07	1.78	6	7	8
Largest Topic (% of Livestream)	26,103	44%	17%	32%	40%	53%
2nd Largest Topic (% of Livestream)	26,103	21%	7%	16%	21%	25%
3rd Largest Topic (% of Livestream)	26,103	13%	5%	10%	13%	17%

% of Time in Livestream	Keywords (translated)	ChatGPT Summary
18.93%	Market, Sector, Valuation, Market Trend, Industry, Situation, Opportunity, Performance, Attention, Position, Rebound, Adjustment, Rise, Decline, Overall, Investment, Especially, Performance, Short-Term, Investor	Market Conditions & Investment Performance
13.95%	Investment, Fund, Returns, Allocation, Market, Asset, Risk, Product, Strategy, Fluctuation, Investor, Selection, Long-Term, Stock, Portfolio, Equity, Hold, Quantitative, Hope, Suitable	Fund Investment Strategies & Portfolio Management
12.77%	Economy, Market, Policy, Expectation, Data, United States, Impact, Situation, Interest Rate Cut, Overall, Growth, Domestic, Federal Reserve, Global, Factor, China, Meeting, Overseas, Real Estate, Inflation	Global Economic & Market Expectations
12.28%	New Energy, Semiconductor, Industry, Automobile, Chip, Industry, Demand, Development, Photovoltaic, Industrial Chain, Field, Technology, Future, Robot, Domestic, Direction, Intelligent, Related, China, Energy	Emerging China Tech & Green Energy
8.89%	Consumption, Industry, Company, Medicine, Innovation, Enterprise, Sector, Liquor, Healthcare, Growth, Demand, Focus, Product, Future, Field, Track, Investment, Direction, Improvement, R&D	Consumer & Healthcare Sector Growth
8.18%	Fund, Product, Investment, Attention, Manager, Risk, Management, Investor, Performance, Performance, Related, This Fund, Viewpoint, Returns, Situation, Reminder, Risk Tolerance, China Asset Management, Content, Mixed	Fund Performance & Risk Management
8.13%	Meeting Minutes, Development, Investment, Artificial Intelligence, Company, Technology, Model, Research, Industry, Gaming, Future, Economy, Technology, Industry, Work, Digital, Data, China, Finance, Innovation	AI & Technology Investment Trends
6.85%	Follow, Hope, Interaction, Benefits, Communication, Content, Fans, Special, End, Topic, Assistant, Market, Event, Support, Wealth, Viewpoint, Related, Red Envelope, Interested, Discussion Forum	Investor Engagement & Support
5.55%	Index, Dividend, China Securities, Hong Kong Stocks, Industry, Company, Market, Technology, Market Capitalization, Stocks, Performance, Dividend Payout, Dividend, Growth, Style, Sci-Tech Innovation, Value, Valuation, Attention, Enhancement	Stock Performance & Dividend Growth
4.47%	Bonds, Interest Rate, Gold, Funds, Assets, Bank, Credit, Bond Market, Government Bonds, Yield, Risk, Trading, Price, Market, Liquidity, Bond Trading, Returns, Situation, US Dollar, Short-Term Bonds	Bond Market & Interest Rates

Speakers



Proportion of Livestreams (%)
0
10
20
30
40
50
60
70
80
90
77%
27%
17%
8%
2%
8%
Regular Livestream Host
Fund Manager
Analyst
Investment Advisor
Non-Fund-Manager Executive
Others
Speaker Type

Determinants

Dependent Variables:	(1)	(2)	(3)	(4)
	First Stream$_m$		*Livestream*$_m$	
Recent Return$_{m-1}$	0.008***	0.008***	0.025***	$\boxed{0.030^{***}}$
	(10.31)	(9.55)	(4.93)	$\boxed{(7.39)}$
Top 5 Return$_{m-1}$	0.007***	0.007***	0.099***	$\boxed{0.032^{***}}$
	(6.28)	(4.90)	(9.25)	$\boxed{(6.34)}$
Management Fee$_{m-1}$	0.001*	-0.000	-0.002	0.004
	(1.94)	(-0.03)	(-0.53)	(0.43)
Service Fees$_{m-1}$	0.001***	-0.001	$\boxed{0.040^{***}}$	0.021***
	(3.04)	(-0.85)	$\boxed{(7.43)}$	(4.15)
Loads$_{m-1}$	0.000	0.005	$\boxed{-0.027^{***}}$	0.027
	(0.33)	(1.51)	$\boxed{(-8.66)}$	(1.36)
Fund Size$_{m-1}$	0.000	-0.009***	0.046***	0.111***
	(0.40)	(-7.01)	(8.82)	(13.01)
Fund Age$_{m-1}$	-0.005***	-0.021***	0.014***	0.029***
	(-10.24)	(-7.68)	(2.68)	(3.15)
Disclosure$_m$	0.013	0.013	-0.011	0.010
	(0.69)	(0.66)	(-0.57)	(0.43)
Fund FE	No	Yes	No	Yes
Yr-Month FE	Yes	Yes	Yes	Yes
Cluster	Fund Family	Fund Family	Fund Family	Fund Family
Sample	Fund-Yr-Month	Fund-Yr-Month	Fund-Yr-Month	Fund-Yr-Month
# of Observations	147,151	147,151	147,151	147,151
Adjusted R-squared	0.012	0.002	0.072	0.325

Quarterly Flows

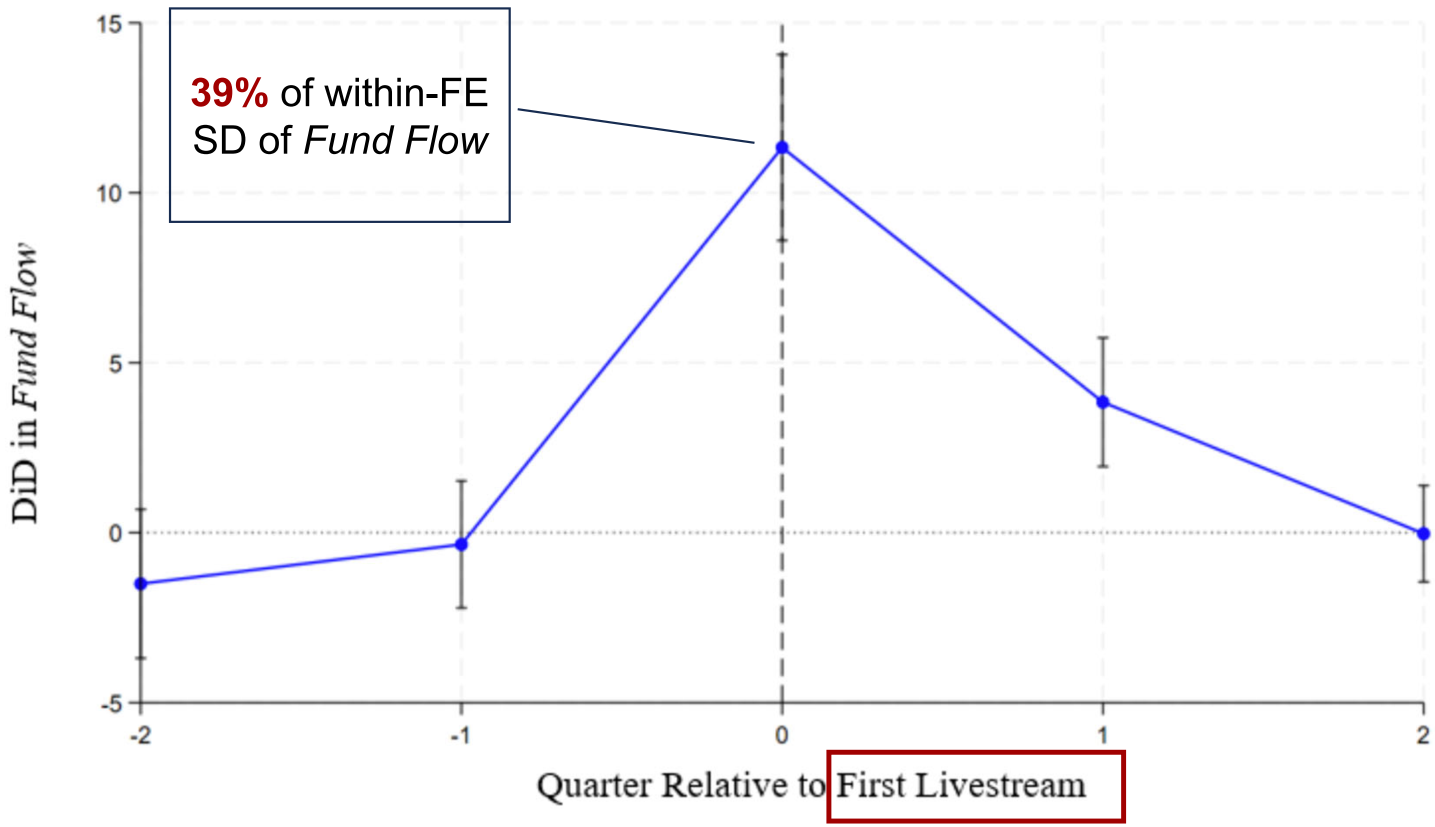
Quarterly flows:

$$Fund\ Flow_q = \frac{NAV_q - NAV_{q-1} \times (1 + Net\ Return_q)}{NAV_{q-1}}$$

Generalized DiD

- $Flow_{q+j} = \beta_1 Livestream_q + \beta_k Controls_{q-1} + Fund\ FE + YQ\ FE + \varepsilon$

Quarterly Flows



Quarterly Flows

Dependent Variable:	(1)	(2)
	Fund Flow$_q$	
First Stream$_q$	11.332***	
	(8.12)	
Livestream$_q$		10.649***
		(14.45)
Recent Return$_{q-1}$	7.789***	7.561***
	(17.27)	(17.28)
Top 5 Return$_{q-1}$	4.739***	4.441***
	(7.18)	(6.80)
Management Fee$_{q-1}$	-1.915**	-1.997**
	(-2.46)	(-2.51)
Service Fees$_{q-1}$	2.384***	2.087***
	(4.79)	(4.13)
Loads$_{q-1}$	-3.675	-3.830*
	(-1.58)	(-1.66)
Fund Size$_{q-1}$	-27.409***	-29.078***
	(-27.21)	(-27.89)
Fund Age$_{q-1}$	-0.164	-1.204
	(-0.18)	(-1.34)
Disclosure$_q$	0.090	0.117
	(0.09)	(0.12)
Fund FE	Yes	Yes
Yr-Qtr FE	Yes	Yes
Cluster	Fund Family	Fund Family
Sample	Fund-Yr-Qtr	Fund-Yr-Qtr
# of Observations	50,867	50,867
Adjusted R-squared	0.164	0.171

39% of within-FE SD of *Fund Flow*

37% of within-FE SD of *Fund Flow*

Class-Level Quarterly Flows

13% of within-FE SD of ***Class Flow***

	(2)
Dependent Variables:	*Class Flow*$_{f,c,q}$
Class in Cart$_q$	1.134***
	(2.79)
Class Service Fees$_{t-1}$	0.094
	(0.70)
Class Loads$_{t-1}$	0.182*
	(1.81)
Class Size$_{t-1}$	-2.982***
	(-14.15)
Class Age$_{t-1}$	0.410***
	(2.80)
Fixed Effects	Fund-Year-Quarter
Cluster	Fund Family
Sample	Fund-Class-Year-Quarters of Dual Class Funds
# of Observations	43,028
Adjusted R-squared	0.510

Intraday Flows (10-Min Intervals)

Intraday Flows (10-Min Intervals)

Sample (N=239,096):

4,455 A & C classes of the same fund-day, with only one class in the shopping cart.

27 intraday observations for each fund-class-day

Identification: High-dimensional fixed effects capture post-livestream change in *Hot* status between livestreaming & non-livestreaming classes of the same fund on the same day

Sample period:

December 2, 2024, through March 31, 2025, as the hot fund list is not available retroactively.

	(2)
Dependent Variables:	$Hot_{f,c,d,t}$
$Class\ in\ Cart_{f,c,d} \times Post_{f,d,t}$	0.011*** (6.02)
$Class\ Service\ Fees_{m-1}$	N/A
$Class\ Loads_{m-1}$	N/A
$Class\ Size_{m-1}$	N/A
$Class\ Age_{m-1}$	N/A
Controls × *Post* included	Yes
Fund-Day FE	No
Fund-Day-Post FE	Yes
Class-Day FE	Yes
Cluster	Fund-Day
Sample	Fund-Class-Day-Time of Dual Class Funds
# of Observations	239,096
Adjusted R-squared	0.699

Intraday Flows (10-Min Intervals)

Unconditional probability of becoming ***Hot***: 2%

55% increase in the probability of becoming ***Hot***

	(2)
Dependent Variables:	$Hot_{f,c,d,t}$
$Class\ in\ Cart_{f,c,d} \times Post_{f,d,t}$	0.011***
	(6.02)
$Class\ Service\ Fees_{m-1}$	N/A
$Class\ Loads_{m-1}$	N/A
$Class\ Size_{m-1}$	N/A
$Class\ Age_{m-1}$	N/A
Controls × *Post* included	Yes
Fund-Day FE	No
Fund-Day-Post FE	Yes
Class-Day FE	Yes
Cluster	Fund-Day
Sample	Fund-Class-Day-Time of Dual Class Funds
# of Observations	239,096
Adjusted R-squared	0.699

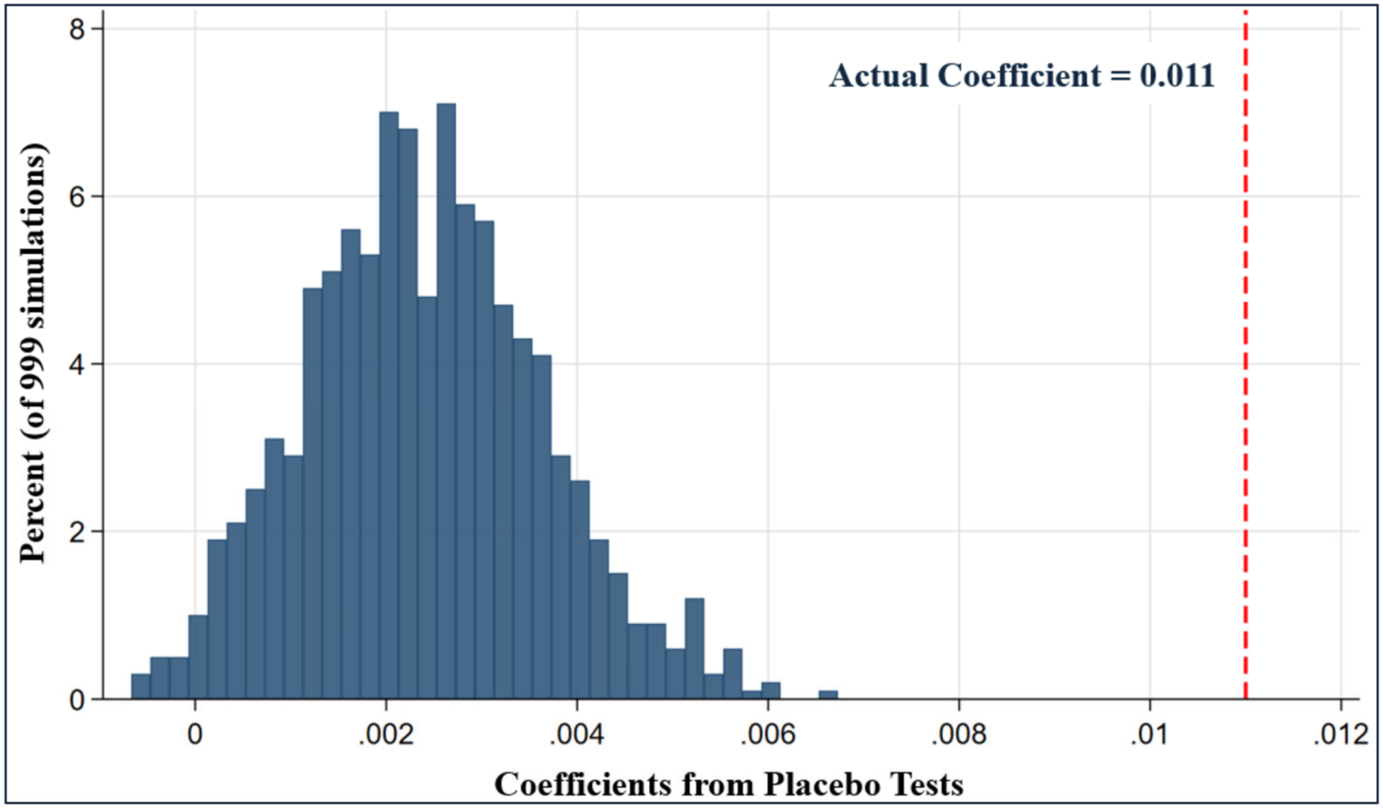
Intraday Flows (10-Min Intervals)

999 placebo tests: same fund-classes on randomly selected non-livestreaming dates.

Plot coefficients on

Class in Cart ✕ *Post*

P-value (β_1_Actual < β_1_Placebo): < 0.001



Purchase Decision: Effects on Returns Chasing

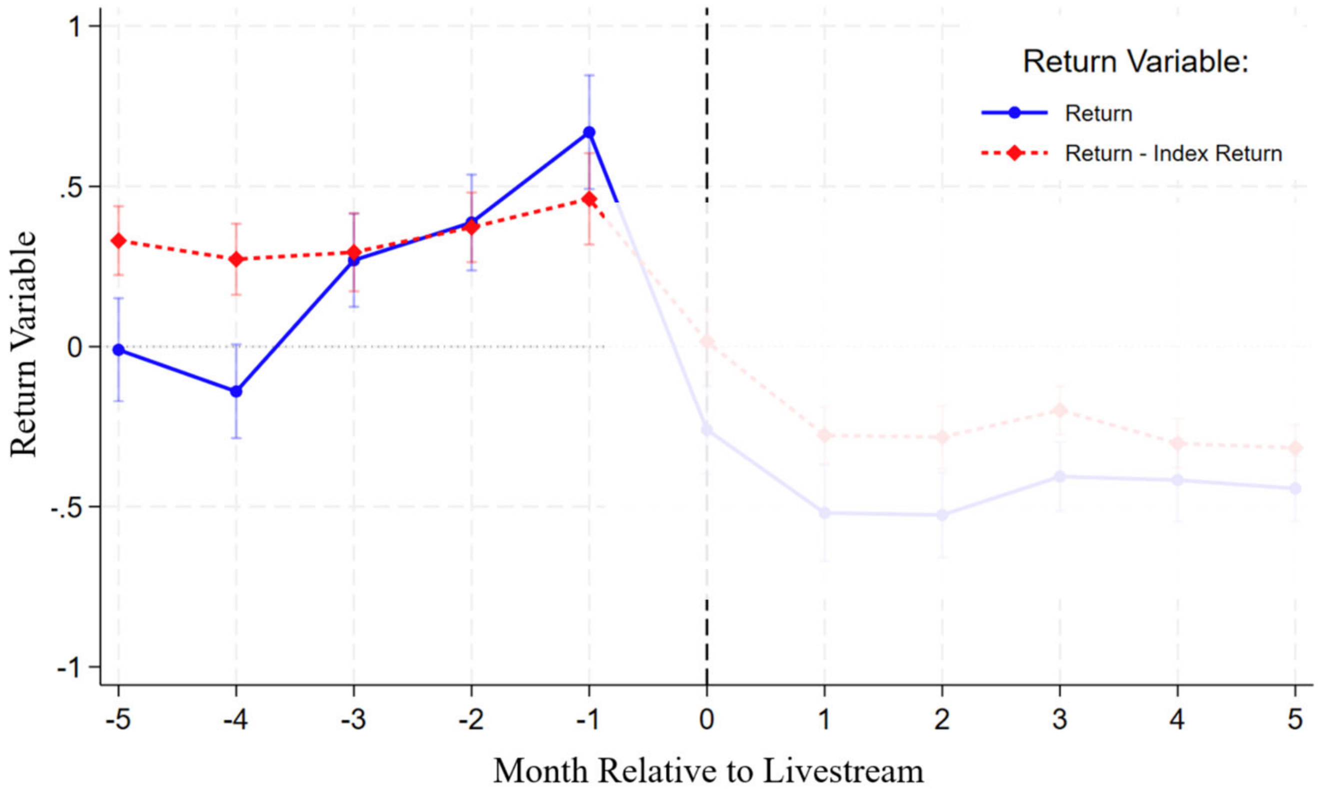
	(1)	(2)
Dependent Variable:	*Fund Flow$_q$*	
Recent Return$_{q-1}$	6.892***	5.991***
	(13.17)	(11.02)
Recent Return$_{q-1}$ × *First Stream$_q$*	3.703***	
	(3.50)	
Recent Return$_{q-1}$ × *Livestream$_q$*		2.919***
		(5.17)
First Stream$_q$	9.537***	
	(7.86)	
Livestream$_q$		10.433***
		(15.04)
Recent Return$_{q-1}$ × *Controls* included	Yes	Yes
Fund FE	Yes	Yes
Yr-Qtr FE	Yes	Yes
Cluster	Fund Family	Fund Family
Sample	Fund-Yr-Qtr	Fund-Yr-Qtr
# of Observations	50,867	50,867
Adjusted R-squared	0.167	0.174

54% of the effect on *Recent Return*

49% of the effect on *Recent Return*

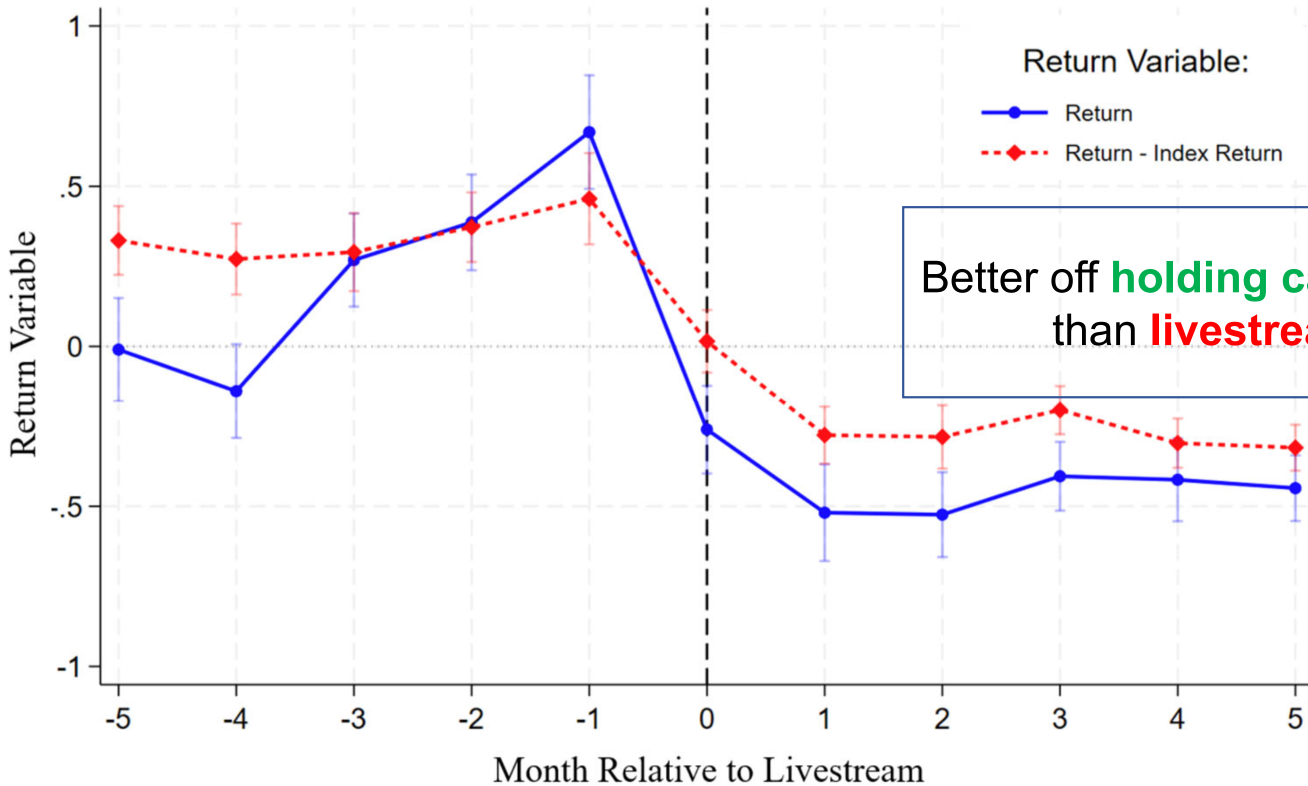
Monthly Returns of Livestream Funds

Univariates



Monthly Returns of Livestream Funds

Univariates



Better off **holding cash or index funds** than **livestreaming funds**

Monthly Returns

- Four returns measures, in percentages:

1. **Net return:** net-of-fee return
2. **DGTW alpha:** net return less matched portfolio
3. **Carhart alpha:** net four-factor alpha
4. **China alpha:** net three-factor alpha developed for China (Liu, Stambaugh, & Yuan, 2019, JFE)

- Generalized DiD regressions
- $Return_{m+j} = \alpha + \beta_1 Livestream_m + \beta_2 Controls + \varepsilon$
- Tabulate β_1 only

Monthly Returns

Livestreaming funds underperform non-livestreaming funds by
0.674 ~ 1.179 percentage points in returns in subsequent five months

Panel C: Summary of monthly generalized DiD regression results, all livestreams, with controls, with fund and year-month FE

	m-5	m-4	m-3	m-2	m-1	m	m+1	m+2	m+3	m+4	m+5	m(+1, +5)
Return												
Livestream$_m$	0.544***	0.619***	0.669***	0.791***	1.008***	0.356***	-0.179***	-0.308***	-0.174***	-0.233***	-0.290***	-1.179***
	(9.10)	(11.02)	(10.88)	(13.09)	(12.35)	(6.08)	(-3.41)	(-6.55)	(-3.78)	(-4.53)	(-6.39)	(-7.56)
DGTW Alpha												
Livestream$_m$	0.322***	0.428***	0.479***	0.483***	0.646***	0.247***	-0.116**	-0.231***	-0.183***	-0.227***	-0.235***	-0.988***
	(6.25)	(8.52)	(8.02)	(10.10)	(10.26)	(5.40)	(-2.60)	(-5.74)	(-4.06)	(-5.52)	(-5.14)	(-7.61)
Carhart Alpha												
Livestream$_m$	0.457***	0.514***	0.630***	0.735***	0.803***	0.402***	-0.024	-0.192***	-0.136***	-0.259***	-0.255***	-0.863***
	(7.87)	(9.28)	(10.42)	(12.57)	(10.99)	(7.07)	(-0.48)	(-4.19)	(-2.75)	(-4.92)	(-5.99)	(-5.50)
China 3F Alpha												
Livestream$_m$	0.521***	0.550***	0.601***	0.716***	0.795***	0.420***	0.027	-0.148***	-0.139***	-0.207***	-0.209***	-0.674***
	(8.64)	(10.16)	(9.98)	(11.59)	(10.96)	(6.86)	(0.55)	(-3.32)	(-2.84)	(-3.89)	(-4.63)	(-4.09)

Manager on Livestream

Theory:

1. More informative if managers have stronger reputation incentives
2. Could also exacerbate persuasion

Determinants:

Managers are more likely to appear on livestreams following strong performance, when the fund is larger, when they graduated from a top university, and when they are early-career.

Manager on Livestream

Livestreams with managers discuss topics that require higher financial literacy and that are more relevant to specific funds

	% of Time in Livestream		
ChatGPT Summary of Topics	**Manager-Attending (a)**	**Manager-not-Attending (b)**	**Diff: (a)-(b)**
Emerging China Tech & Green Energy	14.44%	10.13%	4.31%***
Consumer & Healthcare Sector Growth	10.55%	7.00%	3.55%***
AI & Technology Investment Trends	10.18%	7.92%	2.26%***
Fund Investment Strategies & Portfolio Management	14.54%	13.29%	1.25%***
Stock Performance & Dividend Growth	6.62%	5.53%	1.09%***
Global Economic & Market Expectations	12.30%	13.07%	-0.77%***
Bond Market & Interest Rates	3.45%	5.45%	-2.00%***
Market Conditions & Investment Performance	16.61%	18.65%	-2.04%***
Fund Performance & Risk Management	6.85%	10.10%	-3.25%***
Investor Engagement & Support	4.47%	8.85%	-4.38%***

Manager on Livestream

Dependent Variables:	(3) *Fund Flow*$_q$
$Livestream_q \times Manager\_On_q$	3.780**
	(2.31)
$Livestream_q$	7.999***
	(8.96)
$Manager\_On_q \times Controls$	Yes
Fund FE	Yes
Time FE	Yr-Qtr
Cluster	Fund Family
Sample	Fund-Yr-Quarter
# of Observations	50,867
Adjusted R-squared	0.178

flows increase by **47%** with manager presence

Manager on Livestream

	m-5	m-4	m-3	m-2	m-1	m	m+1	m+2	m+3	m+4	m+5	m(+1, +5)
Return												
With Manager$_m$	0.489***	0.603***	0.612***	0.953***	1.676***	0.800***	-0.080	-0.354***	-0.339***	-0.299***	-0.298**	-1.363***
	(3.46)	(4.77)	(5.22)	(8.77)	(11.56)	(4.95)	(-0.68)	(-3.17)	(-2.64)	(-2.77)	(-2.05)	(-4.54)
Without Manager$_m$	0.538***	0.615***	0.635***	0.713***	0.731***	0.167***	-0.208***	-0.286***	-0.135***	-0.198***	-0.237***	-1.059***
	(7.70)	(9.45)	(7.90)	(10.09)	(8.41)	(2.79)	(-3.06)	(-5.48)	(-2.73)	(-3.19)	(-4.52)	(-5.65)
Difference							0.128	-0.068	-0.204	-0.101	-0.062	-0.304
							(0.98)	(-0.57)	(-1.51)	(-0.81)	(-0.39)	(-0.97)
DGTW Alpha												
With Manager$_m$	0.319**	0.456***	0.598***	0.654***	1.090***	0.552***	0.012	-0.236**	-0.281**	-0.224**	-0.184	-0.910***
	(2.58)	(3.90)	(5.92)	(6.19)	(8.94)	(4.50)	(0.12)	(-2.18)	(-2.25)	(-2.06)	(-1.42)	(-3.33)
Without Manager$_m$	0.279***	0.417***	0.374***	0.413***	0.472***	0.127**	-0.164***	-0.247***	-0.171***	-0.183***	-0.199***	-0.959***
	(4.63)	(7.20)	(5.07)	(7.37)	(7.13)	(2.50)	(-2.89)	(-5.63)	(-3.79)	(-3.67)	(-3.94)	(-6.17)
Difference							0.176	0.011	-0.110	-0.042	0.015	0.049
							(1.57)	(0.09)	(-0.86)	(-0.34)	(0.11)	(0.17)
Carhart Alpha												
With Manager$_m$	0.389***	0.559***	0.551***	0.946***	1.362***	0.732***	0.136	-0.172	-0.353***	-0.352***	-0.298**	-1.036***
	(2.87)	(4.30)	(4.68)	(7.86)	(10.28)	(4.95)	(1.11)	(-1.38)	(-2.62)	(-2.74)	(-2.38)	(-3.21)
Without Manager$_m$	0.460***	0.494***	0.576***	0.659***	0.589***	0.252***	-0.050	-0.186***	-0.071	-0.220***	-0.203***	-0.727***
	(6.82)	(7.63)	(7.86)	(9.64)	(7.48)	(4.46)	(-0.72)	(-3.58)	(-1.37)	(-4.06)	(-3.75)	(-3.89)
Difference							0.186	0.014	**-0.282***	-0.132	-0.095	-0.308
							(1.32)	(0.10)	**(-1.96)**	(-0.97)	(-0.68)	(-0.88)
China 3F Alpha												
With Manager$_m$	0.447***	0.637***	0.479***	0.888***	1.293***	0.745***	0.155	-0.155	-0.324***	-0.314**	-0.304**	-0.939***
	(3.58)	(5.67)	(4.27)	(7.56)	(10.95)	(4.95)	(1.23)	(-1.28)	(-2.89)	(-2.43)	(-2.48)	(-3.29)
Without Manager$_m$	0.493***	0.514***	0.570***	0.647***	0.597***	0.273***	-0.029	-0.164***	-0.069	-0.150**	-0.150***	-0.560***
	(6.78)	(7.69)	(7.42)	(8.97)	(7.12)	(4.76)	(-0.47)	(-2.94)	(-1.31)	(-2.58)	(-3.01)	(-2.88)
Difference							0.183	0.009	**-0.255****	-0.164	-0.153	-0.378
							(1.29)	(0.07)	**(-2.17)**	(-1.19)	(-1.24)	(-1.27)

Persuasive Features

- Persuasion is stronger when:
  1. **First half** of shopping cart
  2. Linguistic tone is more **positive**
  3. Vocal sentiment is more **positive**
  4. Voice has higher **valence**
  5. Voice has higher **arousal**
  6. Speaker is more **attractive**

Persuasion = sum of 6, scaled to (0,1)

- Binary variables are for above-median

Persuasive Features – Fund Flows

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent Variables:				*Fund Flow$_q$*				
Livestream$_q$ × First Half$_q$	8.590*** (7.48)						6.544*** (6.23)	
Livestream$_q$ × High Verbal Sentiment$_q$		5.199*** (4.12)					2.599** (2.12)	
Livestream$_q$ × High Vocal Valence$_q$			4.801*** (3.58)				0.750 (0.48)	
Livestream$_q$ × High Vocal Arousal$_q$				6.122*** (4.88)			2.091 (1.41)	
Livestream$_q$ × High Vocal Sentiment$_q$					6.233*** (4.69)		3.171** (2.23)	
Livestream$_q$ × High Attractiveness$_q$						5.284*** (3.67)	2.504* (1.83)	
Livestream$_q$ × Persuasion$_q$								15.619*** (7.05)
Livestream$_q$	3.594*** (3.96)	6.438*** (7.38)	6.103*** (6.97)	6.654*** (7.60)	6.281*** (7.45)	6.589*** (7.49)	0.735 (0.81)	2.466*** (2.89)
Controls from Table 8 Panel A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Manager_On$_q$ × Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PersuasionVar$_q$ × Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fund FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yr-Qtr FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster	Fund Family	Fund Family	Fund Family	Fund Family	Fund Family	Fund Family	Fund Family	Fund Family
Sample	Fund-Yr-Qtr	Fund-Yr-Qtr	Fund-Yr-Qtr	Fund-Yr-Qtr	Fund-Yr-Qtr	Fund-Yr-Qtr	Fund-Yr-Qtr	Fund-Yr-Qtr
# of Observations	50,867	50,867	50,867	50,867	50,867	50,867	50,867	50,867
Adjusted R-squared	0.184	0.182	0.180	0.181	0.181	0.181	0.187	0.185

Flows are **six times larger** for the most persuasive livestreams compared to the least persuasive ones

Persuasive Features – Returns

Persuasion Variables:	*First Half*	*Verbal Sentiment*	*Vocal Valence*	*Vocal Arousal*	*Vocal Sentiment*	*Attractiveness*	*Persuasion*
Return							
High Persuasion$_m$	-1.326***	-1.299***	-1.233***	-1.313***	-1.369***	-1.349***	-1.535***
	(-6.14)	(-6.10)	(-5.38)	(-5.51)	(-5.78)	(-5.85)	(-5.96)
Low Persuasion$_m$	-0.673***	-0.859***	-0.908***	-0.854***	-0.809***	-0.802***	-0.769***
	(-3.17)	(-4.17)	(-4.46)	(-4.00)	(-4.22)	(-4.15)	(-4.07)
Difference	**-0.653*** **	**-0.440** **	-0.326	**-0.459* **	**-0.560*** **	**-0.546*** **	**-0.766*** **
	(-3.14)	**(-2.43)**	(-1.54)	**(-1.85)**	**(-2.78)**	**(-2.73)**	**(-3.48)**
DGTW Alpha							
High Persuasion$_m$	-1.101***	-1.131***	-1.105***	-1.214***	-1.179***	-1.278***	-1.332***
	(-6.09)	(-6.22)	(-5.61)	(-5.95)	(-6.12)	(-6.31)	(-6.16)
Low Persuasion$_m$	-0.758***	-0.819***	-0.836***	-0.755***	-0.786***	-0.678***	-0.735***
	(-4.33)	(-4.92)	(-5.22)	(-4.43)	(-4.73)	(-4.37)	(-4.90)
Difference	**-0.344* **	**-0.312** **	-0.269	**-0.458** **	**-0.392** **	**-0.600*** **	**-0.597*** **
	(-1.93)	**(-2.06)**	(-1.54)	**(-2.21)**	**(-2.22)**	**(-3.25)**	**(-3.34)**
Carhart Alpha							
High Persuasion$_m$	-0.979***	-0.965***	-0.944***	-0.990***	-1.035***	-1.005***	-1.212***
	(-4.63)	(-4.64)	(-4.10)	(-4.01)	(-4.35)	(-4.41)	(-4.58)
Low Persuasion$_m$	-0.352*	-0.521**	-0.530***	-0.507**	-0.472**	-0.473**	-0.425**
	(-1.70)	(-2.48)	(-2.59)	(-2.48)	(-2.36)	(-2.50)	(-2.23)
Difference	**-0.626*** **	**-0.444** **	**-0.414* **	**-0.483* **	**-0.563** **	**-0.531*** **	**-0.788*** **
	(-3.24)	**(-2.40)**	**(-1.89)**	**(-1.91)**	**(-2.49)**	**(-2.86)**	**(-3.23)**
China 3F Alpha							
High Persuasion$_m$	-0.679***	-0.715***	-0.702***	-0.738***	-0.750***	-0.816***	-0.844***
	(-3.15)	(-3.21)	(-2.96)	(-2.84)	(-3.06)	(-3.51)	(-3.15)
Low Persuasion$_m$	-0.380*	-0.424*	-0.430**	-0.409*	-0.401*	-0.324	-0.381*
	(-1.78)	(-1.90)	(-2.01)	(-1.89)	(-1.91)	(-1.55)	(-1.90)
Difference	-0.299	-0.291	-0.272	-0.329	-0.349	**-0.492** **	**-0.463* **
	(-1.64)	(-1.34)	(-1.21)	(-1.22)	(-1.50)	**(-2.37)**	**(-1.90)**

21 out of 28 specifications show significantly worse returns for more persuasive livestreams

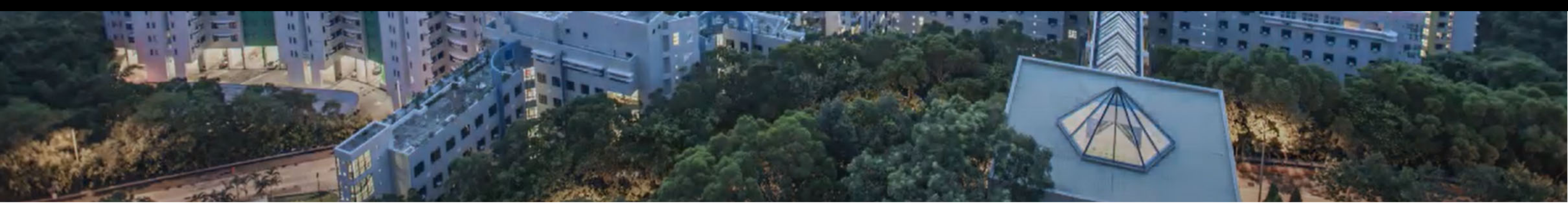
Conclusions

Fund livestreams are persuasive

Beneficial effects of firms’ social media in equity markets do not extend to financial products

Regulators should be wary of “Investor Education” from financial product sellers

Thank you!
Questions?



Livestream-Level Speaker Persuasive Features

- **Verbal Sentiment**:
  - (# of positive sentences - # of negative sentences)/(1 + # of positive sentences + # of negative sentences).
  - Sample: All sentences transcribed using Python *faster-whisper* package.
  - Model used: Chinese FinBERT model.
- **Vocal Valence/Arousal** :
  - Average valence/arousal score of sentences in a livestream.
  - Sample: First sentence per minute.
  - Package used: Python *pyAudioAnalysis* package (Hu & Ma, 2025 JF).
- **Vocal Sentiment**:
  - (# of happy sentences - # of sad sentences)/(1 + # of happy sentences + # of sad sentences).
  - Sample: First sentence per minute.
  - Package used: Python *speechemotionrecognition* package (Hu & Ma, 2025 JF).
- **Facial Attractiveness**:
  - Average attractiveness score calculated from facial images in a livestream.
  - Sample: facial image every five minutes.
  - Model used: ResNeXt-50 model trained on the SCUT-FBP5500 dataset.

Livestream-Level Speaker Persuasive Features

Panel A: Summary of statistics

Variables	N	Mean	SD	25%	Median	75%
Verbal sentiment, measured at sentence level (for all sentences)						
Positive	21,734,488	0.06	0.24	0	0	0
Negative	21,734,488	0.03	0.17	0	0	0
Vocal traits, measured at sentence level (for the first sentence per minute)						
Length (seconds)	1,367,082	5.21	3.70	2.00	3.16	10.00
Vocal Valence	1,367,082	0.19	0.60	-0.14	0.21	0.54
Vocal Arousal	1,367,082	0.35	0.32	0.16	0.37	0.57
Vocal Happy	1,367,082	0.32	0.47	0	0	1
Vocal Sad	1,367,082	0.07	0.26	0	0	0
Visual trait, measured at image level						
Attractiveness	437,706	3.34	0.35	1.60	3.37	3.59
Verbal, vocal, & visual traits, measured at livestream level						
Verbal Sentiment	26,103	0.36	0.27	0.19	0.38	0.55
Vocal Valence	26,103	0.19	0.33	0.00	0.21	0.41
Vocal Arousal	26,103	0.35	0.24	0.20	0.36	0.51
Vocal Sentiment	26,103	0.55	0.47	0.31	0.74	0.91
Attractiveness	26,103	3.34	0.26	3.18	3.36	3.51

Panel B: Correlation table (livestream level)

	Verbal Sentiment	*Vocal Valence*	*Vocal Arousal*	*Vocal Sentiment*	*Attractiveness*
Verbal Sentiment	1				
Vocal Valence	0.071***	1			
Vocal Arousal	0.014**	0.640***	1		
Vocal Sentiment	0.008	0.490***	0.635***	1	
Attractiveness	-0.005	0.131***	0.133***	0.142***	1