

FinTech Platforms and Mutual Fund Distribution

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Joint work with Xiaomeng Lu and Jun Pan, both from SAIF, SJTU

Specialty Conference

Fintech to Enable Development, Investment, Financial Inclusion, and Sustainability

The Rise of Platform Economy

- Amazon, Taobao, Uber, Airbnb, Google, Instagram, Facebook...

2018					2008				
RANK	COMPANY		FOUNDED	US\$bn	RANK	COMPANY		FOUNDED	US\$bn
1.	 *		1976	890	1.	 PetroChina		1999	728
2.	 *		1998	768	2.	 EXXON		1870	492
3.	 Microsoft *		1975	680	3.			1892	358
4.	 *		1994	592	4.	 中国移动 China Mobile		1997	344
5.	 *		2004	545	5.	 ICBC		1984	336
6.	 腾讯 *		1998	526	6.	 GAZPROM		1989	332
7.	 BERKSHIRE HATHAWAY		1955	496	7.	 Microsoft		1975	313
8.	 Alibaba.com *		1999	488	8.			1907	266
9.	 Johnson & Johnson		1886	380	9.	 SINOPEC		2000	257
10.	J.P.Morgan		1871	375	10.	 AT&T		1885	238

* Companies based on the platform model

Sources: Bloomberg, Google

- Everyday life: learning, shopping, entertainment, transportation, investment
- **China** experienced a rapid increase in FinTech
- **Financial products:** Yue bao, mutual Fund, P2P, wealth products, insurance...
- This paper: What happens when platforms are allowed to intermediate financial products?

Traditional Channels vs. FinTech Platforms

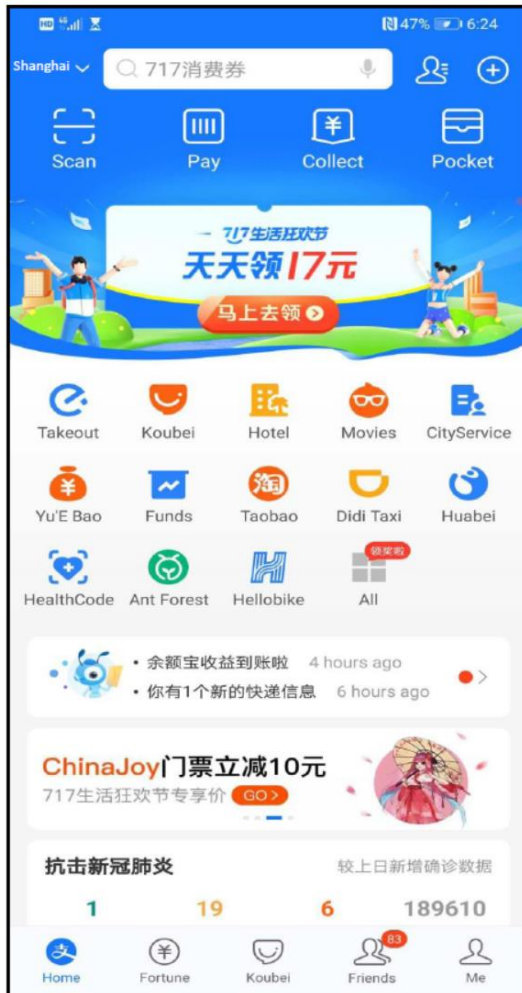
- **Traditional Channels:**

- In 2010 China: Fund families (31%); Bank (60%); Broker (9%)
- Limited number of funds, Segmented market, Conflict of interest ...

- **FinTech Channel:**

- Created by tech-driven firms
- Large scale and broader coverage
- Technological efficiency – easy access, search and trade via mobile app
- Information structure – simple user interface

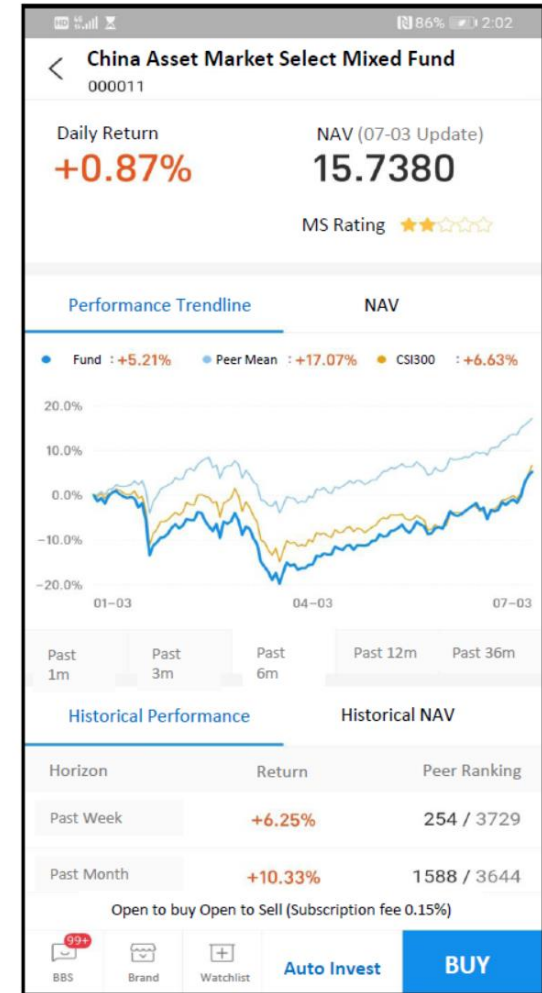
Example of A FinTech Platform



Fund Ranking List

Performance Rank

Equity	NAV	12m Ret
Fullgoal Internet Equity... 006751	2.2969	+126.34%
GF Diversified Emerging... 003745	2.2027	+123.01%
GF Medical Equity... 004851	2.9606	+114.88%
ICBC Frontier Medical... 001717	3.3350	+111.61%
BY Medical Health ... 001915	1.9980	+110.09%
Central Europe Medical... 006228	2.1169	+108.17%
TrueValue Medical... 003230	2.7651	+108.04%
FS Cinda New Energy... 001410	3.2030	+107.85%
ICBC Medical Health... 006002	2.7578	+106.87%



Select Lists Funds Managed by Schwab Laudus Funds Find Funds Compare Funds

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The Select List is built by identifying funds that offer you the best combination of factors such as performance, risk and expense. Learn more about [how funds make the Select List](#) and about how Schwab makes it easier for you to find the right fund.

Select List: **Large-Cap U.S. Stock**

Growth of 10,000 Hypothetical Investment | [3 Month Performance](#)



Large-Cap U.S. Stock Fund Characteristics

- Invest primarily in stocks that fall in the top 70% of the U.S. market capitalization range.
- Includes Large-Cap Growth, Value and Blend funds.
- No load and no transaction fee.
- Pre-screened by Schwab Experts.

Large-Cap U.S. Stock Funds

- 21 Total Funds
- 3 Schwab Affiliate Funds
- 17 Third-Party funds
- 1 Market-Cap Weighted Index Funds
 - (1) Schwab-Affiliate (0) Third-Party
- 1 Fundamental Index Funds
 - (1) Schwab-Affiliate (0) Third-Party
- 0 Balanced Funds

Large Blend Add Symbol Add Symbol Add Symbol Add Symbol

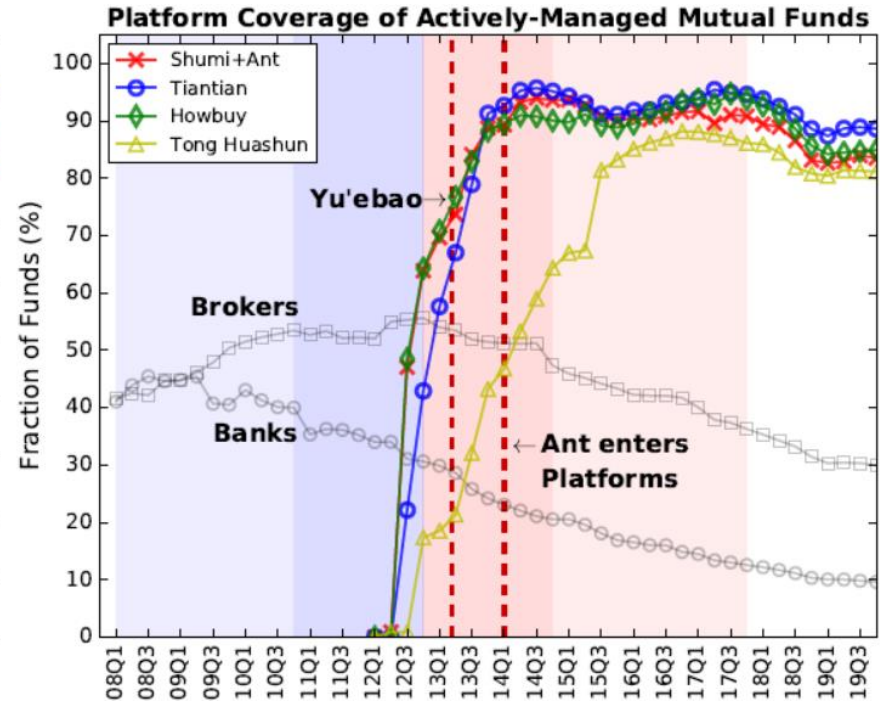
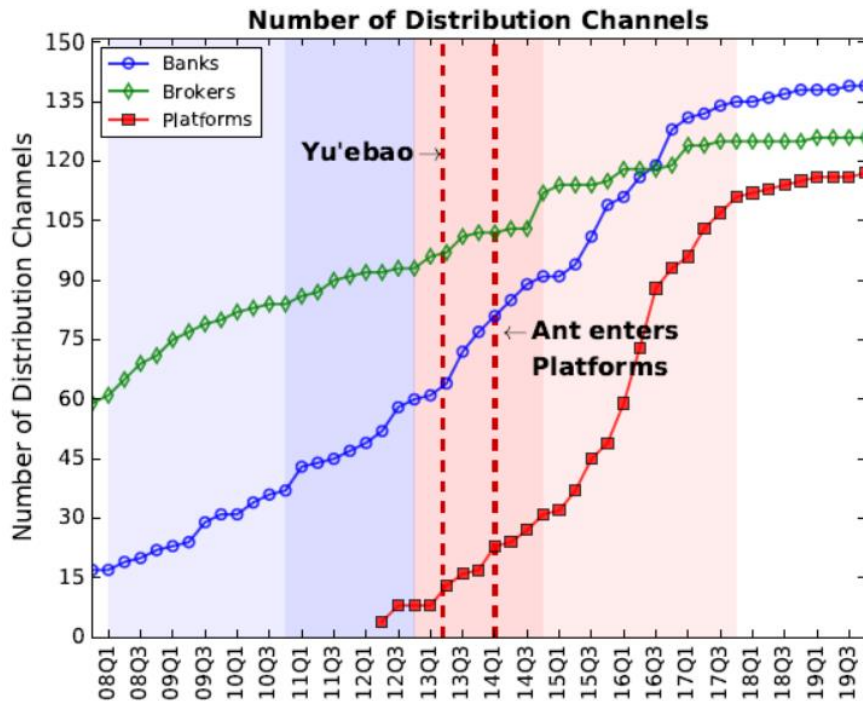
Enter Mutual Fund Symbol Add

Q2 2020 OneSource Select List® Performance Data as of 06/30/2020

How Funds Are Selected

Select Funds to Compare (max 5)	Symbol/Name	Morningstar Category	Average Annual Returns					Upside Capture Ratio	Downside Capture Ratio	Net Expense Ratio (%)	Gross Expense Ratio (%)	Socially Responsible	
			Return 3 Month	1 Year	3 Year	5 Year	10 Year						
	Benchmark: S&P 500 TR		+3.59	+12.84	+10.23	+9.86	+13.15	--	NA	NA	NA	NA	NA
Leading Schwab Affiliate Funds (3 Funds) Click icon to view on chart													
<input type="checkbox"/>	Laudus U.S. Large Cap Growth Fund LGILX	Large Growth	+11.28	+24.45	+10.14	+14.62	+16.40	+8.54 (10/14/1997)	115.86	80.57	0.75	0.75	No
— Fundamental Index Funds (1 Fund) Click icon to view on chart													
<input type="checkbox"/>	Schwab Fundamental US Large Company Index Fund SFLNX	Large Value	-1.72	+3.47	+5.32	+6.09	+10.82	+7.13 (04/02/2007)	96.97	120.53	0.25	0.25	No
— Market-Cap Weighted Index Funds (1 Fund) Click icon to view on chart													
<input type="checkbox"/>	Schwab® S&P 500 Index Fund SWPPX	Large Blend	+3.58	+12.79	+10.20	+9.80	+13.07	+7.71 (05/19/1997)	99.94	100.06	0.02	0.02	No
Leading 3rd Party Funds (17 Funds) Click icon to view on chart													

The Rise of Platform Economy

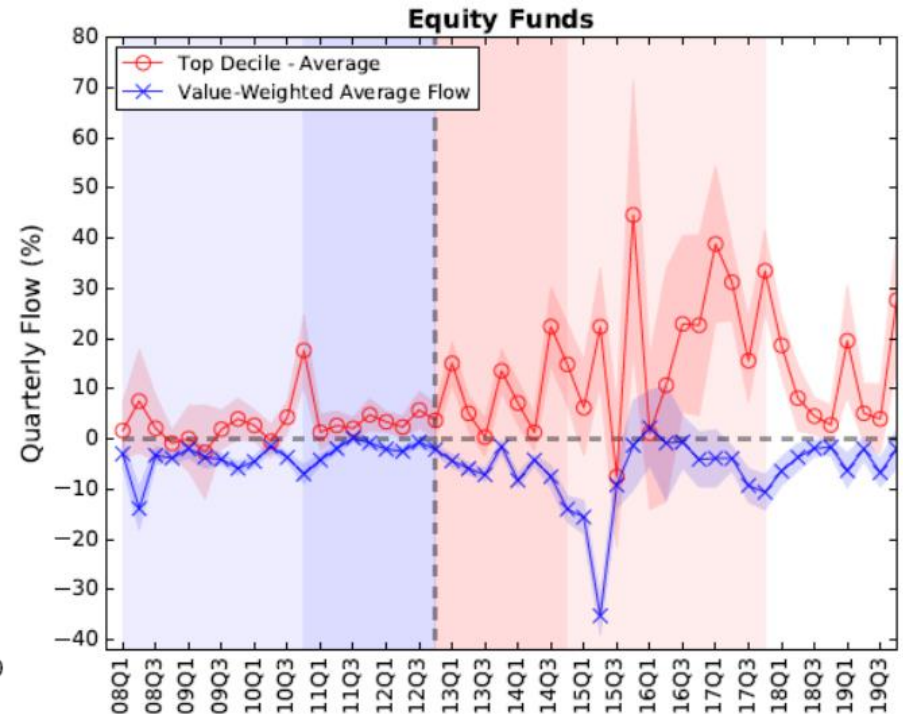
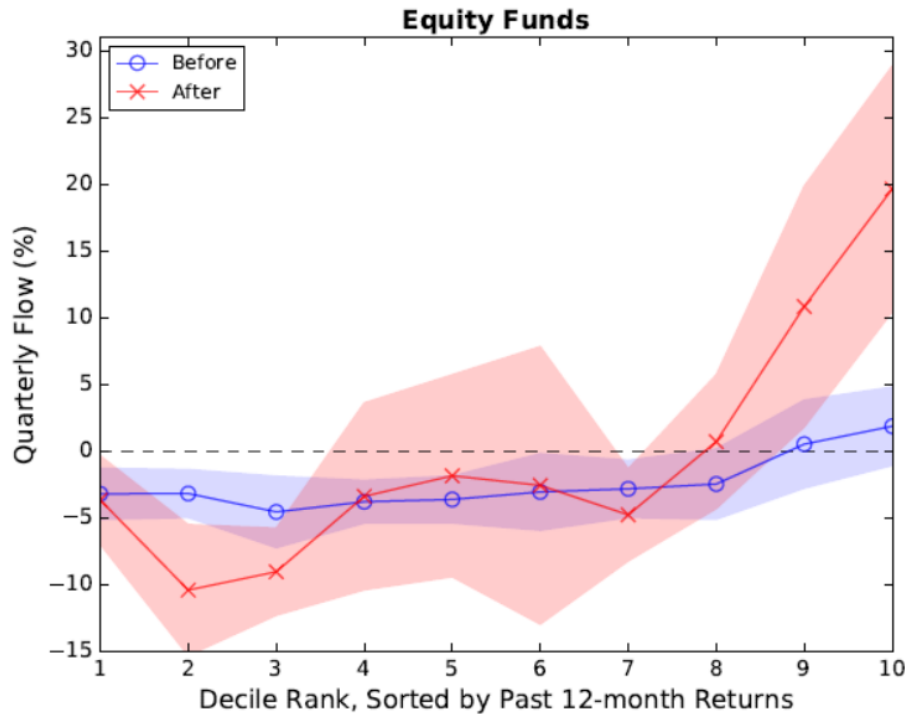


- By 2018, each of the top four platforms covered over 90% of all funds
- In 2012, the CSRC issued licenses for FinTech platforms for the first time.
 - Largest two platforms: Tiantian and Ant Financial
 - Tiantian in 2018: active users of 1.4 million, spending 22.3 minutes per day;
- In 2018, a total # of 106 platforms; account for around 30% of the fund market share

Main Findings

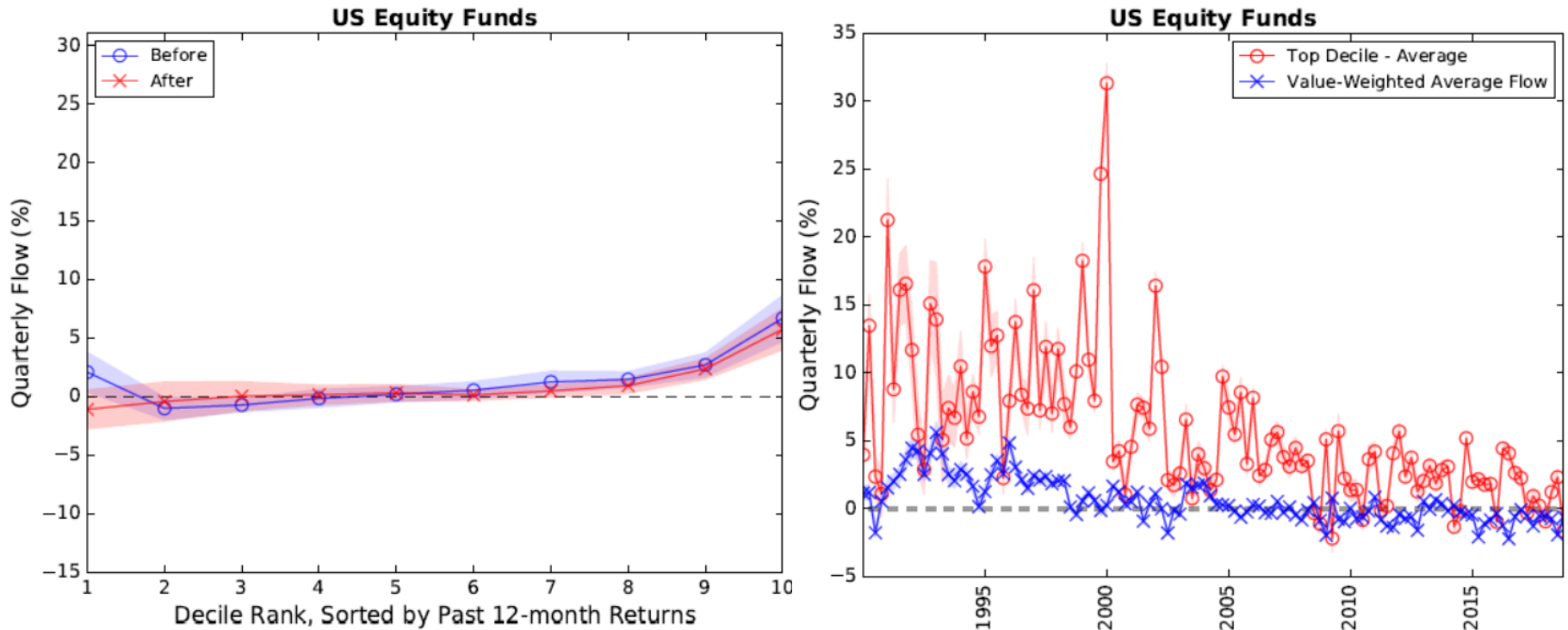
- **On Investors:**
 - A striking increase in flow sensitivity to performance associated
 - Net flow to top 10% performing funds more than triples their pre-platform level (Winner Take All)
- **Potential Channels:**
 - Platform features: Technological efficiency + Information structure (\surd)
 - Investors self-select to enter platforms (\times)
 - Funds self-select to enter platforms (\times)
- **On fund managers and fund families:**
 - Managers increase risk taking to enhance the probability of becoming top performers.
 - Families are less incentivized to groom star managers.

Performance Chasing: Before vs. After



- Quarterly flow to top-decile equity funds increases from 1.88% before (2008-2012) to 19.65% after (2013-2017).
- Drastic increase in flow-performance relation happens only on and after 2013.

Performance Chasing: Before and After



- Flow-performance relation remains stable at around 6%, both before and after

Performance Chasing: Staggered Entrance

- Utilize the exact dates on which funds sign up to platforms
- Panel Regression using Staggered Fund Entrance onto platforms

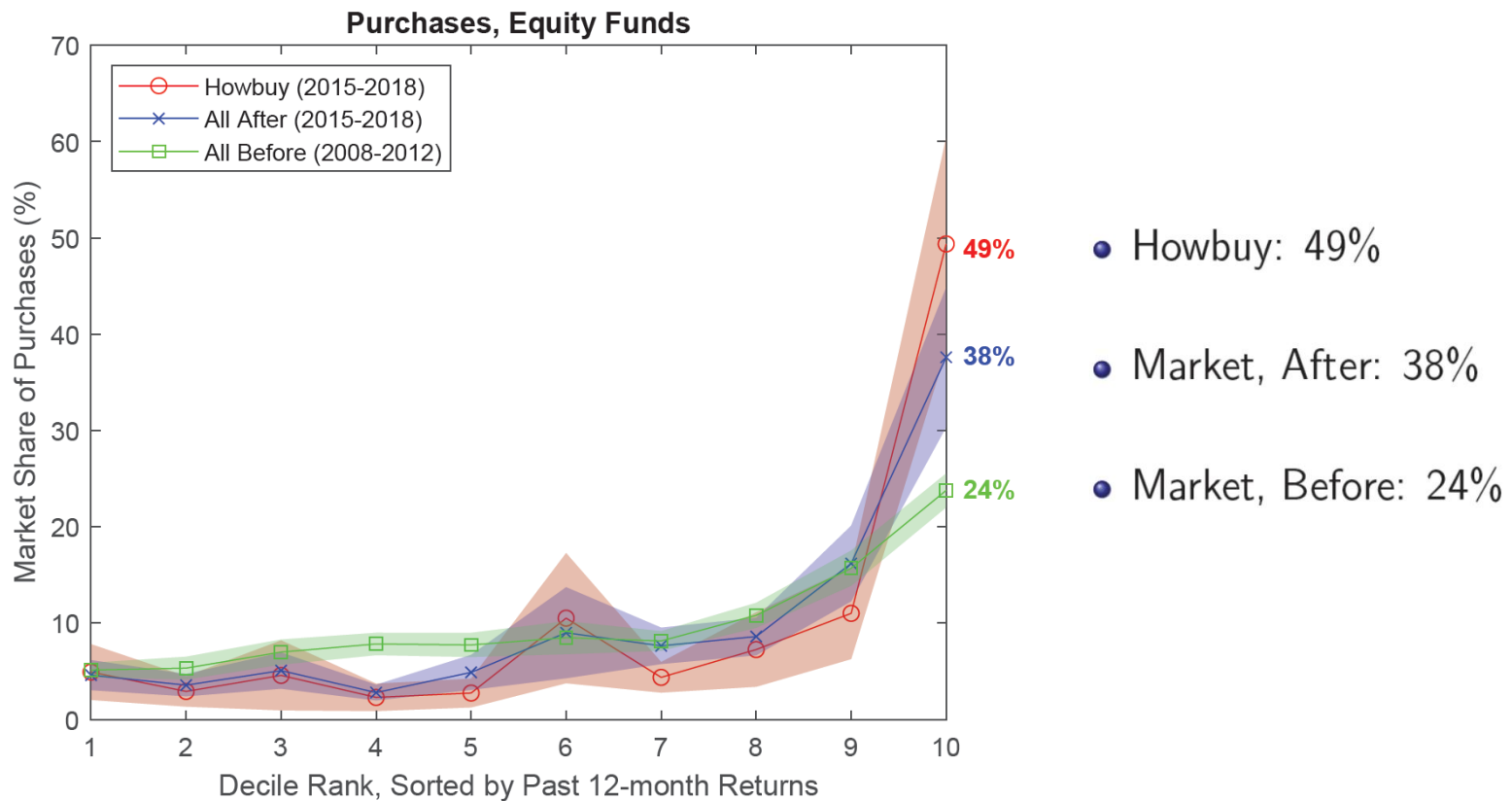
$$\text{Flow}_t^i = a + b \text{Decile10}_{t-1}^i + c \text{Decile10}_{t-1}^i \times \text{Platform}_t^i + d \text{Platform}_t^i + \text{Controls} + \epsilon_t^i$$

$\text{Platform}_t^i = 1$ if fund i is covered by both Ant Financial and Tiantian in quarter t .

	Equity	Mixed	Bond	All
Decile10	6.985*** (6.03)	6.127*** (4.71)	14.383*** (4.79)	8.132*** (8.32)
Decile10×Platform	16.964*** (3.75)	11.399*** (5.34)	-5.101 (-1.26)	7.966*** (4.72)
Platform	-3.097 (-1.07)	1.759 (1.29)	1.432 (0.67)	-0.702 (-0.63)
Controls, Time FE	Y	Y	Y	Y
Observations	6,705	12,941	6,766	26,412
R-squared	0.079	0.065	0.123	0.066

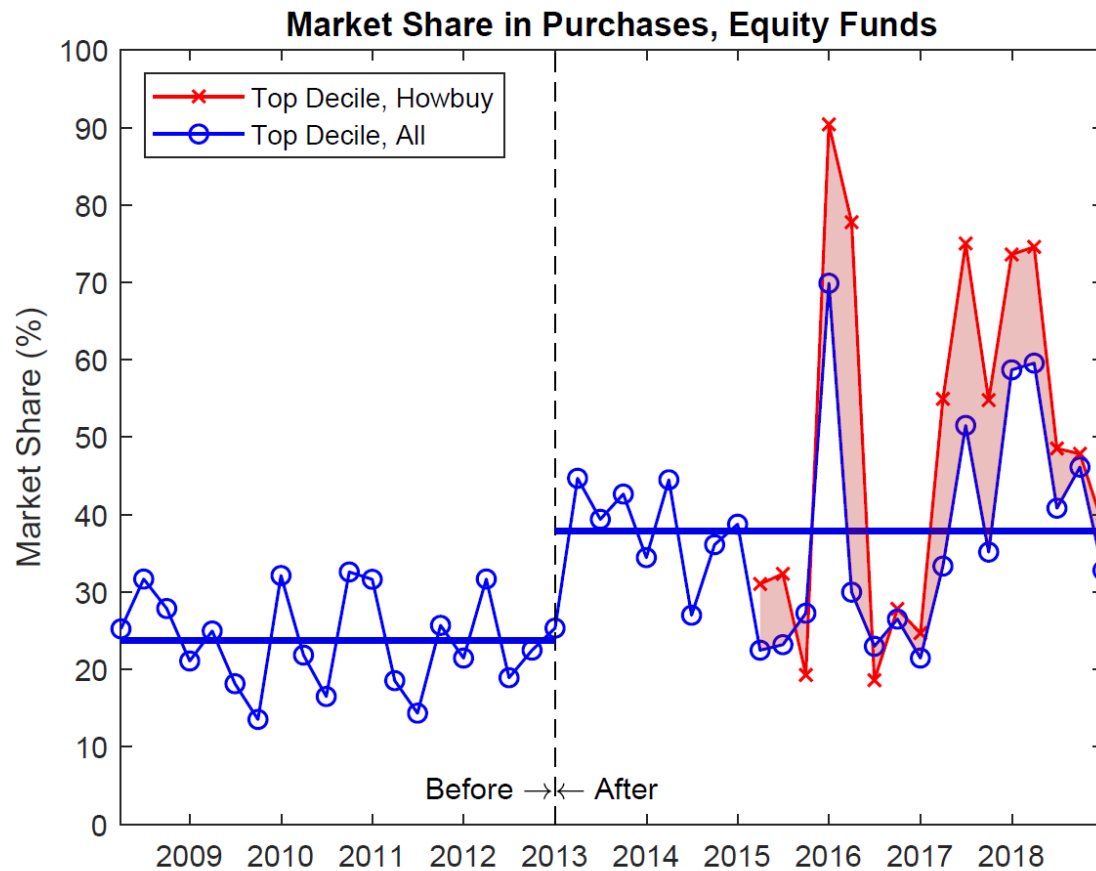
Performance Chasing: Evidence from Howbuy

- Before (2008-2012) vs. After (2015-2018) vs. Howbuy (2015-2018)
- Purchase fraction is the purchase amount for that decile divided by the aggregate purchase amount



Performance Chasing: Evidence from Howbuy

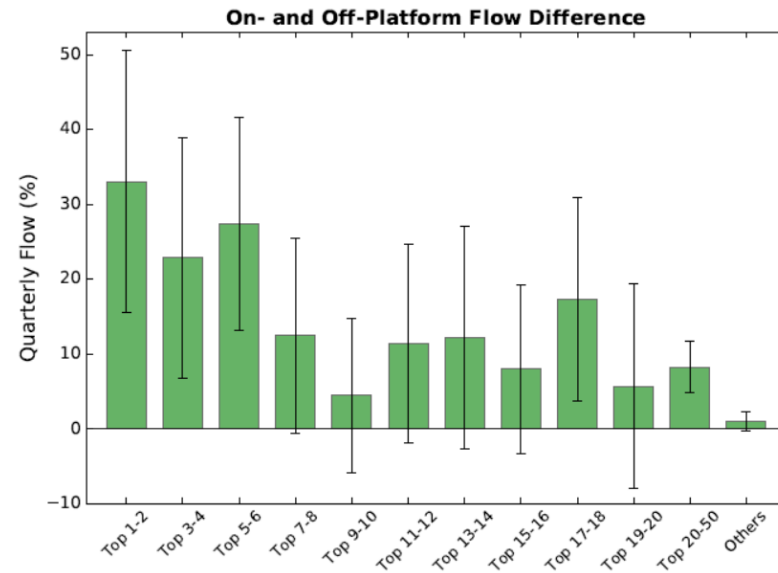
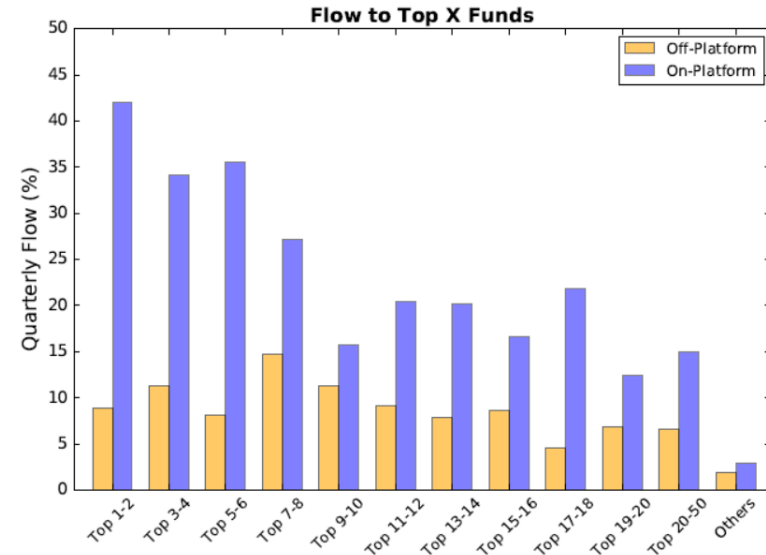
- Time-Series Variation



Channels – Information Structure

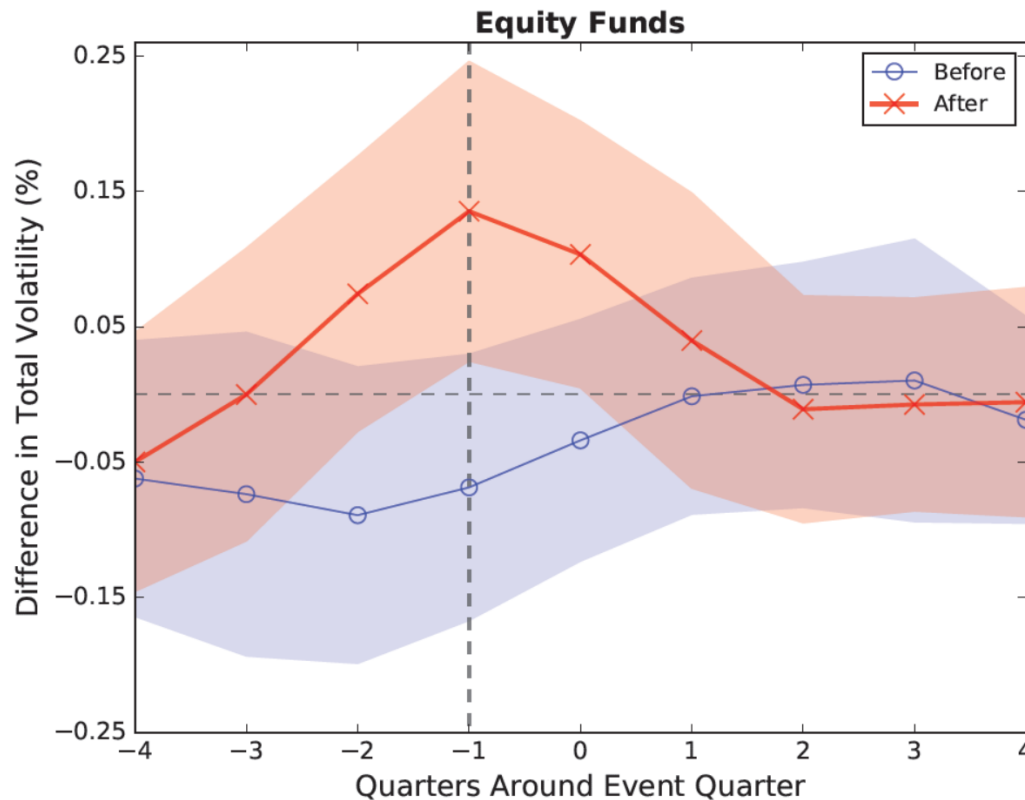
- Front-Page Funds => Saliency
- Front page normally displays 6-10 funds
 - TOP 1-2, ..., Top 19-20
 - Top 20-50, Bottom 100, Others
 - Extra flows to each group on and off platforms

Fund Name	NAV	12m Ret
1 Fullgoal Internet Equity... 006751	2.2969 2020-7-3	126.34%
2 GF Diversified Emerging... 003745	2.2027 2020-7-3	123.01%
3 GF Medical Equity... 004851	2.9606 2020-7-3	114.88%
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9 ICBC Medical Health... 006002	2.7578 2020-7-3	106.87%
10 Central Europe Medical... 006229	2.0957 2020-7-3	106.68%



On Managers: Change in Risk Taking

- Flow-performance relation is more convex after the emergence of platforms.
- Stronger convexity => incentive to get into top rank increases
- => Option-like payoff for fund managers (e.g. Brown, Harlow, and Starks, 1996; Chevalier and Ellison, 1997)



On Managers: Change in Risk Taking

- Prior to 2013, fund managers rely on their abilities in stock selections
- Post 2013, the risk taking behavior increases also in the systematic component.

		Idiosyncratic Volatility						
		$k = -3$	$k = -2$	$k = -1$	$k = 0$	$k = 1$	$k = 2$	$k = 3$
Decile 10×After		0.037** (2.18)	0.046** (2.51)	0.036* (1.84)	0.019 (1.00)	0.001 (0.09)	-0.015 (-0.79)	-0.006 (-0.34)
Decile 10		0.040*** (3.45)	0.051*** (4.26)	0.058*** (4.95)	0.050*** (4.37)	0.040*** (4.56)	0.037** (2.48)	0.025 (1.52)
		Systematic Volatility						
		$k = -3$	$k = -2$	$k = -1$	$k = 0$	$k = 1$	$k = 2$	$k = 3$
Decile 10×After		0.049 (1.43)	0.067** (2.12)	0.077** (2.30)	0.057* (1.82)	0.01 (0.59)	-0.006 (-0.24)	-0.014 (-0.70)
Decile 10		-0.023 (-0.88)	-0.044 (-1.61)	-0.043* (-1.71)	-0.007 (-0.33)	0.004 (0.38)	0.01 (0.57)	0.012 (0.72)

- Fund managers have already reached the limit of their own skills and are using leverage to get ahead.

On Families: Inter- and Intra-Family Competition

- Before platforms, large fund families serve as mini-platforms
- Post platforms, large fund families as organizations lose their cohesiveness.

FamilyRank	1.583*** (6.86)		1.122*** (4.60)
FamilyRank × Platform	-0.277 (-0.70)		-1.033** (-2.54)
Decile10		7.784*** (7.01)	5.992*** (5.10)
Decile10 × Platform		8.213*** (4.30)	9.853*** (4.93)
Platform	-0.697 (-0.44)	-1.905 (-1.46)	-0.086 (-0.05)
Controls	Y	Y	Y
Time, Family, and Style FE	Y	Y	Y
Observations	22,268	22,268	22,268
R-Squared	0.067	0.074	0.074

- Strong sensitivity of flow to within-family ranking before the introduction of platforms
- Dominate by universal performance ranking after platform introduction.

Other Tests and Robustness

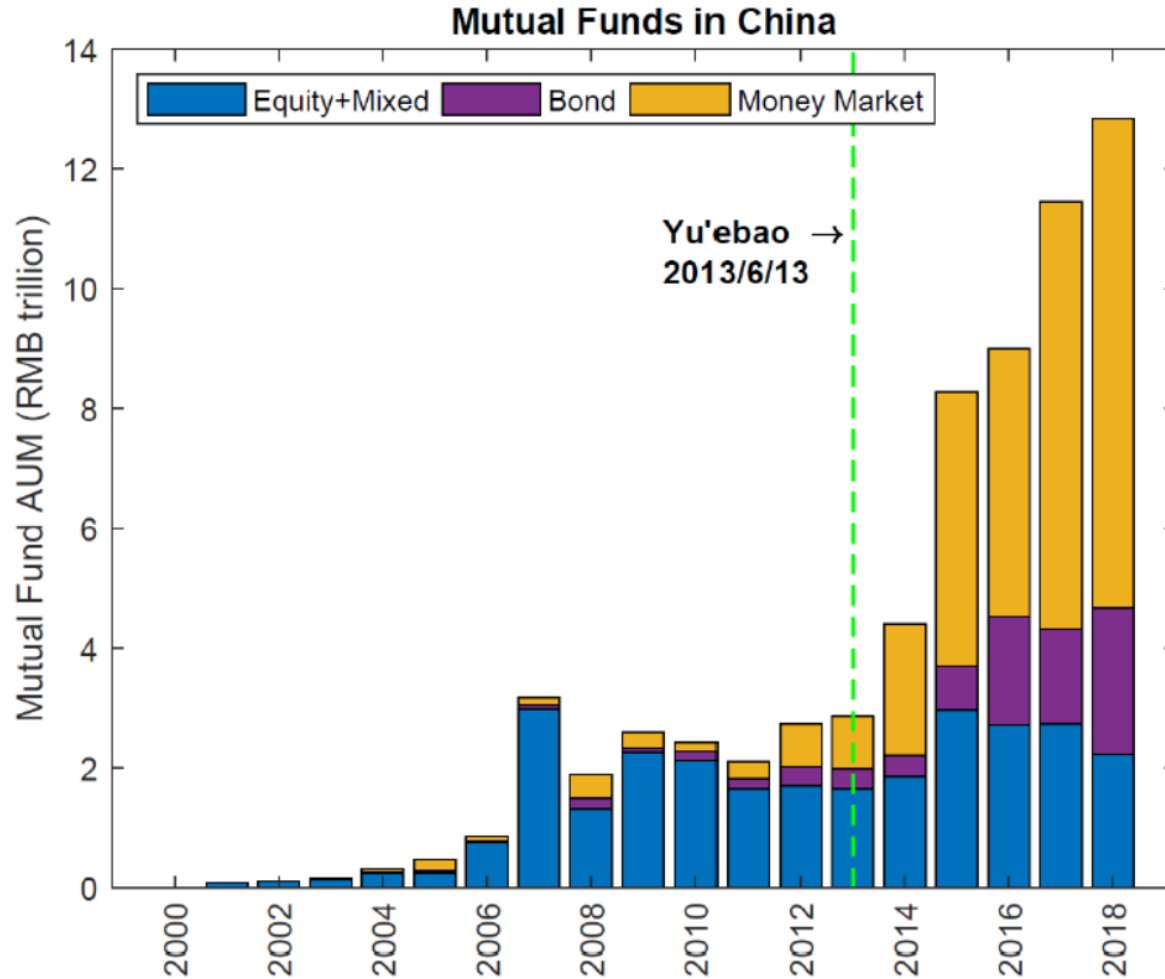
- Determinants of entrance time
 - Early entrants have the characteristics: Non-bank affiliated, small, less retail holdings
- Limited ability of flows in predicting future fund return
- No change in advertising expenses
- No change in the distribution of fund return skewness or kurtosis

- Robustness
 - Change in market condition
 - Change in Morningstar rating
 - Constant fund sample
 - Control for broker and bank distribution channels
 - Value-Weighted results
 - Using performance rank
 - Using the number of platforms
 - Alternative performance horizons
- S

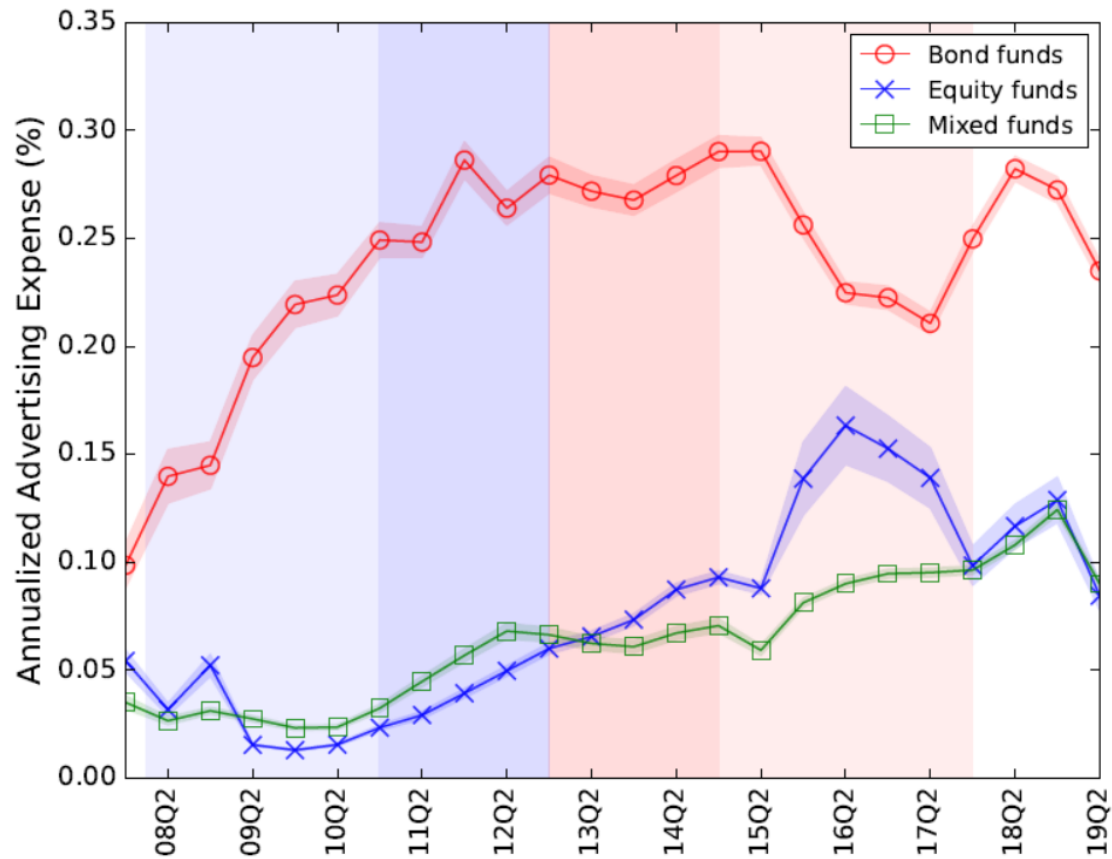
Conclusion

- Empirical evidences on the economic impact of platform intermediation of financial products:
- Distributional efficiency \neq Allocational efficiency
 - ✓ Investors are not using the technological efficiency to build more efficient portfolios.
 - ✓ In the absence of guidance from banks and brokers, investors pay more attention to the prominent features of platform apps, e.g., performance ranking lists.
- How to design policies to alleviate the unintended consequences while maintaining the technological advantages of FinTech platforms presents a challenge

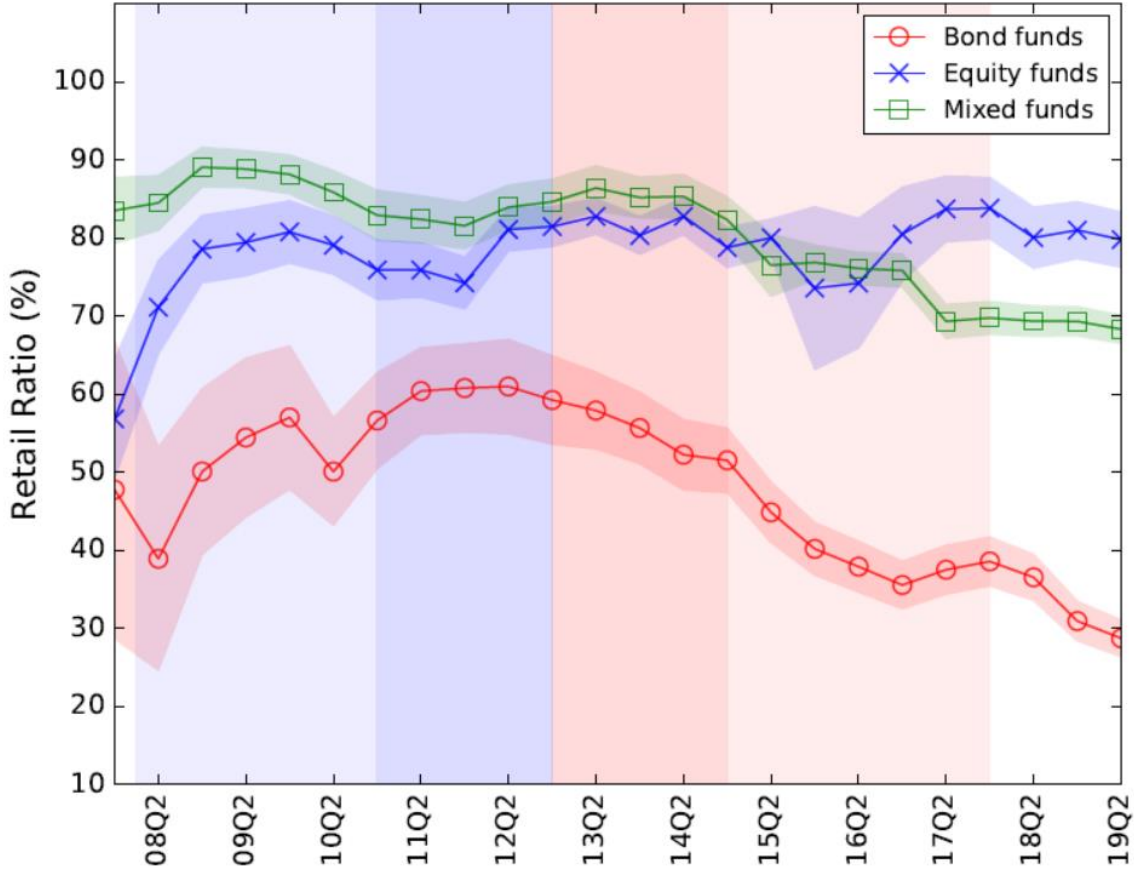
Appendix 1: Mutual Fund Industry Size



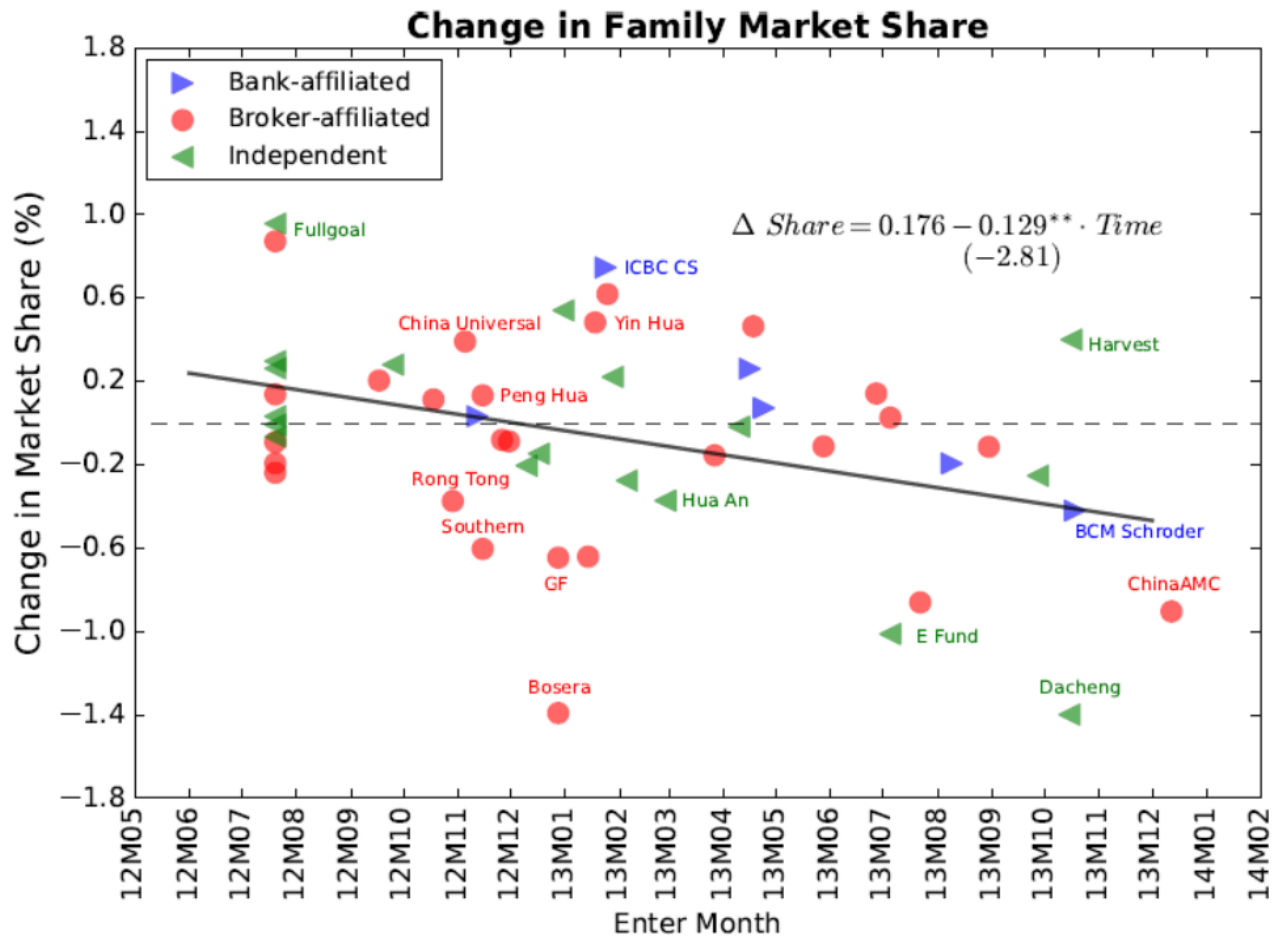
Appendix 2: Advertising Expenses



Appendix 3: Retail Ratio



Appendix 4: Family Market Share



Appendix 5: Determinants of Entrance

	Funds		Family	
	D(Enter \leq 2013Q1)	Log(Enter months)	D(Enter \leq 2013Q1)	Log(Enter months)
	Logit (1)	OLS (2)	Logit (3)	OLS (4)
Bank-affiliated	-1.773*** (-4.78)	0.574*** (6.48)	-2.073 (-1.51)	0.586* (1.72)
Broker-affiliated	-0.028 (-0.13)	0.089 (1.51)	0.867 (0.92)	-0.04 (-0.24)
RetailRatio	-0.021*** (-3.80)	0.005*** (3.44)	-0.127*** (-3.06)	0.019** (2.52)
Log(Size)	-0.261*** (-2.87)	0.107*** (4.55)	-1.381** (-2.49)	0.200* (1.88)
Log(Age)	0.745** (2.57)	-0.210*** (-2.76)	5.369* (1.95)	-0.334 (-0.81)
Flow $_{t-1}$	0.788* (1.91)	-0.187*** (-3.07)	0.414 (0.17)	-0.4 (-0.94)
MRet $_{t-1,t-4}$	0.187 (0.85)	-0.044 (-0.70)	3.05* (1.94)	-0.25 (-1.31)
Std $_{Mret,t-1,t-8}$	-10.981 (-0.73)	-1.279 (-0.31)	94.222 (0.92)	-15.971 (-0.80)
Management Fee	-1.024 (-0.62)	0.091 (0.24)	9.616* (1.80)	-1.174 (-1.05)
Subscription Fee	-0.388 (-0.70)	0.03 (0.21)	-3.281 (-0.78)	0.503 (0.67)
Redemption Fee	0.453 (0.92)	-0.172 (-1.35)	4.302 (1.23)	-1.193*** (-2.06)
Style FE	Y	Y	N	N
Observations	457	457	60	60
R^2	0.115	0.18	0.396	0.358

Appendix 7: Largest Ten Families

B. Largest Ten Fund Families

Largest 10	Before (2008–2012)				After (2013–2017)			
	Fund name	TNA (\$B)	#Funds	Share	Fund name	TNA (\$B)	#Funds	Share
1	China Asset Management	105.32	13.25	8.01%	China Asset Management	92.92	21.45	5.92%
2	Bosera Asset Management	76.54	10.8	5.82%	E Fund Management	84.35	26.70	5.37%
3	Gf Fund Management	69.17	7.3	5.26%	Harvest Fund Management	69.45	27.50	4.42%
4	Harvest Fund Management	59.07	11.35	4.49%	China Southern Asset Management	60.61	25.75	3.86%
5	China Southern Asset Management	58.51	11.85	4.45%	Bosera Asset Management	57.89	28.15	3.69%
6	E Fund Management	56.75	10.55	4.32%	Gf Fund Management	57.34	22.95	3.65%
7	Dacheng Fund Management	53.33	9.6	4.06%	ICBC Credit Suisse Asset Management	55.12	25.80	3.51%
8	Hua An Fund Management	40.83	7.85	3.11%	China Universal Asset Management	53.86	20.85	3.43%
9	Invesco Great Wall Fund Management	40.44	8.25	3.08%	Fullgoal Fund Management	48.86	25.45	3.11%
10	Fullgoal Fund Management	39.95	9.6	3.04%	Bank Of China Investment Management	42.10	21.20	2.68%
	The Largest Ten Fund Families	59.99	10.0	45.63%	The Largest Ten Fund Families	62.25	24.6	39.65%
	The Rest Fund Families (N=50)	14.29	4.6	54.37%	The Rest Fund Families (N=92)	10.30	8.84	60.35%