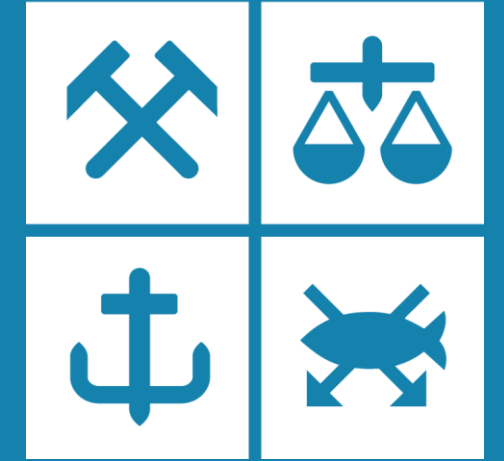


The Better Angels of our Nature?

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Angel investment

- An important source of entrepreneurial finance globally that matters for firm outcomes (Kerr, Lerner and Schoar 2011, Lerner, Schoar, Sokolinski and Wilson 2018).
- Interacts with institutional venture capital (Hellman, Schure and Vo 2021, Hellmann and Thiele 2015).
- But also, informal in nature and therefore hard to observe.
 - Who are angel investors? (Bach, Baghai, Strömberg and Warg 2023).
 - What do their investments look like?

We study angel investors in private and public markets. We examine:

1. What are the returns to angel investments?
2. Are differences between individual angel investors important for explaining angel investment returns?
3. Are some angels persistently better than others and, if so, what explains this?

Research Setting

High Innovation Potential (HIP) firms

- Tick of at least 2 ex-ante innovation flags

Innovation Flag	% of startups
English company name	28.3%
Located in an innovation hub	27.5%
Potentially innovative industry	63.7%
Distant board member	16.1%

Methodology from Kisseleva, Mjøs and Robinson (2023)

Relating ex-ante innovation flags to later-stage outcomes

	VC Investment (1/0)			Governmental Innovation Grant (1/0)		
English name (1/0)	1.381*** [0.066]			1.013*** [0.068]	1.412*** [0.065]	1.149*** [0.067]
Innovation hub (1/0)	1.256*** [0.065]			0.943*** [0.067]	0.464*** [0.066]	1.157* [0.067]
Innovative industry (1/0)	1.997*** [0.122]			1.679*** [0.124]	2.227*** [0.130]	1.980*** [0.131]
Distant board member (1/0)				1.348*** [0.068]	1.037*** [0.071]	0.838*** [0.068]
Observations	124,348	124,348	124,348	124,348	124,348	124,348
Pseudo R-squared	5.2 %	4.5 %	5.3 %	4.4 %	12.2 %	7.5 %

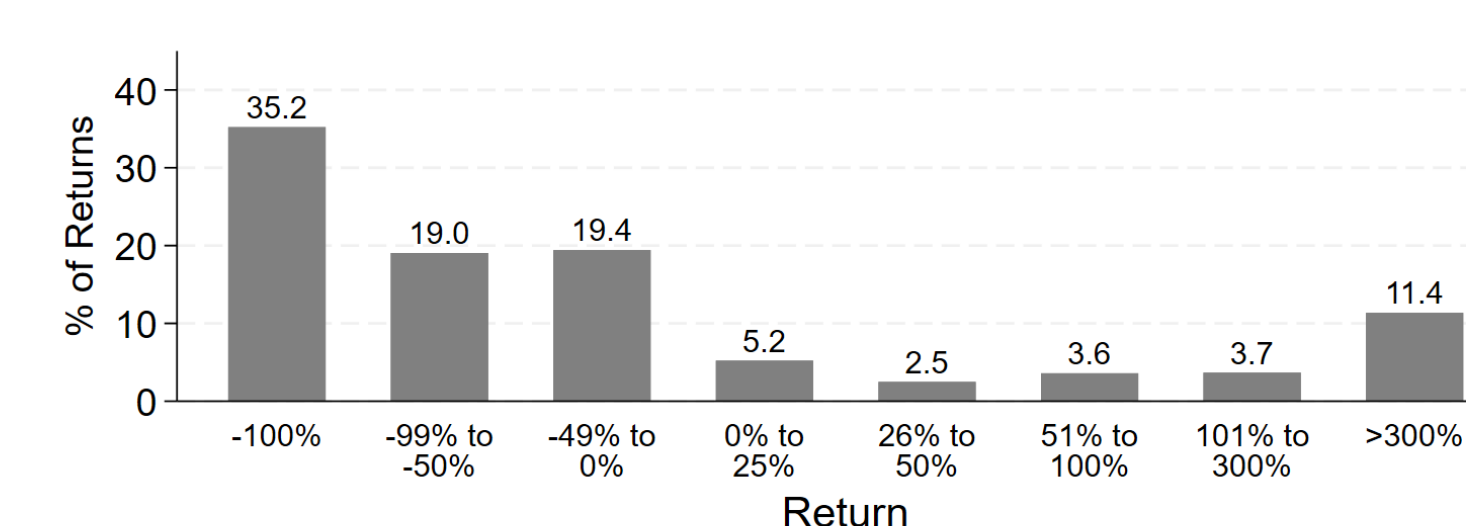
- We observe all Norwegian limited liability firms, all investors and their equity transactions.
- In the population of startups (2004-2017) we define Angel investors as non-founder investors in **HIP firms**.
- We have Investments by **42,129 angels** in **17,462 HIP firms**, ~50% of which are realized by sample end.
- We define different angel types: *Wealthy, Repeat and Experienced angels*.

Main Results

1 Angel investment returns

- The return distribution displays many large losses and profound skewness.
- Investor fixed effects **absorb ~45% of variation** in realized returns, indicating that heterogeneity across individual angel investors is important for explaining angel investment returns.

The distribution of angel investment returns



"Explaining" angel investment returns

Investment returns are measured as Ln (1+TVPI).

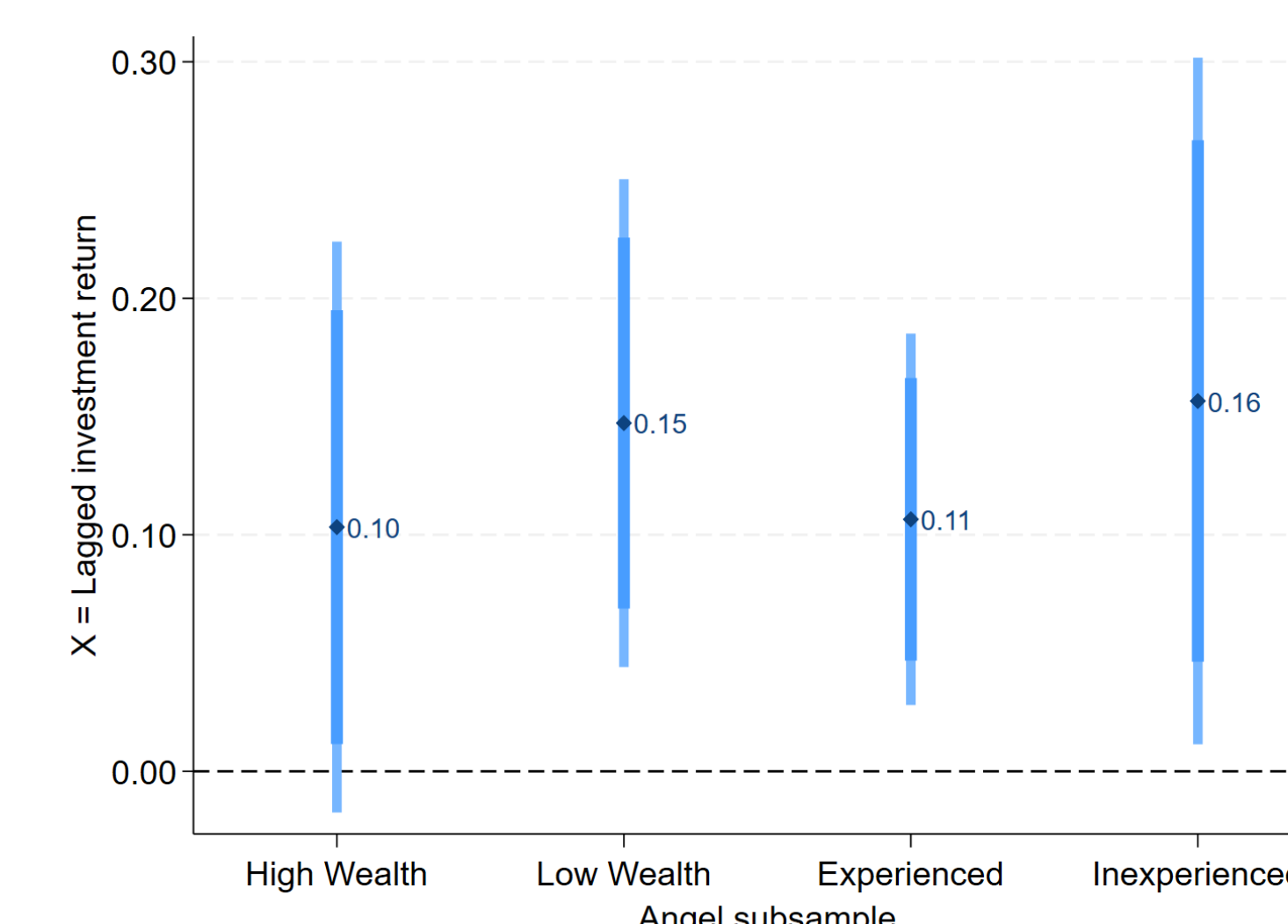
	(1)	(2)	(3)	(4)	(5)	(6)
Repeat angel (1/0)	0.096*** (0.032)	0.082*** (0.028)	0.090*** (0.027)			0.008 (0.014)
Wealthy angel (1/0)	-0.010 (0.030)	0.010 (0.028)	0.064** (0.028)	0.082*** (0.031)		0.063*** (0.016)
Experienced angel (1/0)	-0.046** (0.023)	-0.048** (0.019)	-0.023 (0.017)	-0.036 (0.024)		0.022** (0.011)
Observations	40,985	40,985	40,985	25,993	25,993	35,395
Adjusted R-squared	0.3 %	3.3 %	4.8 %	7.4 %	52.2 %	62.8 %
Controls	NO	NO	YES	YES	YES	YES
Calendar year FE	NO	YES	YES	YES	YES	YES
Investment firm age FE	NO	YES	YES	YES	YES	YES
Industry FE	NO	YES	YES	YES	YES	YES
Investor FE	NO	NO	NO	NO	YES	NO
Firm FE	NO	NO	NO	NO	NO	YES

2 Performance persistence in angel investing

- Based on *realized investments*: The angel's return on the prior investment indicates a higher return on the next investment in a different firm.
- Based on *all investments*: Success (failure) of the firm in the prior investment relates positively to success (failure) of the firm in the next.
- Performance persistence is not purely a result of exposure of sequential investments to common market conditions and its strength is related to angel investor experience and wealth.

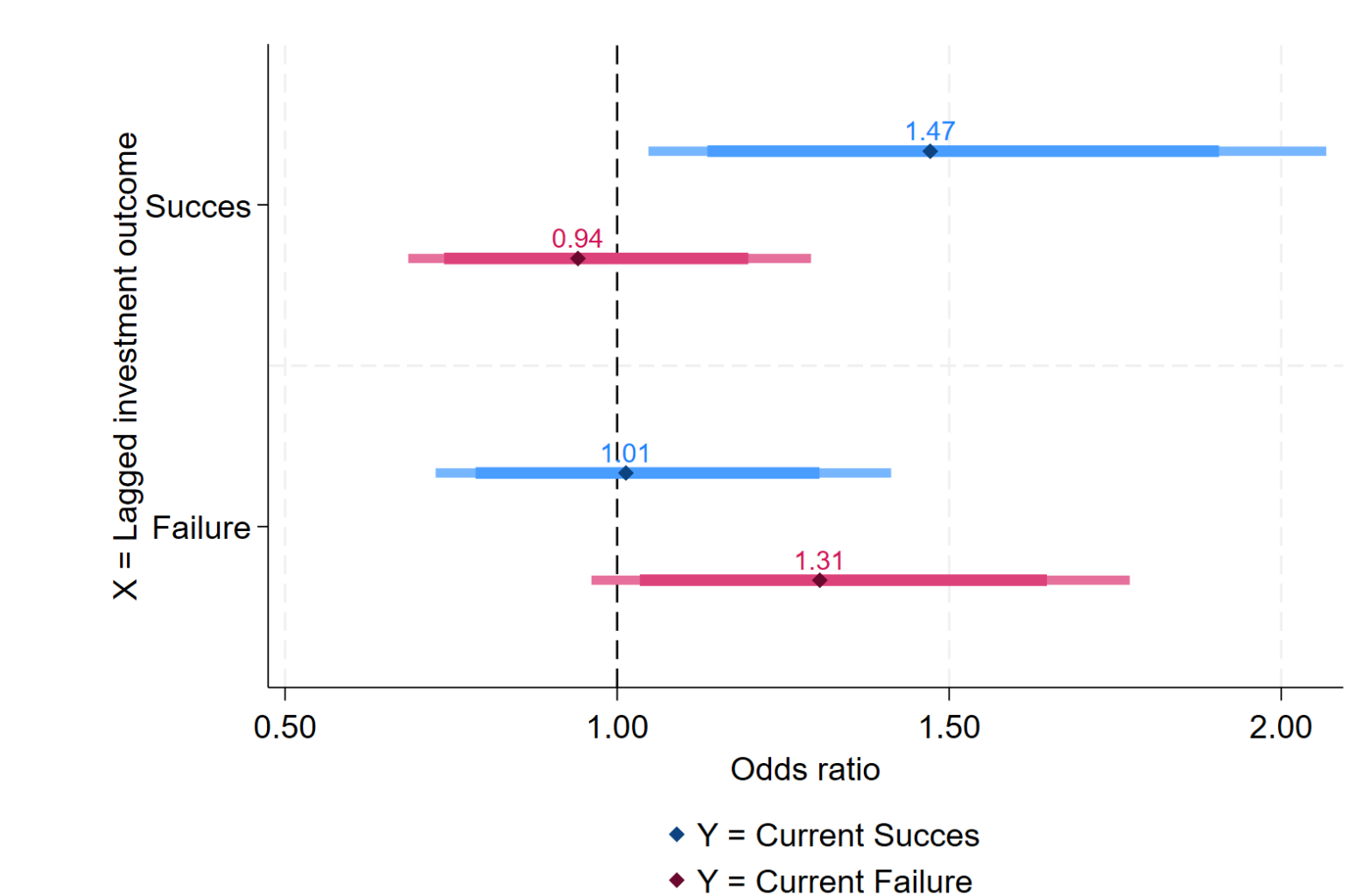
Regressing lagged on current investment returns (OLS)

Investment returns are measured as Ln (1+TVPI).

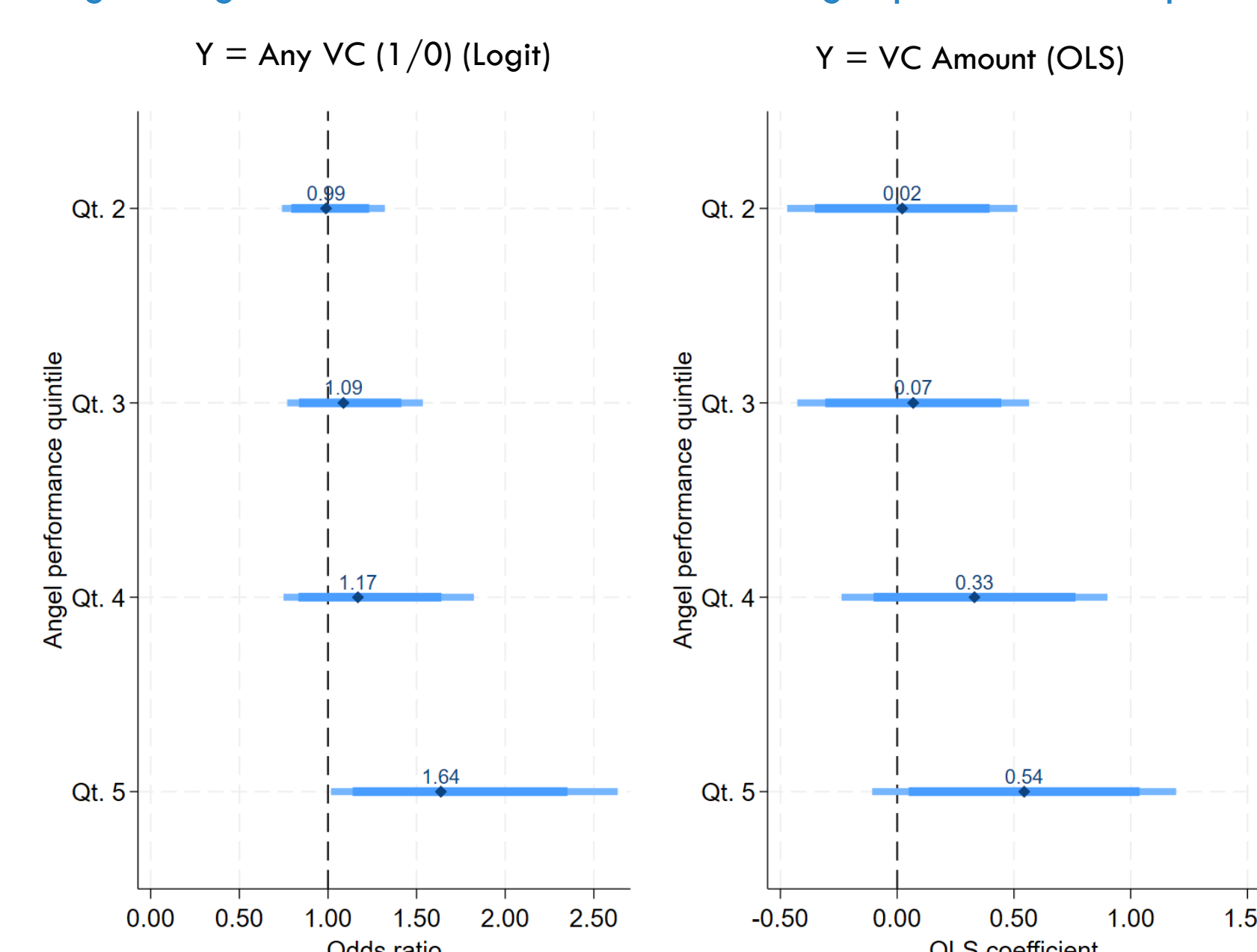


Regressing lagged on current investment firm outcomes (Logit)

Firm outcomes are firm-level indicators for success and failure. Success: Firm got acquired, merged or went public, Failure: Bankruptcy.



Regressing VC investment outcomes on angel performance quintile



Regressing public investment returns on angel performance (OLS)

Public investment returns are daily risk adjusted returns (investment-level Sharpe ratios).

	(1)	(2)	(3)	(4)
Performance	0.022*** (0.004)	0.017*** (0.004)	0.033*** (0.005)	0.038*** (0.007)
Repeat angel (1/0)		0.003 (0.005)		
Performance x Repeat		0.012* (0.006)		
Wealthy angel (1/0)			0.008 (0.006)	
Performance x Wealthy			-0.024*** (0.008)	
Experienced angel (1/0)				-0.012** (0.006)
Performance x Experienced				-0.019*** (0.007)
Observations	490,272	490,272	490,272	490,272
Adjusted R-squared	1.5 %	1.5 %	1.5 %	1.5 %
Controls	YES	YES	YES	YES

3 "Better Angels"

- Angels are ranked based on their individual fixed effect component of returns – Performance conditional on observable investment and investor characteristics.
- Better performing angels invest alongside VC investors - Supportive of better angels being better networked and facing a better deal flow.
- Better performing angels make better public stock investments - Supportive of better angels having greater selection skills.

Conclusion

There are better angels among us in the market for early-stage finance. We find:

- 1 Heterogeneity across individual angel investors is important for explaining variation in returns.
- 2 Some angels are better than others and angel investor performance is persistent.
- 3 Access to a better deal flow and selection skills are potential reasons why some angels are better.

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