Online Appendix to Commissioner Robert J. Jackson, Jr.
Statement on Accredited Investor Definition
December 18, 2019

Motivation

Figure 1 from Eaglesham and Jones (2018) shows that brokerage firms ("brokers" or "firms") that engage in private placements are often those with significant "red flags," including customer complaints, regulatory investigations and actions, firings, criminal charges, and other non-financial disclosures reported to the Financial Industry Regulatory Authority (FINRA).[1] In their analysis, they found that of the brokerage firms that have engaged in private placements, more than half employ a significant proportion of registered representatives ("reps") with red flags. By contrast, for firms that do not engage in private placements, only a quarter employ a significant proportion of representatives with red flags.

Figure 1

Investors in private placements are, generally speaking, "Accredited Investors." This includes sophisticated investors such as banks and private funds—but also some high income or high net worth retail investors.[2] Therefore, one important question raised by the data presented in Eaglesham and Jones (2018) is whether Accredited Investors are actually sophisticated enough to efficiently sort themselves so as to avoid potential investor harms in the private offerings space.

[1] These exclude disclosures of personal bankruptcies, tax liens, and other financial issues reported on the filings.

[2] "(5) Any natural person whose individual net worth, or joint net worth with that person's spouse, exceeds $1,000,000. [...] (6) Any natural person who had an individual income in excess of $200,000 in each of the two most recent years or joint income with that person's spouse in excess of $300,000 in each of those years and has a reasonable expectation of reaching the same income level in the current year;"

Data and Methodology

In order to answer this question we collect data on private placements from the SEC's Form D Data page. We collect publicly available information on brokers from FINRA's BrokerCheck.

Following Qureshi and Sokobin (2015) we proxy for investor harm using customer complaints because we do not have data on individual investor harm. Specifically, we narrow our focus to customer complaints related to private placements and direct investments.[3] Customer complaints are not a perfect proxy for investor harm as they may sometimes be meritless. However, brokers and their reps are responsible for self-reporting complaint metrics—and FINRA has fined brokers for under-reporting complaints.[4] On balance, we consider customer complaints to be a lower-bound on investor harm as meritless complaints will be treated as noise in our statistical models, whereas we have no way to detect and address under-reporting.

We collect information on individual (rep) and firm (broker) misconduct, as well as firm-level data on complaints, e.g., past private placement complaints, total firm complaints, firm sales practice complaints, complaints related to registered reps, serious complaints, firm conduct disclosures, individual conduct disclosures, the number of private placement deals sold. We define serious complaints as those related to misrepresentations, suitability failures, misappropriation of customer funds, unauthorized trading, excessive trading, theft, and excessive fees.

We run regressions of investor harm on past investor harm and past broker activity—complaints, misconduct, deal activity. These regressions are analogous to the fraud prediction model of Dimmock and Gerken (2012), although that paper focuses on investment adviser misconduct.

Table 1 reports summary statistics for our sample from 2008–2018. We report summary statistics based on yearly averages. Over our eleven year sample we have approximately 5,300 firms per year. For most variables, we compute the total occurrences over the previous five years. For the complaints and individual and broker misconduct variables we transform the data into indicator variables for whether there is one or more occurences.

[3]See FINRA product complaint codes: `https://www.finra.org/filing-reporting/rule-4530-reporting-requirements#customer-complaints`.

[4]`https://www.investmentnews.com/article/20190620/FREE/190629994/finra-dings-edward-jones-for-underreporting-alleged-damages-in`

Panel (a) includes the full sample, and Panel (b) includes only the sample of private placement brokers. There are many statistics, but the main takeaway is that private placement brokers tend to have more registered reps, and also more instances of customer complaints and misconduct.

Table 1 here

Figure 2 shows rates of customer complaints and individual rep misconduct over the last five years, as reported in 2018. Private placement brokers have significantly higher rates of sales practice complaints and individual rep misconduct.

Figure 2 here

Results

Our main predictive regressions are as follows:

$$Harm_{i,t} = \beta_0 + \beta_1 PriorHarm_{i,t} + \beta_2 X_{i,t} + \varepsilon_{i,t}, \tag{1}$$

where $PriorHarm$ is measured over the past five years, and $X_{i,t}$ is a vector of controls for prior broker activity.

Table 2 reports results from these regressions.[5]

Table 2 here

Panel A includes the full sample of brokers. Column (1) regresses investor harm—customer complaints in the current year t—on past investor harm in the previous five years and a constant. Although for any given broker-year observation the probability of investor harm is small (80 bps), the probability of harm conditional on past harm is much higher (23.4%). Adding controls and year fixed effects, the probability of harm remains high—11.3 and 11.4% respectively in Columns (2) and (3). These results show that firms with past investor harm are likely to have future investor harm. Notably, having sold a private placement in the last five years is also highly predictive of

[5]For ease of interpretation we present estimates from linear probability models estimated via OLS as a robustness we also estimate each model as a logit. The qualitative results are the same.

harm, increasing the probability by about 8%. Most forms of customer complaints about the firm are not strongly predictive—except for the presence of complaints about individual registered representatives (adding another 3%). We interpret our results as suggesting that sorting is imperfect as investors continue to find themselves harmed by high risk brokers.

One potential issue with our full sample analysis is that brokers that sell private placements may be systematically different from brokers that never sell private placements. Therefore, we repeat our analysis in the subsample of brokers that have done a private placement any time in our sample (Table 2 Panel (b)). The results are qualitatively similar, although the main predictor—past harm—is slightly less predictive in Columns (2) and (3).

Another concern with our methodology is that—while our estimates are large and statistically significant—they could be generating many false positives. To mitigate this concern we plot a receiver operating characteristic (ROC) curve for the prediction model for the logit form of Table 2 Panel (a) Column (3). Figure 3 shows that the curve rises steeply, showing a large proportion of fraud firm-years could be avoided at a low false positive rate. Specifically, holding constant a 5% false positive rate, the model can identify nearly three-fourths of all investor harms.

Overall, our results appear to be consistent with Egan et al. (2019), as we find evidence suggestive of serial investor harm. Egan et al. (2019) show that one-third of all advisers with misconduct records are repeat offenders, and provide evidence that, although half of advisers are fired, they are often re-hired and therefore continue to harm investors. They also argue that some firms appear to "specialize" in misconduct—which is consistent with the observation by Eaglesham and Jones (2018) that private placement activity bifurcates the brokerage market and that misconduct clusters in the segment that conducts private placements. Moreover, this harm seems to be highly ex-ante predictable—even more so than the investment adviser fraud studied in Dimmock and Gerken (2012).

References

Dimmock, Stephen G, and William C Gerken, 2012, Predicting fraud by investment managers, *Journal of Financial Economics* 105, 153–173.

Eaglesham, Jean, and Coulter Jones, 2018, Firms with troubled brokers are often behind sales of private stakes, *The Wall Street Journal* .

Egan, Mark, Gregor Matvos, and Amit Seru, 2019, The market for financial adviser misconduct, *Journal of Political Economy* 127, 233–295.

Qureshi, Hammad, and Jonathan S Sokobin, 2015, Do investors have valuable information about brokers?, *FINRA Office of the Chief Economist Working Paper* .

Tables and Figures

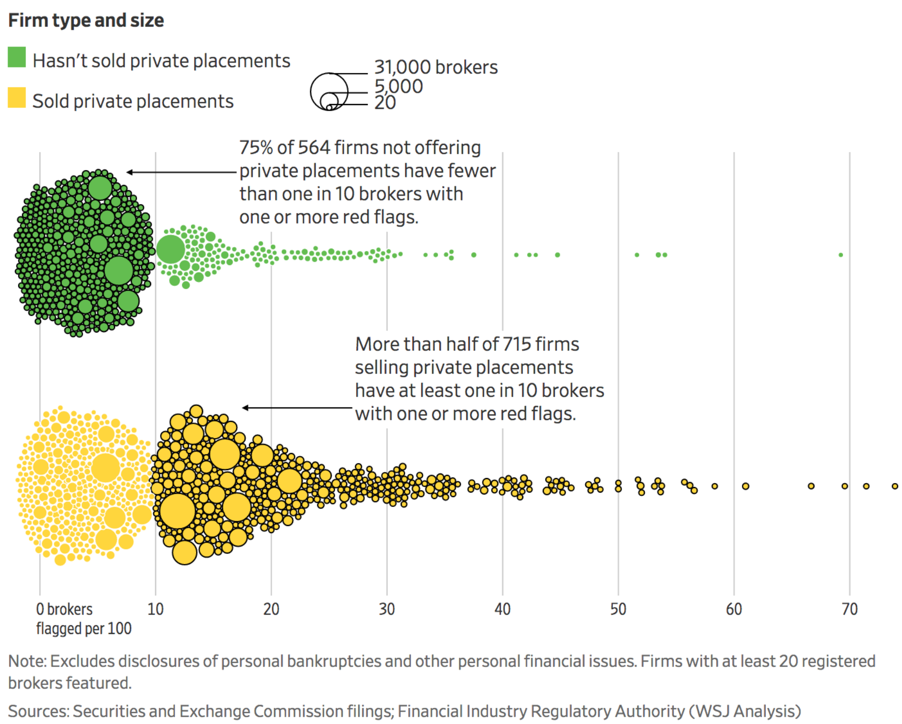

Figure 1: A 2018 WSJ Analysis showed that many firms selling private placements had "red flags" for broker misconduct. See Eaglesham and Jones (2018).

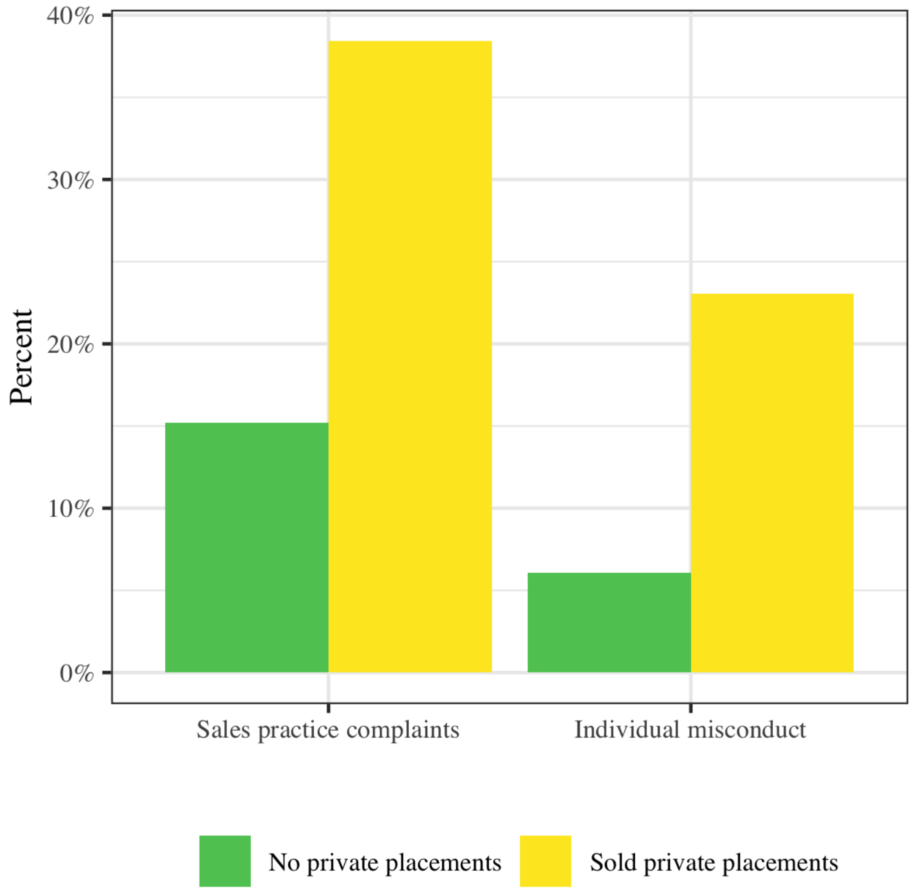

Figure 2: Percentage of brokerage firms with sales practice complaints and individual misconduct reports in the past five years as of 2018.

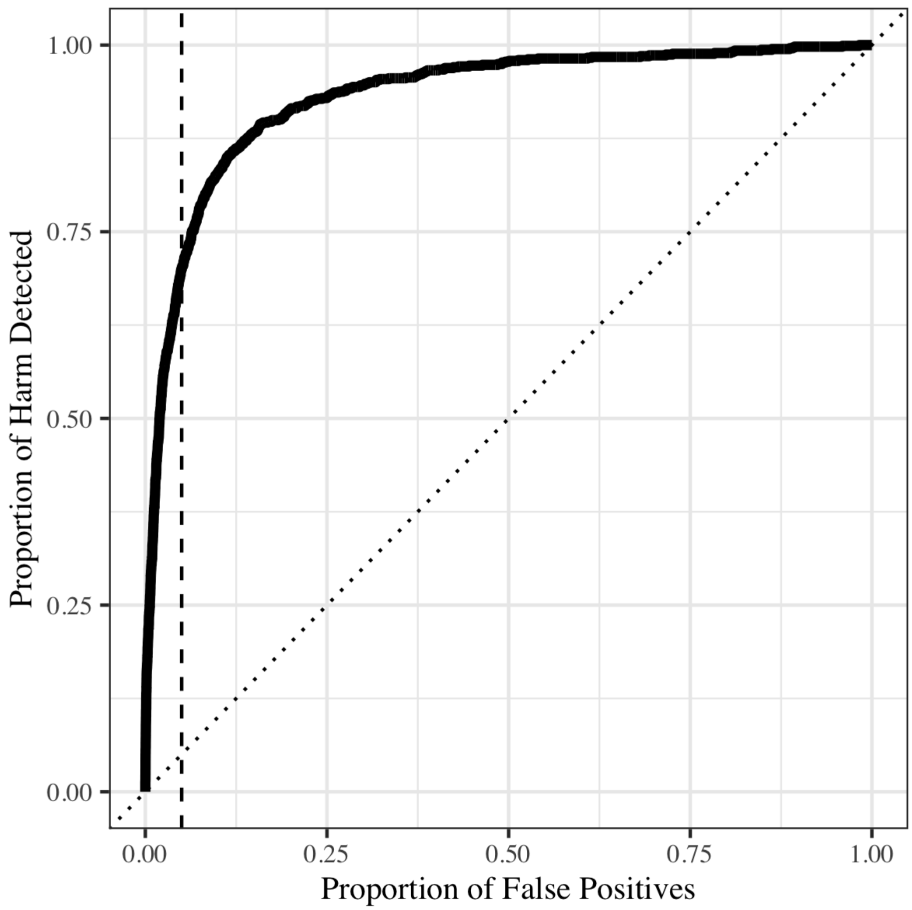

Figure 3: Prediction model ROC curve corresponding to Table 2 Panel (a) Column (3) in logit form. Dotted horizontal line is the 45-degree line corresponding to fully random predictions. The vertical dashed line corresponds to a 5% false positive rate.

Table 1: **Summary Statistics.** This table reports summary statistics of yearly averages across the cross-section of all brokers in the sample.

(a) Full Sample

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Median	Pctl(75)	Max
Registered reps	58,380	274.247	21.710	241.810	255.825	275.806	291.580	309.893
Private placement broker	58,380	0.257	0.007	0.246	0.251	0.257	0.264	0.266
Individual misconduct	58,380	0.145	0.024	0.104	0.133	0.144	0.158	0.184
Firm misconduct	58,380	0.017	0.001	0.015	0.016	0.017	0.018	0.020
Private placement complaints	58,380	0.345	0.023	0.305	0.329	0.347	0.364	0.385
Firm complaints	58,380	0.292	0.017	0.261	0.273	0.288	0.311	0.314
Sales practice complaints	58,380	0.248	0.017	0.220	0.227	0.247	0.265	0.272
Operational complaints	58,380	0.204	0.012	0.180	0.195	0.203	0.217	0.217
Registered rep complaints	58,380	0.207	0.017	0.177	0.190	0.205	0.226	0.227
Serious complaints	58,380	0.189	0.017	0.159	0.178	0.189	0.208	0.209
Number of private placements	58,380	1.311	0.647	0.296	0.694	1.424	1.842	2.223
PP complaints (three years)	58,380	0.043	0.005	0.030	0.040	0.045	0.047	0.047
PP complaints (five years)	58,380	0.055	0.009	0.033	0.050	0.059	0.062	0.062
PP complaints (ten years)	58,380	0.075	0.017	0.040	0.061	0.082	0.088	0.095

(b) Private Placement Brokers

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Median	Pctl(75)	Max
Registered reps	14,976	749.287	56.195	672.391	705.342	745.250	799.946	862.205
Private placement broker	14,976	1.000	0.000	1	1	1	1	1
Individual misconduct	14,976	0.291	0.031	0.231	0.273	0.297	0.317	0.323
Firm misconduct	14,976	0.055	0.006	0.050	0.051	0.052	0.055	0.067
Private placement complaints	14,976	0.428	0.029	0.387	0.412	0.420	0.446	0.491
Firm complaints	14,976	0.463	0.016	0.435	0.448	0.462	0.478	0.484
Sales practice complaints	14,976	0.412	0.018	0.384	0.395	0.416	0.429	0.433
Operational complaints	14,976	0.348	0.016	0.319	0.336	0.350	0.365	0.366
Registered rep complaints	14,976	0.374	0.024	0.333	0.354	0.377	0.398	0.404
Serious complaints	14,976	0.337	0.020	0.301	0.319	0.341	0.355	0.362
Number of private placements	14,976	4.631	2.095	1.192	2.653	4.884	6.971	7.584
PP complaints (three years)	14,976	0.122	0.017	0.078	0.115	0.128	0.134	0.135
PP complaints (five years)	14,976	0.150	0.024	0.088	0.139	0.160	0.167	0.168
PP complaints (ten years)	14,976	0.198	0.041	0.103	0.171	0.219	0.227	0.236

Table 2: **Regressions.** This table reports results from predictive regressions of investor harm related to private placements, on past broker activity. PP complaints is an indicator for whether the brokerage firm received any customer complaints related to its private placement activity in the last five years. PP broker is an indicator for whether the brokerage firm particpated in the sale of a private placement in the last five years.

(a) Full Sample

	(1)	(2)	(3)
PP complaints	0.234***	0.113***	0.114***
	(0.003)	(0.005)	(0.010)
PP complaints × PP broker		0.083***	0.082***
		(0.006)	(0.013)
PP broker		0.017***	0.018***
		(0.002)	(0.003)
Complaints			
Firm		−0.006**	−0.006
		(0.003)	(0.004)
Sales practice		0.001	0.002
		(0.004)	(0.005)
Registered rep		0.006**	0.005
		(0.003)	(0.005)
Serious		0.008***	0.008**
		(0.003)	(0.003)
Misconduct			
Firm		0.003**	0.003**
		(0.001)	(0.001)
Individual		0.030***	0.029***
		(0.002)	(0.003)
Other			
Number of reps		0.00001***	0.00001***
		(0.00000)	(0.00000)
Constant	0.008***	−0.003***	
	(0.001)	(0.001)	
FE	None	None	Year
Observations	45,119	45,119	45,119
R^2	0.139	0.207	0.208
Adjusted R^2	0.139	0.207	0.207
Note:			*p<0.1; **p<0.05; ***p<0.01

(b) Private Placement Brokers

	(1)	(2)	(3)
PP complaints	0.243***	0.085***	0.088***
	(0.006)	(0.014)	(0.014)
PP complaints × PP broker		0.092***	0.090***
		(0.015)	(0.018)
PP broker		0.008*	0.013***
		(0.004)	(0.004)
Complaints			
Firm		−0.007	−0.007
		(0.009)	(0.007)
Sales practice		−0.002	−0.001
		(0.010)	(0.013)
Registered rep		0.014*	0.013
		(0.008)	(0.008)
Serious		0.016**	0.016*
		(0.007)	(0.007)
Misconduct			
Firm		0.008*	0.007
		(0.004)	(0.004)
Individual		0.050***	0.048***
		(0.005)	(0.006)
Other			
Number of reps		0.00001***	0.00001***
		(0.00000)	(0.00000)
Constant	0.025***	−0.005	
	(0.002)	(0.004)	
FE	None	None	Year
Observations	12,604	12,604	12,604
R^2	0.132	0.208	0.210
Adjusted R^2	0.132	0.208	0.209
Note:		*p<0.1; **p<0.05; ***p<0.01	