

Replication of "Luck Versus Skill in the Cross-Section of Mutual Fund Returns (Fama and French, 2010)"

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Github link: <https://github.com/Yanping-Zhu/Replication>

This document provides the replication of the primary results in Tables 2 - 4 and Figures 1-2 of Fama and French (2010, JF). Due to the computational cost, I only simulate 100 times for the bootstraps whereas the paper simulate 10,000 times.

1 Replication of Table 2

Notice that in my data sample, there are a lot of observations that do not have data on total net asset value. In this case, the weights in my replication of the value-weighted case may be different from those in the paper. I guess that's the reason why I cannot get significance for net α s in VW case. But the economic magnitude is similar to that in the paper.

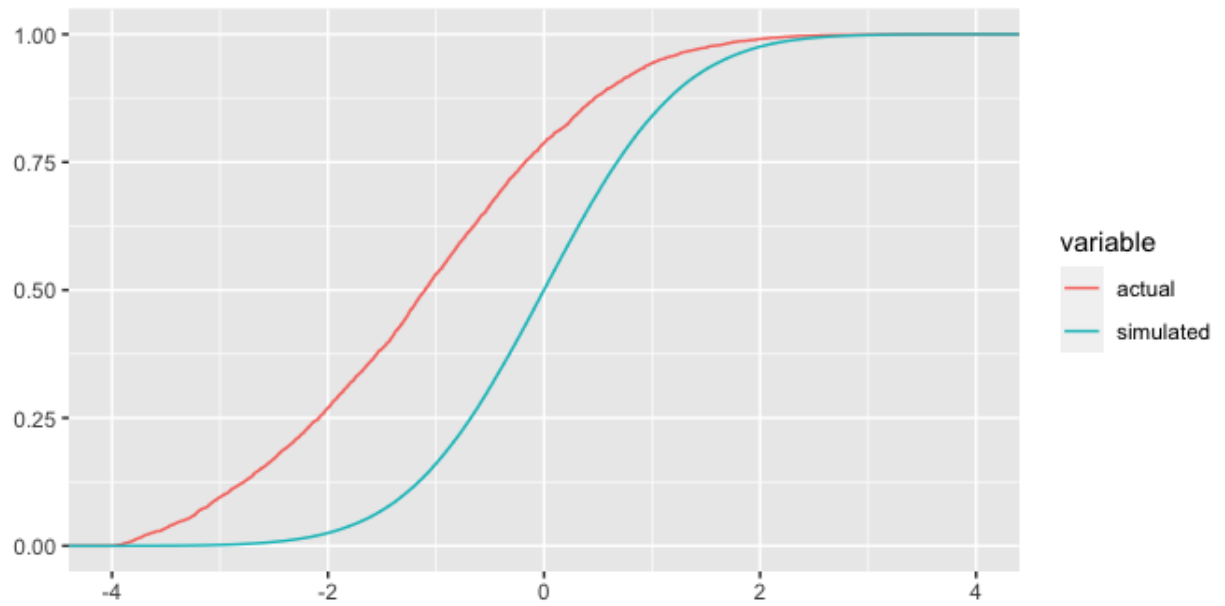
	$12 \times a$						
	<i>Net</i>	<i>Gross</i>	<i>b</i>	<i>s</i>	<i>h</i>	<i>m</i>	R^2
EW Returns							
<i>Coeff</i>	-1.80	-0.36	0.91				0.94
<i>t</i>	-2.30	-0.46	62.82				
<i>Coeff</i>	-1.68	-0.28	0.89	0.19	0.02		0.96
<i>t</i>	-2.66	-0.46	87.54	11.56	0.85		
<i>Coeff</i>	-1.44	-0.07	0.89	0.19	0.015	-0.02	0.96
<i>t</i>	-2.23	-0.114	66.83	11.70	0.71	-1.61	
VW Returns							
<i>Coeff</i>	-0.96	0.48	0.87				0.91
<i>t</i>	-1.09	0.27	52.57				
<i>Coeff</i>	-0.72	0.60	0.85	0.17	-0.02		0.93
<i>t</i>	-0.81	0.67	51.04	7.93	-0.66		
<i>Coeff</i>	-0.80	0.48	0.85	0.17	-0.02	0.01	0.93
<i>t</i>	-0.92	0.53	50.55	7.84	-0.61	0.61	

2 Replication of Table 3

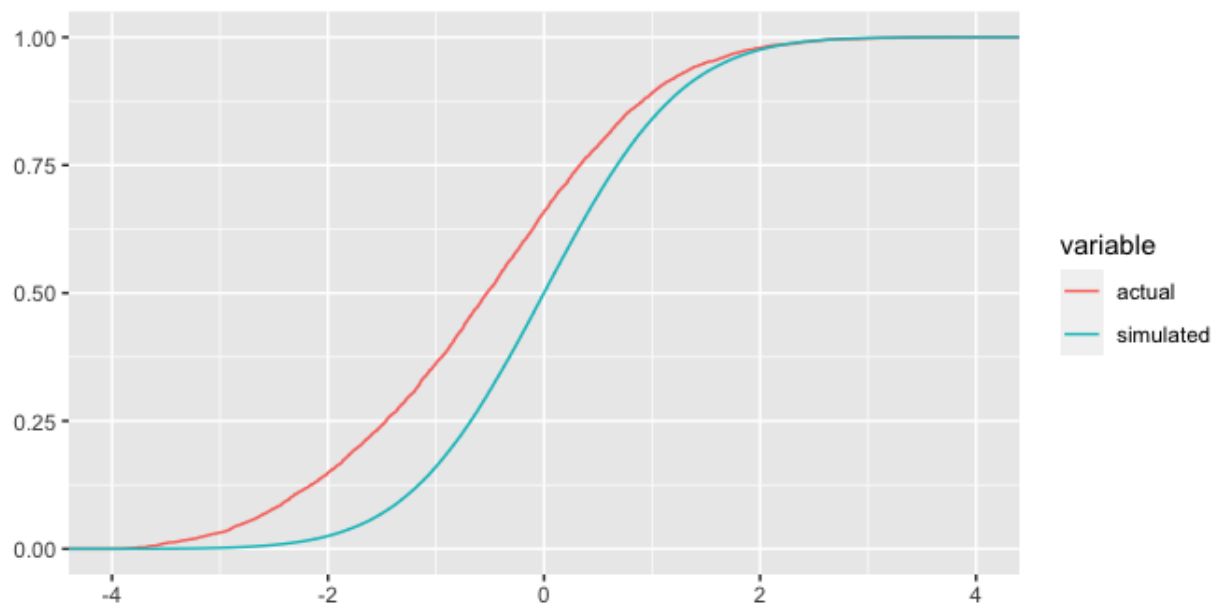
Notice that the table replicates the results for the \$5 million AUM group.

<i>Pct</i>	<i>Sim</i>	<i>Act</i>	<i>Pct</i>	<i>Sim</i>	<i>Act</i>
3-Factor Net Returns			3-Factor Gross Returns		
5	-1.67	-3.82	5	-1.68	-2.86
10	-1.29	-3.23	10	-1.29	-2.37
20	-0.84	-2.53	20	-0.85	-1.74
30	-0.52	-2.00	30	-0.52	-1.26
40	-0.25	-1.55	40	-0.26	-0.86
50	-0.00	-1.17	50	-0.00	-0.53
60	0.25	-0.81	60	0.25	-0.2
70	0.53	-0.42	70	0.52	0.13
80	0.85	0.01	80	0.84	0.54
90	1.29	0.62	90	1.30	1.05
95	1.67	1.05	95	1.66	1.49

3 Replication of Figure 1



4 Replication of Figure 2



Notice that since I only simulated 100 times due to the computational cost, my figure 2 is slightly different from figure 2 in the paper. However, as compared to Figure 1 above, the actual t-statistics shift right-ward, and these two CDFs seemingly cross at around 2. This is in general consistent with the paper.

5 Replication of Table 4

Notice that the following table replicates the results for the \$5 million AUM group with $\sigma = 0.5, 1.0, 1.5$.

Average from Simulations				
Pct	Actual	0.5	1.0	1.5
5	-3.82	-10.70	-10.86	-10.96
10	-3.23	-7.89	-7.99	-8.06
30	-2.53	-3.02	-3.03	-3.06
50	-1.17	-0.01	-0.00	0.00
70	-0.42	2.98	3.03	3.05
90	0.62	7.87	8.00	8.03