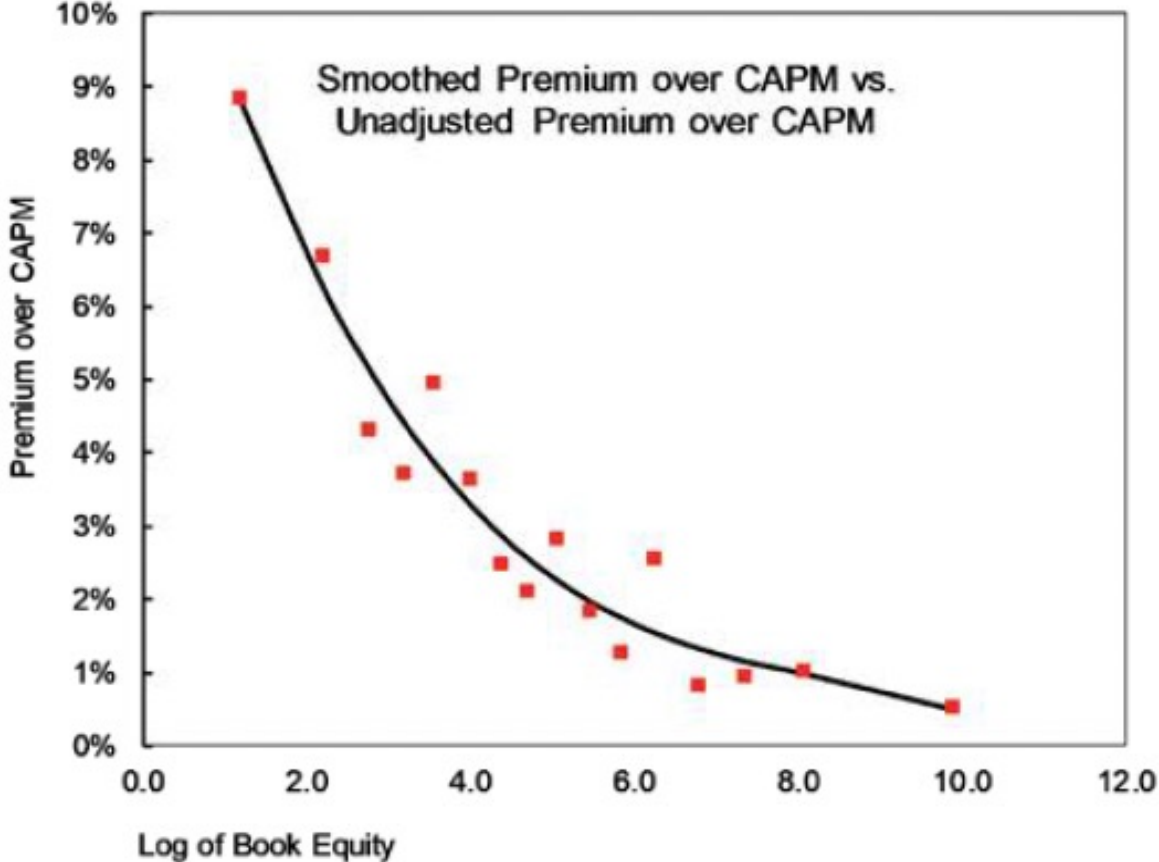Historical Equity Risk Premium: Average Since 1990
Data for Year Ending December 31, 2018

Equity Risk Premium Study: Data through December 31, 2018
Data Smoothing with Regression Analysis
Dependent Variable: Premium over CAPM
Independent Variable: Log of Average Book Equity

Portfolio Rank by Size	Avg. Book Equity (in € millions)	Log of Avg. Book Equity	Sum Beta Beta (Sum Beta) Since '90	Arithmetic Avg. Risk Premium	Indicated CAPM Premium	Premium over CAPM	t-Value Premium over CAPM	Smoothed Premium over CAPM
1 (big)	19,250.00	9.87	0.95	5.69%	5.14%	0.55%	–	0.51%
2	3,177.60	8.06	1.03	6.61%	5.57%	1.04%	0.379	0.99%
3	1,537.20	7.34	1.03	6.54%	5.57%	0.97%	0.266	1.16%
4	871.70	6.77	1.05	6.53%	5.68%	0.85%	0.132	1.34%
5	514.50	6.24	1.06	8.32%	5.74%	2.58%	1.235	1.55%
6	338.90	5.83	1.06	7.02%	5.74%	1.28%	0.354	1.76%
7	232.00	5.45	1.03	7.43%	5.57%	1.86%	0.641	1.98%
8	155.80	5.05	0.99	8.20%	5.36%	2.84%	1.328	2.27%
9	108.90	4.69	0.99	7.49%	5.36%	2.13%	0.829	2.57%
10	79.70	4.38	0.98	7.81%	5.30%	2.51%	1.083	2.87%
11	53.60	3.98	0.96	8.86%	5.19%	3.67%	1.676	3.32%
12	34.90	3.55	0.96	10.16%	5.19%	4.97%	2.178	3.88%
13	24.30	3.19	0.98	9.03%	5.30%	3.73%	1.954	4.41%
14	15.80	2.76	1.01	9.80%	5.47%	4.33%	1.610	5.15%
15	8.90	2.19	1.07	12.50%	5.79%	6.71%	3.073	6.28%
16 (small)	3.20	1.18	1.37	16.27%	7.41%	8.86%	2.049	8.82%

Regression Output:

Intercept	12.739%
Log(Size)	-3.807%
Log(Size)^2	0.430%
Log(Size)^3	-0.017%
Adj. R^2	92%

Smoothed Premium = 12.739% -3.807% * Log(Book Equity) + 0.430% * Log(Book Equity)^2 -0.017% * Log(Book Equity)^3

Smoothed Premium over CAPM vs. Unadjusted Premium over CAPM

Note: "Log" reflects natural logarithm (base e = 2.71828)

A Study of Return Differences Between Large and Small Companies in Europe (2019 update)