AF6305 Individual Project

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1 Data

- Database access
- Stock price
- Delisting adjustment for monthly return
- Why no adjustment for daily return
- Dealing with NA values in return

Figure 1: Number of Stocks in CRSP Sample by Exchange

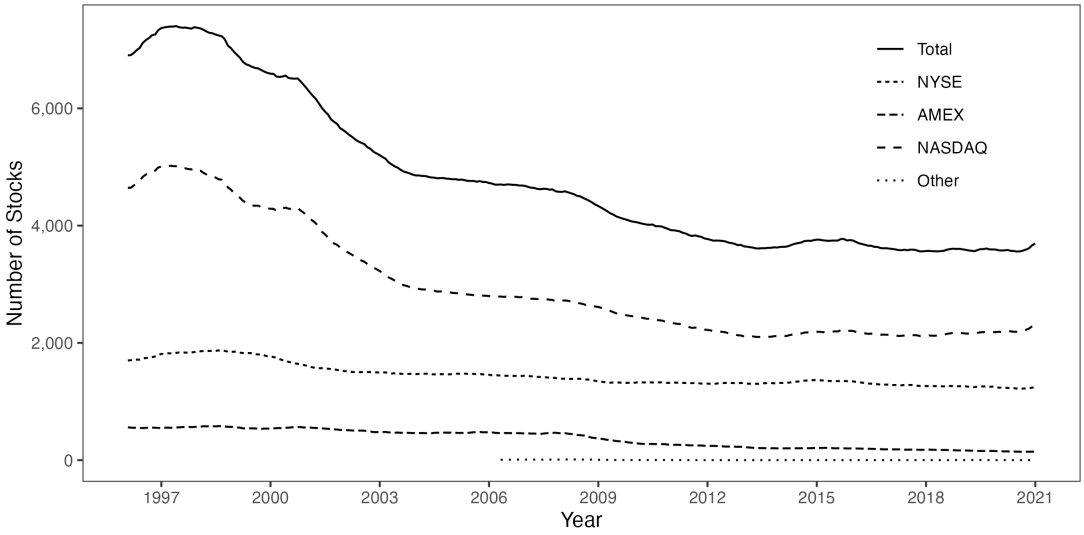

Table 1: Summary Statistics of Returns

var	mean	sd	skew	kurtosis	min	5%	25%	median	75%	95%	max	n
r_m	0.0098	0.17	4.1	96	-0.8	-0.21	-0.068	-0.00034	0.069	0.25	3.4	4776
r_d	0.00071	0.043	4.6	170	-0.42	-0.051	-0.014	-0.00047	0.013	0.054	0.94	4860

Table 2: Summary Statistics of Beta

Months	μ	σ	skew	kurtosis	min	5%	25%	median	75%	95%	max	n
1	0.82	1.72	-0.31	85.01	-23.5	-1.49	0.1	0.8	1.53	3.18	23.49	4838
3	0.83	0.93	-0.37	32.69	-9.81	-0.51	0.35	0.83	1.31	2.24	9.95	4780
6	0.84	0.7	-0.19	18.46	-5.67	-0.21	0.44	0.84	1.24	1.95	6.38	4701
12	0.86	0.57	-0.01	9.06	-3.24	-0.03	0.49	0.86	1.2	1.78	4.47	4537
24	0.87	0.5	0.06	4.64	-1.67	0.07	0.54	0.87	1.18	1.68	3.49	4220

Figure 2: Value of Stocks in CRSP Sample by Exchange

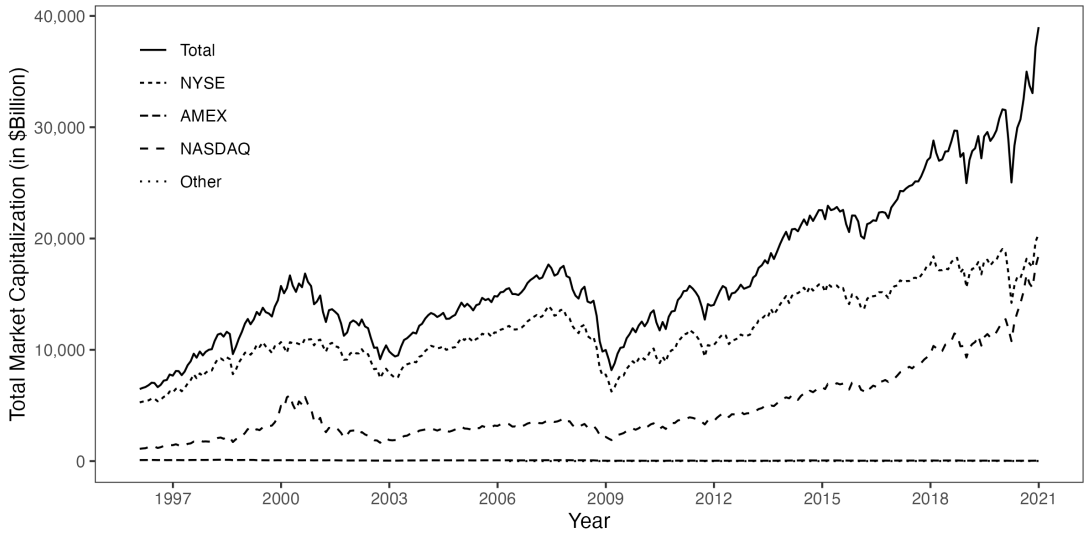

Table 3: Beta Correlation Matrix

	1m	3m	6m	12m	24m
1m		0.590	0.490	0.430	0.390
3m	0.530		0.780	0.670	0.600
6m	0.400	0.750		0.840	0.740
12m	0.320	0.610	0.810		0.880
24m	0.270	0.520	0.700	0.870	

Table 4: Beta Persistence

Lag	β^{1M}	β^{3M}	β^{6M}	β^{12M}	β^{24M}
1	0.14				
3	0.12	0.31			
6	0.12	0.29	0.45		
12	0.1	0.26	0.4	0.56	
24	0.09	0.24	0.36	0.5	0.64
36	0.1	0.24	0.36	0.48	0.59
48	0.1	0.23	0.33	0.45	0.55
60	0.09	0.21	0.31	0.41	0.51
120	0.07	0.17	0.26	0.34	0.41

Table 5: Single Portfolio Sort (EW)

Sort Variable	1	2	3	4	5	5-1
Size	0.99	0.89	0.93	0.93	0.78	-0.21
	(2.53)	(2.28)	(2.52)	(2.74)	(2.66)	(-0.86)
BM	0.58	0.76	0.84	0.93	1.55	0.97
	(1.39)	(2.15)	(2.52)	(2.85)	(3.7)	(3.68)
Momentum	0.56	0.86	0.81	0.85	0.99	0.43
	(1.22)	(2.57)	(2.71)	(2.94)	(2.8)	(1.43)

Table 6: Single Portfolio Sort (VW)

Sort Variable	1	2	3	4	5	5-1
Size	3.19	2.3	2.05	1.81	1.23	-1.96
	(7.26)	(6.18)	(5.91)	(5.65)	(4.69)	(-6.27)
BM	1.49	1.38	1.25	1.29	1.74	0.25
	(5.25)	(5.13)	(4.48)	(4.33)	(4.77)	(0.93)
Momentum	0.54	0.62	0.7	0.64	0.86	0.31
	(1.33)	(2.09)	(2.71)	(2.51)	(2.73)	(0.92)

Table 7: Double Portfolio Sort (EW)

Size	1	2	3	4	5	5-1
1	0.47	0.89	0.99	1.42	2.02	1.56
	(1.07)	(2.58)	(2.9)	(3.68)	(3.8)	(5.04)
2	0.82	0.82	0.91	1.03	1.25	0.43
	(1.89)	(2.3)	(2.5)	(2.68)	(2.4)	(1.26)
3	0.91	0.87	0.93	0.89	1.23	0.32
	(2.16)	(2.5)	(2.65)	(2.56)	(2.72)	(0.97)
4	0.98	0.85	1	0.86	0.98	0
	(2.55)	(2.61)	(2.96)	(2.45)	(2.5)	(0.01)
5	0.81	0.77	0.89	0.7	0.75	-0.06
	(2.49)	(2.61)	(3.03)	(2.27)	(2.3)	(-0.24)

Table 8: Double Portfolio Sort (VW)

Size	1	2	3	4	5	5-1
1	3.51	2.56	2.58	3.28	4.51	1
	(6.9)	(7.08)	(6.94)	(7.8)	(7.42)	(2.22)
2	2.71	1.99	1.81	2.02	2.54	-0.16
	(6.31)	(5.8)	(5.34)	(5.66)	(5.52)	(-0.48)
3	2.47	1.74	1.65	1.64	2.05	-0.43
	(5.89)	(5.28)	(5.16)	(5.07)	(5.16)	(-1.26)
4	2.16	1.51	1.65	1.46	1.65	-0.51
	(5.62)	(4.91)	(5.18)	(4.47)	(4.72)	(-1.51)
5	1.36	1.22	1.2	1.05	1.05	-0.31
	(4.68)	(4.59)	(4.53)	(3.78)	(3.32)	(-1.25)

Table 9: Fama-MacBeth Regression

factor	1	2	3	4	5	6
(Intercept)	0.88	1.14	0.9	1.08	1.06	0.75
	(2.56)	(2.75)	(2.27)	(3.75)	(2.51)	(2.45)
bm	0.25					0.27
	(2.01)					(2.13)
size		0				0
		(-1.17)				(-0.81)
mom			0.1			0.13
			(0.25)			(0.36)
ivol				-2.79		-7.73
				(-0.37)		(-1.1)
ret					-2.58	-2.96
					(-4.74)	(-5.58)

Table 10: Fama-MacBeth Regression on Arbitrage Measures

factor	1	2	3	4
(Intercept)	0.84	0.45	0.82	0.62
	(2.42)	(1.18)	(2.4)	(1.6)
size	0	0	0	0
	(-0.38)	(3.26)	(-0.13)	(-0.51)
bm	0.04	0.31	0.06	0.07
	(0.27)	(1.46)	(0.39)	(0.45)
mom	0.05	0.24	0.1	0.07
	(0.14)	(0.49)	(0.26)	(0.19)
amihud_illiq	-71849.82			10316.49
	(-2)			(1.18)
bm:amihud_illiq	80846			
	(1.93)			
size:amihud_illiq	44.61			
	(0.37)			
mom:amihud_illiq	235630.9			
	(2.3)			
inst_own		0.65		0.35
		(2.3)		(1.44)
bm:inst_own		-0.36		
		(-1.41)		
size:inst_own		0		
		(-2.65)		
mom:inst_own		-0.25		
		(-0.5)		
disp			-0.05	-0.04
			(-0.54)	(-1.32)
bm:disp			-0.01	
			(-0.11)	
size:disp			0	
			(-1.13)	
mom:disp			-0.14	
			(-0.93)	