Dissecting Anomalies

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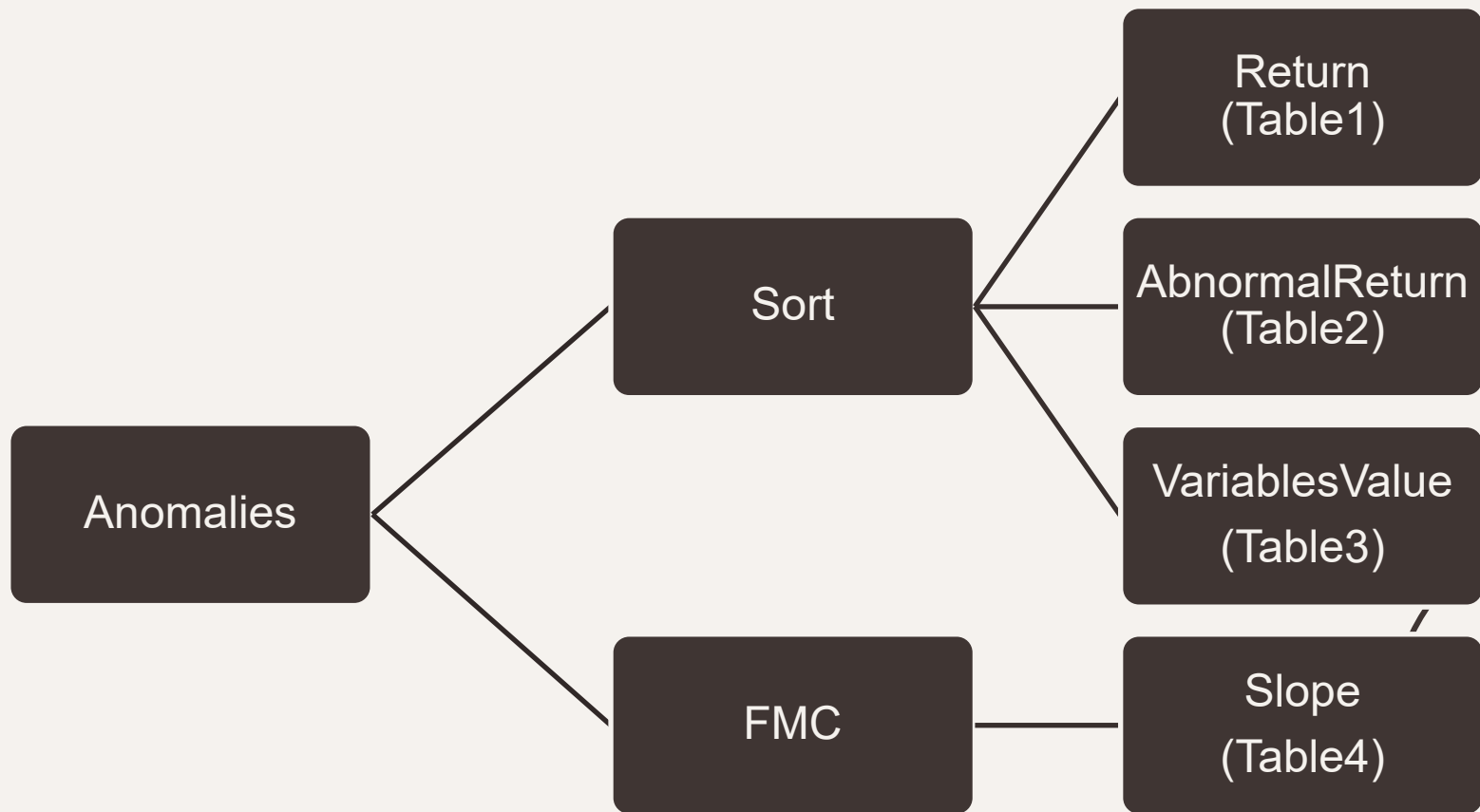
Table1

		Percent of Total Market	VW Average Return		EW Average Return		Cross-Section
	Firms	Cap	Ave	Std Dev	Ave	Std Dev	Std Dev of Returns
		Average Monthly Values, July 1963–December 2005					
Market	3060	100.00	0.94	4.44	1.36	6.14	15.14
Micro	1831	3.07	1.29	6.84	1.56	6.99	17.51
Small	603	6.45	1.22	6.03	1.21	6.26	11.41
Big	626	90.48	0.92	4.36	1.07	5.10	8.77
All but Micro	1229	96.93	0.94	4.42	1.13	5.57	10.22

	Firms	Percent MC	VW Return	Std	EW Return	Std
Market	783	100	1.04	26.17	1.08	9.1
Micro	156	28	1.52	30.54	1.55	11.76
Small	235	33	1.08	24.57	1.08	8.62
Big	392	39	0.89	24.57	0.9	7.86
All but micro	627	72	0.96	24.69	0.97	8.2

Table1

	MC	B/M	Mom	Zero NS	NS	Neg Ac/B	Pos Ac/B	dA/A	Neg Y	Y/B
Average of Annual EW Average Values, 1963–2005										
Market	4.22	−0.47	16.64	0.24	3.55	−8.06	9.50	11.45	0.22	−3.65
Micro	2.89	−0.34	14.62	0.33	3.67	−10.53	11.45	9.88	0.30	−11.86
Small	5.09	−0.59	21.20	0.18	3.58	−5.17	8.03	15.29	0.12	7.08
Big	7.01	−0.70	19.00	0.09	2.92	−3.26	5.18	12.06	0.07	11.99
All but Micro	6.09	−0.65	20.01	0.13	3.26	−4.21	6.56	13.70	0.10	9.51

	MC	B/M	Mom	Zero NS	NS	Neg AC/B	AC/B	dA/A	NegY	Y/B
Average of Annual EW Average Values										
Market	8.74	0.23	0.1	0.54	0.01	18	0.01	5.26	0.19	5.53
Micro	6.98	-0.12	0.08	0.64	-0.01	17.99	-0.02	-1.09	0.46	-5.81
Small	8.14	0.14	0.1	0.54	0.01	18.01	0.02	6.36	0.2	4.23
Big	9.85	0.42	0.12	0.51	0.02	18.01	0.01	7.12	0.08	10.84
All but micro	9.21	0.32	0.11	0.52	0.02	18.01	0.01	6.84	0.13	8.36

Overview of table2 & 3

	Negatives		Positives					Pos H−Neg L	Negatives		Positives					Pos H−Neg L
	Low	High	Low	2	3	4	High		Low	High	Low	2	3	4	High	
Sorting on Accruals, Ac/B																
			Average Value-Weight Returns								*t-statistics for Average Value-Weight Returns*					
Market	0.19	0.05	0.00	0.01	−0.02	−0.07	−0.34	−0.54	2.82	1.13	0.00	0.23	−0.24	−1.12	−4.39	−5.29
Micro	0.12	0.05	−0.05	0.07	0.05	0.07	−0.25	−0.37	2.55	0.86	−0.65	0.90	0.78	1.37	−4.50	−4.56
Small	0.17	0.16	0.11	0.04	0.10	−0.03	−0.20	−0.37	2.79	2.84	1.70	0.71	1.51	−0.46	−2.78	−4.00
Big	0.20	0.05	−0.00	0.01	−0.03	−0.09	−0.37	−0.56	2.62	0.93	−0.02	0.17	−0.40	−1.16	−3.82	−4.70
			Average Equal-Weight Returns								*t-statistics for Average Equal-Weight Returns*					
Market	0.33	0.20	0.13	0.14	0.15	0.14	−0.08	−0.41	4.00	3.80	2.57	2.56	2.94	2.27	−0.90	−6.76
Micro	0.44	0.27	0.27	0.20	0.20	0.26	−0.00	−0.44	4.23	3.12	3.21	2.30	2.43	3.05	−0.04	−6.12
Small	0.14	0.19	0.10	0.10	0.05	−0.04	−0.27	−0.42	1.82	3.17	1.46	1.39	0.80	−0.57	−2.87	−4.83
Big	0.12	0.06	−0.00	0.07	0.08	0.03	−0.18	−0.30	1.71	1.34	−0.10	1.46	1.50	0.44	−2.01	−3.30

	Average of Annual EW Average Values							Average of Annual Cross-Section Standard Deviations						
	Negatives		Positives					Negatives		Positives				
	Low	High	Low	2	3	4	High	Low	High	Low	2	3	4	High
Sorting on Accruals, Ac/B														
Market	−30.23	−1.92	1.02	3.24	6.12	10.78	37.72	50.65	1.23	0.60	0.71	1.00	1.82	34.61
Micro	−34.74	−1.97	1.00	3.25	6.14	10.87	39.93	55.38	1.24	0.61	0.70	0.99	1.82	36.37
Small	−22.73	−1.91	1.03	3.26	6.15	10.71	32.43	38.78	1.25	0.59	0.71	0.98	1.81	26.82
Big	−15.94	−1.83	1.02	3.22	6.07	10.62	28.47	25.48	1.21	0.60	0.70	1.01	1.81	23.18

Sorting on Asset Growth, dA/A

Table2

	All Firms					High-Low	All Firms				
	Low	2	3	4	High		Low	2	3	4	High
Sorting on Momentum, *Mom*											
	Average Value-Weight Returns						*t*-statistics for Average Value-Weight Returns				
Market	−0.31	−0.07	−0.10	0.06	0.43	0.74	−2.11	−0.91	−1.57	1.00	3.91
✔ Micro	−0.64	−0.16	0.05	0.22	0.72	1.37	−5.26	−1.80	0.60	2.90	6.61
Small	−0.54	−0.10	0.01	0.11	0.62	1.16	−3.97	−1.38	0.14	1.87	5.89
Big	−0.25	−0.07	−0.11	0.05	0.41	0.66	−1.55	−0.79	−1.63	0.88	3.44
	Average Equal-Weight Returns						*t*-statistics for Average Equal-Weight Returns				
Market	−0.06	−0.05	0.12	0.25	0.69	0.75	−0.36	−0.70	2.22	4.88	8.64
✔ Micro	0.08	−0.01	0.28	0.38	0.81	0.73	0.43	−0.14	3.43	5.06	9.27
Small	−0.47	−0.07	0.04	0.13	0.61	1.08	−2.71	−0.88	0.71	2.15	6.42
Big	−0.26	−0.09	−0.02	0.12	0.46	0.72	−1.45	−1.11	−0.42	2.43	4.54
	-0.17	-0.26	0.02	0.39	0.21	0.38	-0.86	-2.14	-0.25	3.5	1.2
	-1.13	0.67	-0.3	0.54	1.71	2.8	-5.26	-3.35	-1.72	2.47	7.13
	-1.13	-0.47	-0.09	0.47	1.22	1.3	-7.91	-3.67	-0.86	3.65	7.25
	-1.11	-0.56	0.003	0.56	1.14	2.2	-9.1	-5.14	0.03	5.14	9.07
	Average EW Returns						T-stat for Average EW Returns				
	-0.21	-0.24	-0.06	0.35	0.17	0.38	-1.09	-2.64	-0.63	3.04	0.98
	-1.16	-0.7	-0.33	0.51	1.68	3.2	-5.42	-3.48	-1.85	2.4	7.09
	-1.13	-0.47	-0.09	0.48	1.22	2.31	-7.92	-3.67	-0.86	3.66	7.26
	-1.3	-0.74	-0.18	0.37	0.95	2.15	-6.64	-4.65	-1.12	2.61	5.8

| | Negatives | | Zeros | Positives | | | | | Pos H − Neg L | Negatives | | Zeros | Positives | | | | |
	Low	High		Low	2	3	4	High		Low	High		Low	2	3	4	High
Sorting on Net Stock Issues, NS																	
				Average Value-Weight Returns									*t*-statistics for Average Value-Weight Returns				
Market	0.26	0.11	−0.11	−0.03	0.08	0.11	−0.08	−0.29	−0.54	3.73	1.56	−1.34	−0.42	1.56	1.69	−0.98	−3.91
✔ Micro	0.26	0.10	−0.08	0.10	0.02	0.28	−0.13	−0.45	−0.71	3.24	1.26	−1.33	1.45	0.24	3.59	−1.91	−5.06
Small	0.26	0.20	−0.08	0.11	0.15	0.12	0.11	−0.36	−0.62	3.29	2.47	−1.06	1.65	2.27	1.87	1.46	−4.44
Big	0.26	0.11	−0.13	−0.04	0.08	0.11	−0.09	−0.27	−0.54	3.44	1.46	−1.27	−0.53	1.49	1.51	−0.97	−3.36
				Average Equal-Weight Returns									*t*-statistics for Average Equal-Weight Returns				
Market	0.38	0.30	0.13	0.19	0.22	0.27	0.07	−0.27	−0.66	6.05	4.86	1.34	3.08	4.16	4.69	0.81	−2.55
✔ Micro	0.47	0.42	0.23	0.32	0.27	0.39	0.08	−0.22	−0.69	5.41	4.43	2.15	3.28	3.13	4.28	0.75	−1.54
Small	0.26	0.15	−0.12	0.13	0.19	0.13	0.07	−0.35	−0.61	3.29	1.94	−1.06	1.92	2.89	1.91	0.85	−3.16
Big	0.28	0.17	−0.07	0.09	0.14	0.14	−0.02	−0.34	−0.62	4.25	2.88	−0.65	1.76	2.83	2.46	−0.20	−3.74
	0.34	0.00	0.08	0.18	0.15	-0.07	-0.19	-0.37	0.72	1.51	-0.02	1.68	1.12	1.22	-0.55	-1.41	-2.35
	0.21	0.23	0.02	-0.15	0.10	-0.08	-0.65	-0.14	-0.35	-0.4	-0.76	0.3	-0.34	0.2	-0.16	1.36	-0.25
	0.34	0.02	0.01	-0.09	0.16	0.21	-0.17	-0.42	-0.76	1.36	0.07	0.2	-0.31	0.63	0.76	-0.72	-1.52
	0.34	-0.03	0.03	0.24	0.15	0.10	-0.31	-0.49	-0.83	1.1	-0.13	0.57	1.32	1.1	0.64	-1.73	-2.95
				Average EW Returns									T-stat for Average EW Returns				
	0.30	-0.04	0.04	0.14	0.11	-0.11	-0.23	-0.41	0.71	1.37	-0.29	0.8	0.89	0.91	-0.83	-1.68	-2.61
	0.24	0.26	0.01	-0.18	0.07	0.31	-0.62	-0.17	-0.41	-0.47	-0.87	-0.07	-0.41	0.14	-0.22	1.29	-0.31
	0.34	0.02	0.01	-0.09	0.16	0.21	-0.17	-0.42	-0.76	1.36	0.07	0.2	-0.31	0.64	0.76	-0.72	-1.52
	0.34	-0.03	0.02	0.23	0.15	0.10	-0.31	-0.50	-0.8	1.09	-0.17	0.44	1.28	1.04	0.59	-1.76	-3.03

Sorting on Profitability, Y/B

	Average Value-Weight Returns								t-statistics for Average Value-Weight Returns						
Market	0.05	−0.14	−0.08	0.00	−0.01	0.03	0.06	0.01	0.30	−0.83	−1.24	0.07	−0.22	0.57	1.34
Micro	−0.14	−0.25	−0.07	0.01	0.12	0.10	0.23	0.36	−0.95	−2.46	−1.76	0.09	1.49	1.04	2.22
Small	−0.49	−0.13	−0.05	0.01	0.07	0.16	0.30	0.79	−2.03	−0.53	−0.84	0.29	1.11	2.37	3.72
Big	0.32	−0.28	−0.08	−0.00	−0.03	0.01	0.05	−0.27	1.01	−1.05	−1.12	−0.01	−0.49	0.29	0.98
	Average Equal-Weight Returns								t-statistics for Average Equal-Weight Returns						
Market	0.41	0.15	0.13	0.08	0.11	0.16	0.22	−0.19	2.25	1.20	2.35	1.69	1.97	2.36	2.87
Micro	0.49	0.21	0.21	0.14	0.15	0.20	0.27	−0.23	2.62	1.61	2.87	1.73	1.84	2.08	2.47
Small	−0.44	−0.10	−0.06	0.06	0.08	0.15	0.25	0.68	−1.68	−0.40	−1.04	1.09	1.32	1.97	2.79
Big	0.05	−0.23	−0.00	0.00	0.07	0.09	0.11	0.05	0.17	−0.85	−0.06	0.08	1.40	1.67	1.76

0.04	0.20	0.26	0.02	-0.04	0.07	-0.27	-0.31	0.14	1.14	2.25	0.2	-0.47	0.66	-2.1
-0.12	0.00	-0.06	0.29	0.51	-0.28	-0.23	-0.11	-0.4	0	-0.26	1.11	1.76	-1.1	-0.73
-0.27	-0.08	0.23	-0.06	0.05	0.32	-0.34	-0.07	-0.92	-0.4	1.33	-0.48	0.37	2.02	-2.15
0.04	0.03	0.07	-0.02	0.00	0.05	-0.11	-0.15	0.09	0.09	0.57	-0.22	0.03	0.45	-0.87

Average EW Returns								T-stat for Average EW Returns						
0.001	0.16	0.22	-0.02	-0.08	0.03	-0.31	-0.31	0	0.95	1.99	-0.25	-0.88	0.25	-2.31
-0.15	-0.03	-0.10	0.26	0.48	-0.31	-0.26	-0.11	-0.53	-0.17	-0.38	0.97	1.61	-1.17	-0.83
-0.27	-0.08	0.23	-0.05	0.05	0.32	-0.34	-0.07	-0.93	-0.39	1.33	-0.47	0.37	2.02	-2.13
0.03	0.02	0.07	-0.03	0.00	0.05	-0.12	-0.15	0.08	0.07	0.53	-0.31	-0.05	0.38	-0.91

Table3

	Average of Annual EW Average Values All Stocks					Average of Annual Cross-Section Standard Deviations All Stocks				
	Low	2	3	4	High	Low	2	3	4	High
Sorting on Momentum, *Mom*										
Market	−32.83	−3.36	12.48	31.22	97.89	15.56	4.82	4.51	6.81	61.57
Micro	−34.76	−3.60	12.36	31.29	104.34	16.00	4.81	4.49	6.81	65.95
Small	−29.12	−3.22	12.56	31.31	91.90	13.49	4.84	4.52	6.83	53.43
Big	−25.21	−2.90	12.60	30.93	80.46	11.15	4.77	4.50	6.74	41.73

	Average of Annual EW Average Values								Average of Annual Cross-Section Standard Deviations							
	Negatives		Zeros	Positives					Negatives		Zeros	Positives				
	Low	High		Low	2	3	4	High	Low	High		Low	2	3	4	High
Sorting on Net Stock Issues, *NS*																
Market	−5.73	−0.48	0.00	0.14	0.57	1.48	4.50	24.04	5.24	0.38	0.00	0.09	0.17	0.41	1.67	16.93
Micro	−6.20	−0.46	0.00	0.14	0.58	1.48	4.47	26.03	5.51	0.38	0.00	0.09	0.17	0.40	1.65	18.19
Small	−5.48	−0.48	0.00	0.15	0.58	1.48	4.50	22.18	4.91	0.40	0.00	0.09	0.17	0.41	1.68	15.00
Big	−4.82	−0.51	0.00	0.15	0.57	1.49	4.56	20.29	4.52	0.39	0.00	0.09	0.17	0.41	1.71	13.61

	Average of annual EW Average Values					Average of annual Cross section Std				
	Low	2	3	4	High	Low	2	3	4	High
Sorting on Mom										
Market	-0.24	-0.07	0.03	0.17	0.64	0.1	0.03	0.03	0.05	0.53
Micro	-0.3	-0.11	0	0.14	0.64	0.11	0.03	0.03	0.05	0.56
Small	-0.23	-0.07	0.03	0.16	0.61	0.08	0.03	0.03	0.05	0.43
Big	-0.22	-0.06	0.05	0.19	0.65	0.1	0.03	0.03	0.05	0.51

	Average of annual EW Average Values								Average of annual Cross section Std							
	Negatives			Postives					Negatives			Postives				
	Low	High	Zero	Low	2	3	4	High	Low	High	Zero	Low	2	3	4	High
Sorting on NS																
Market	-0.25	-0.01	0	0.01	0.02	0.04	0.08	0.24	0.3	0.01	0	0	0.01	0.01	0.02	0.2
Micro	-0.4	-0.03	0	0.01	0.03	0.05	0.1	0.31	0.33	0.02	0	0	0.01	0.01	0.03	0.14
Small	-0.23	-0.01	0	0	0.02	0.05	0.1	0.27	0.28	1	0	0	0.01	0.01	0.02	0.17
Big	-0.17	-0.01	0	0	0.02	0.04	0.07	0.21	0.23	0.01	0	0	0.01	0.01	0.01	0.2

Slope Prediction

$$R = \beta_0 + \beta_1(MC) + \beta_2(B/M) + \beta_3(Mom) + \beta_4(Zero\ NS) + \beta_5(NS) + \beta_6(Neg\ Ac/B) + \beta_7(Pos\ Ac/B) + \beta_8(dA/A) + \beta_9(Neg\ Y) + \beta_{10}(Pos\ Y/B)$$

	β_1 (MC)	β_2 (B/M)	β_3 (Mom)	β_4 (Zero NS)	β_5 (NS)	β_6 (Neg Ac/B)	β_7 (Ac/B)	β_8 (dA/A)	β_9 (Neg Y)	β_{10} (Y/B)
Sign	-	+	+	-	-	+	-	-	-	+

Table4

		-	+	+		-		+	-	-	+	
	Int	MC	B/M	Mom	Zero NS	NS	Neg Ac/B	Pos Ac/B	dA/A	Neg Y	Pos Y/B	R^2
Market												
Average	1.81	−0.18	0.26	0.50	−0.11	−1.90	0.03	−0.34	−0.81	0.06	0.92	0.04
t-statistic	5.36	−4.36	3.77	3.24	−2.41	−8.59	0.20	−2.72	−7.37	0.55	3.19	
Micro												
Average	2.63	−0.46	0.23	0.41	−0.16	−1.94	0.00	−0.28	−0.83	−0.01	0.55	0.03
t-statistic	7.41	−6.95	3.19	2.51	−2.83	−6.74	0.03	−2.02	−6.82	−0.11	1.50	
Small												
Average	1.01	−0.03	0.30	0.82	−0.04	−1.49	−0.09	−0.45	−0.57	0.01	1.19	0.05
t-statistic	2.02	−0.37	3.41	4.65	−0.55	−4.42	−0.28	−2.24	−3.10	0.03	2.36	
Big												
Average	1.06	−0.08	0.17	0.78	−0.12	−1.71	0.12	−0.38	−0.17	0.11	0.75	0.08
t-statistic	2.61	−1.96	1.79	3.92	−1.59	−5.28	0.32	−1.49	−0.86	0.46	1.56	
All but Micro												
Average	1.12	−0.08	0.23	0.81	−0.09	−1.65	−0.05	−0.49	−0.43	0.02	0.93	0.06
t-statistic	2.87	−1.92	2.73	4.60	−1.41	−6.28	−0.19	−2.87	−2.80	0.12	2.35	
Market	2.31	-0.13	-0.15	0.5	0.03	-0.68	-0.13	0.13	-0.01	-0.09	0	0.05
T ratio	2.88	-2.02	-1.24	1.81	0.25	-1.17	-1.31	0.4	-2.9	-0.46	0.19	
Micro	6.91	-0.74	0.04	0.49	-0.04	0.4	-0.03	0.38	-0.01	-0.27	0.01	0.12
T ratio	2.5	-1.94	0.2	1.09	-0.19	0.33	-0.1	0.65	-0.92	-0.91	1.04	
Small	0.52	0.1	-0.22	0.6	-0.03	-0.17	-0.2	-0.36	-0.01	-0.37	-0.01	0.07
T ratio	0.3	0.5	-1.13	1.37	-0.19	-0.27	-1.3	-0.81	-2.53	-1.55	-0.93	
Big	1.25	-0.03	-0.26	0.76	0	-1.51	-0.13	0.44	0	0.09	0.01	0.08
T ratio	1.21	-0.34	-1.66	2.27	-0.03	-1.92	-1.29	1.21	-0.49	0.32	0.83	
All but micro	1.47	-0.04	-0.22	0.69	-0.01	-0.71	-0.17	0.01	0	-0.1	0	0.06
T ratio	1.63	-0.55	-1.54	2.28	-0.07	-1.31	-1.78	0.05	-1.66	-0.51	0.04	

Conclusion

- 無法找到充份證據支持在**2013**年到**2020**年我國股票市場存在**Net Stock Issues**、 **Accruals**、 **Profitability**這些異常現象，這可能表示臺灣股票市場的股票價格能充份反應這幾項已公開的資訊，投資人利用這幾項已公開的資訊來買賣股票時，僅能獲得正常報酬，而不會有異常報酬

- 在台灣股票市場，市值**(MC)**較小的公司，對股票報酬有顯著的正相關

- 在台灣股票市場，大型股有顯著的動能效果

- 在台灣股票市場，小型股中資產成長率與股票報酬有顯著的負相關