



KOSPI200

Fat - tail Risk

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1. Fat-tail Risk

2008 9 15 , 가
 가 가
 (Nassim Taleb 中) 가 .
 " " ,
 가 2007 가
 가 2008 가
 가 (Fat - tail)

2. Data

Fat - tail Risk
 S&P500, KOSP200 . 1928 2010
 2 S&P500 , 1990 2010 2 KOSP200

3.

가 가 ,
 가 .
 S&P500 , KOSP200 -0.46, -0.10
 Skewness() 가 가 . Kurtosis() 19.34,
 3.67 가 .
 leptokurtic .
 (-)

S&P500	KOSPI200
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	S&P500	KOSPI200
Sample Number	20,635	5,396
Mean	0.020%	0.014%
Standard Deviation	1.196%	1.869%
Kurtosis	19.339	3.671
Skewness	-0.462	-0.102
Max of Daily Return	15.366%	11.540%
Min of Daily Return	-22.900%	-12.739%

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+/-

"Fat-tail Day"

Daily Return Range				
# of Standard Deviation from Mean	Daily Return Range			
	S&P500		KOSPI200	
+6	Above	7.20%	Above	11.23%
+5	6.00%	~ 7.20%	9.36%	~ 11.23%
+4	4.80%	~ 6.00%	7.49%	~ 9.36%
+3	3.61%	~ 4.80%	5.62%	~ 7.49%
+2	2.41%	~ 3.61%	3.75%	~ 5.62%
+1	1.22%	~ 2.41%	1.88%	~ 3.75%
+0	-1.18%	~ 1.22%	-1.86%	~ 1.88%
-1	-2.37%	~ -1.18%	-3.72%	~ -1.86%
-2	-3.57%	~ -2.37%	-5.59%	~ -3.72%
-3	-4.76%	~ -3.57%	-7.46%	~ -5.59%
-4	-5.96%	~ -4.76%	-9.33%	~ -7.46%
-5	-7.16%	~ -5.96%	-11.20%	~ -9.33%
-6	Below	-7.16%	Below	-11.20%

of Standard Deviation

Daily Return Range

from Mean

S&P500

KOSPI200

+6	Above	7.20%	Above	11.23%
+5	6.00%	~ 7.20%	9.36%	~ 11.23%
+4	4.80%	~ 6.00%	7.49%	~ 9.36%
+3	3.61%	~ 4.80%	5.62%	~ 7.49%
+2	2.41%	~ 3.61%	3.75%	~ 5.62%
+1	1.22%	~ 2.41%	1.88%	~ 3.75%
+0	-1.18%	~ 1.22%	-1.86%	~ 1.88%
-1	-2.37%	~ -1.18%	-3.72%	~ -1.86%
-2	-3.57%	~ -2.37%	-5.59%	~ -3.72%
-3	-4.76%	~ -3.57%	-7.46%	~ -5.59%
-4	-5.96%	~ -4.76%	-9.33%	~ -7.46%
-5	-7.16%	~ -5.96%	-11.20%	~ -9.33%
-6	Below	-7.16%	Below	-11.20%

가

KOSPI200 가 -7.5%

-3

가

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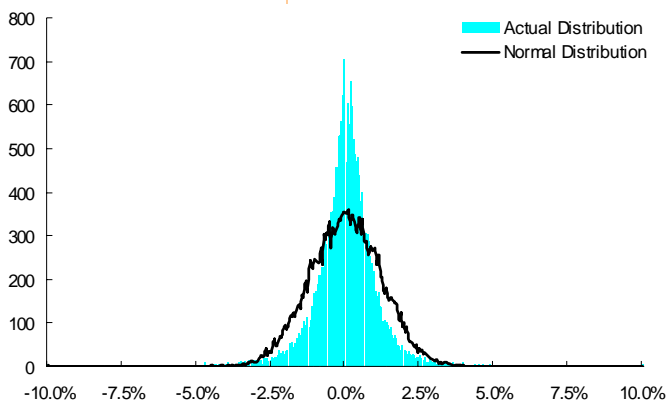
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Actual vs. Normal Distribution

# of Standard Deviations from Mean	S&P500				KOSPI200			
	Actual Distribution		Normal Distribution		Actual Distribution		Normal Distribution	
	Observed	Percentage	Predicted	Percentage	Observed	Percentage	Predicted	Percentage
+6	23	0.11%	0	0.00%	1	0.02%	0	0.00%
+5	18	0.09%	0	0.00%	0	0.00%	0	0.00%
+4	27	0.13%	0	0.00%	7	0.13%	0	0.00%
+3	95	0.46%	27	0.13%	38	0.70%	10	0.13%
+2	278	1.35%	436	2.14%	117	2.17%	111	2.14%
+1	1,408	6.82%	2,762	13.59%	463	8.58%	700	13.59%
+0	16,871	81.76%	14,097	68.27%	4,151	76.93%	3,712	68.27%
-1	1,387	6.72%	2,857	13.59%	461	8.54%	749	13.59%
-2	336	1.63%	418	2.14%	111	2.06%	108	2.14%
-3	102	0.49%	37	0.13%	31	0.57%	6	0.13%
-4	46	0.22%	1	0.00%	12	0.22%	0	0.00%
-5	21	0.10%	0	0.00%	2	0.04%	0	0.00%
-6	23	0.11%	0	0.00%	2	0.04%	0	0.00%

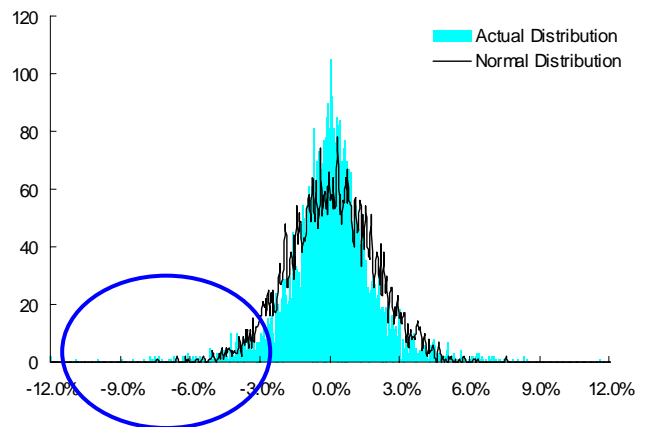
S&P500 , KOSPI200

S&P500



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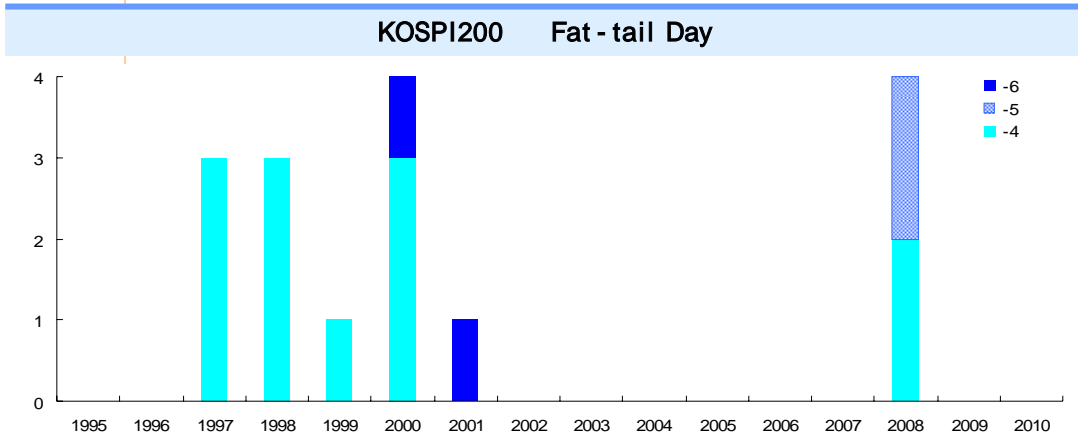
KOSPI200



Fat-tail Day

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2008

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Fat-tail Risk 가

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2008

PIIGS

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KOSPI200

Fat-tail

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Internet

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