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Table 1: Historical volatility for liquid commodity contracts included in the S&P Goldman Sachs Commodity Index (percentage daily price movements 1990-2011 sorted by standard deviation)

Rank	Commodity Contract		1990-2011			
			Mean	Standard deviation	Skew	Kurtosis
1	Natural gas (U.S.)	NGc1	0.08	3.62	0.72	11.47
2	Gasoline blendstock	RBc1	0.05	2.63	0.07	6.11
3	Heating Oil	HOc1	0.06	2.50	-0.69	12.35
4	WTI	CLc1	0.05	2.49	-0.28	13.31
5	Coffee	KCc1	0.05	2.48	0.52	12.55
6	Brent	LCOc1	0.06	2.29	-0.65	16.23
7	Sugar	SBc1	0.04	2.28	-0.06	11.17
8	Nickel	MNi0	0.04	2.24	0.09	6.87
9	Gasoil	LGOc1	0.05	2.24	-1.09	22.55
10	Lean Hogs	LHc1	0.03	2.21	1.83	45.61
11	Lead	MPB0	0.04	2.08	-0.19	8.06
12	Cocoa (ICE)	CCc1	0.04	2.00	0.22	5.65
13	Wheat (CBOT)	Wc1	0.03	1.96	-0.08	17.51
14	Cotton	CTc1	0.02	1.87	-0.44	15.03
15	Silver	Slc1	0.05	1.82	-0.59	10.44
16	Zinc	MZNO	0.02	1.80	-0.26	7.08
17	Copper	MCU0	0.04	1.73	-0.06	7.34
18	Corn	Cc1	0.03	1.70	-0.34	13.75
19	Wheat (Kansas City)	KWc1	0.02	1.69	-0.17	6.64
20	Soy	Sc1	0.03	1.59	-0.52	21.12
21	Aluminium	MAL0	0.01	1.34	-0.15	6.11
22	Live Cattle	LCc1	0.01	1.03	-0.79	11.20
23	Gold	GCc1	0.03	1.02	0.06	11.34
24	Feeder Cattle	FCc1	0.01	0.82	-0.34	13.12

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**Table 2: Mild and wild markets -- the misbehaviour of liquid commodity contracts
(percentage daily price movements sorted by kurtosis, where normal distribution has kurtosis = 3.0)**

Rank	Commodity Contract		1990-2011			
			Mean	Standard deviation	Skew	Kurtosis
1	Lean Hogs	LHc1	0.03	2.21	1.83	45.61
2	Gasoil	LGOc1	0.05	2.24	-1.09	22.55
3	Soy	Sc1	0.03	1.59	-0.52	21.12
4	Wheat (CBOT)	Wc1	0.03	1.96	-0.08	17.51
5	Brent	LCOc1	0.06	2.29	-0.65	16.23
6	Cotton	CTc1	0.02	1.87	-0.44	15.03
7	Corn	Cc1	0.03	1.70	-0.34	13.75
8	WTI	CLc1	0.05	2.49	-0.28	13.31
9	Feeder Cattle	FCc1	0.01	0.82	-0.34	13.12
10	Coffee	KCc1	0.05	2.48	0.52	12.55
11	Heating Oil	HOc1	0.06	2.50	-0.69	12.35
12	Natural gas (U.S.)	NGc1	0.08	3.62	0.72	11.47
13	Gold	GCc1	0.03	1.02	0.06	11.34
14	Live Cattle	LCc1	0.01	1.03	-0.79	11.20
15	Sugar	SBc1	0.04	2.28	-0.06	11.17
16	Silver	Slc1	0.05	1.82	-0.59	10.44
17	Lead	MPB0	0.04	2.08	-0.19	8.06
18	Copper	MCU0	0.04	1.73	-0.06	7.34
19	Zinc	MZNO	0.02	1.80	-0.26	7.08
20	Nickel	MNIO	0.04	2.24	0.09	6.87
21	Wheat (Kansas City)	KWc1	0.02	1.69	-0.17	6.64
22	Gasoline blendstock	RBc1	0.05	2.63	0.07	6.11
23	Aluminium	MAL0	0.01	1.34	-0.15	6.11
24	Cocoa (ICE)	CCc1	0.04	2.00	0.22	5.65

Kurtosis is a measure of the "peakedness" of the distribution of returns.

Normal distribution has kurtosis = 3.

Kurtosis > 3.0 is the definition of fat-tails

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**Table 3: Price moves for liquid commodity contracts on Thursday Sep 22, 2011
(sorted by standard deviations)**

Rank	Commodity Contract		1990-2011				Sep-21	Sep-22	Sep-23	Sep-21	Sep-22	Sep-23
			Mean	Standard deviation	Skew	Kurtosis	Percentage Changes			Standard deviations		
1	Silver	Slc1	0.05	1.82	-0.59	10.44	0.85	-9.60	-17.75	0.44	-5.31	-9.79
2	Copper	MCU0	0.04	1.73	-0.06	7.34	-0.05	-7.52	-4.05	-0.05	-4.38	-2.37
3	Gold	GCc1	0.03	1.02	0.06	11.34	-0.06	-3.67	-5.85	-0.09	-3.63	-5.76
4	Nickel	MNI0	0.04	2.24	0.09	6.87	-3.86	-7.46	-3.18	-1.74	-3.34	-1.44
5	Wheat (Kansas City)	KWc1	0.02	1.69	-0.17	6.64	-0.59	-5.19	1.42	-0.36	-3.08	0.82
6	Corn	Cc1	0.03	1.70	-0.34	13.75	-0.65	-5.21	-1.77	-0.40	-3.08	-1.06
7	Aluminium	MAL0	0.01	1.34	-0.15	6.11	-0.33	-3.89	-0.97	-0.25	-2.90	-0.73
8	Lead	MPB0	0.04	2.08	-0.19	8.06	-4.16	-5.26	-6.64	-2.02	-2.55	-3.22
9	WTI	CLc1	0.05	2.49	-0.28	13.31	-1.12	-6.30	-0.82	-0.47	-2.55	-0.35
10	Wheat (CBOT)	Wc1	0.03	1.96	-0.08	17.51	-1.19	-4.95	1.10	-0.62	-2.54	0.55
11	Live Cattle	LCc1	0.01	1.03	-0.79	11.20	0.46	-2.52	0.49	0.44	-2.46	0.47
12	Coffee	KCc1	0.05	2.48	0.52	12.55	-2.89	-5.04	-3.26	-1.19	-2.05	-1.33
13	Gasoil	LGOc1	0.05	2.24	-1.09	22.55	0.67	-4.39	-0.53	0.27	-1.98	-0.26
14	Brent	LCOc1	0.06	2.29	-0.65	16.23	-0.16	-4.41	-1.44	-0.10	-1.95	-0.65
15	Cotton	CTc1	0.02	1.87	-0.44	15.03	-2.45	-3.58	2.41	-1.32	-1.93	1.27
16	Sugar	SBc1	0.04	2.28	-0.06	11.17	-2.75	-4.32	-3.23	-1.22	-1.91	-1.43
17	Soy	Sc1	0.03	1.59	-0.52	21.12	-1.31	-2.84	-1.95	-0.84	-1.80	-1.24
18	Zinc	MZNO	0.02	1.80	-0.26	7.08	-0.32	-3.19	-4.97	-0.19	-1.78	-2.77
19	Feeder Cattle	FCc1	0.01	0.82	-0.34	13.12	-0.30	-1.42	0.04	-0.38	-1.74	0.03
20	Gasoline blendstock	RBc1	0.05	2.63	0.07	6.11	-1.29	-3.99	-0.21	-0.51	-1.54	-0.10
21	Heating Oil	HOc1	0.06	2.50	-0.69	12.35	-0.93	-2.92	-1.85	-0.39	-1.19	-0.76
22	Cocoa (ICE)	CCc1	0.04	2.00	0.22	5.65	-0.11	-1.72	-1.72	-0.07	-0.88	-0.88
23	Lean Hogs	LHc1	0.03	2.21	1.83	45.61	0.28	-1.04	0.51	0.11	-0.49	0.21
24	Natural gas (U.S.)	NGc1	0.08	3.62	0.72	11.47	-1.79	-0.67	-0.11	-0.52	-0.21	-0.05

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**Table 4: Price moves for liquid commodity contracts on Friday Sep 23, 2011
(sorted by standard deviations)**

Rank	Commodity Contract		1990-2011				Sep-21	Sep-22	Sep-23	Sep-21	Sep-22	Sep-23
			Mean	Standard deviation	Skew	Kurtosis	Percentage Changes			Standard deviations		
1	Silver	Slc1	0.05	1.82	-0.59	10.44	0.85	-9.60	-17.75	0.44	-5.31	-9.79
2	Gold	GCc1	0.03	1.02	0.06	11.34	-0.06	-3.67	-5.85	-0.09	-3.63	-5.76
3	Lead	MPB0	0.04	2.08	-0.19	8.06	-4.16	-5.26	-6.64	-2.02	-2.55	-3.22
4	Zinc	MZNO	0.02	1.80	-0.26	7.08	-0.32	-3.19	-4.97	-0.19	-1.78	-2.77
5	Copper	MCU0	0.04	1.73	-0.06	7.34	-0.05	-7.52	-4.05	-0.05	-4.38	-2.37
6	Nickel	MNI0	0.04	2.24	0.09	6.87	-3.86	-7.46	-3.18	-1.74	-3.34	-1.44
7	Sugar	SBC1	0.04	2.28	-0.06	11.17	-2.75	-4.32	-3.23	-1.22	-1.91	-1.43
8	Coffee	KCC1	0.05	2.48	0.52	12.55	-2.89	-5.04	-3.26	-1.19	-2.05	-1.33
9	Soy	Sc1	0.03	1.59	-0.52	21.12	-1.31	-2.84	-1.95	-0.84	-1.80	-1.24
10	Corn	Cc1	0.03	1.70	-0.34	13.75	-0.65	-5.21	-1.77	-0.40	-3.08	-1.06
11	Cocoa (ICE)	CCc1	0.04	2.00	0.22	5.65	-0.11	-1.72	-1.72	-0.07	-0.88	-0.88
12	Heating Oil	HOc1	0.06	2.50	-0.69	12.35	-0.93	-2.92	-1.85	-0.39	-1.19	-0.76
13	Aluminium	MAL0	0.01	1.34	-0.15	6.11	-0.33	-3.89	-0.97	-0.25	-2.90	-0.73
14	Brent	LCOc1	0.06	2.29	-0.65	16.23	-0.16	-4.41	-1.44	-0.10	-1.95	-0.65
15	WTI	CLc1	0.05	2.49	-0.28	13.31	-1.12	-6.30	-0.82	-0.47	-2.55	-0.35
16	Gasoil	LGOc1	0.05	2.24	-1.09	22.55	0.67	-4.39	-0.53	0.27	-1.98	-0.26
17	Gasoline blendstock	RBc1	0.05	2.63	0.07	6.11	-1.29	-3.99	-0.21	-0.51	-1.54	-0.10
18	Natural gas (U.S.)	NGc1	0.08	3.62	0.72	11.47	-1.79	-0.67	-0.11	-0.52	-0.21	-0.05
19	Feeder Cattle	FCc1	0.01	0.82	-0.34	13.12	-0.30	-1.42	0.04	-0.38	-1.74	0.03
20	Lean Hogs	LHc1	0.03	2.21	1.83	45.61	0.28	-1.04	0.51	0.11	-0.49	0.21
21	Live Cattle	LCc1	0.01	1.03	-0.79	11.20	0.46	-2.52	0.49	0.44	-2.46	0.47
22	Wheat (CBOT)	Wc1	0.03	1.96	-0.08	17.51	-1.19	-4.95	1.10	-0.62	-2.54	0.55
23	Wheat (Kansas City)	KWc1	0.02	1.69	-0.17	6.64	-0.59	-5.19	1.42	-0.36	-3.08	0.82
24	Cotton	CTc1	0.02	1.87	-0.44	15.03	-2.45	-3.58	2.41	-1.32	-1.93	1.27