

APPENDIX A

TABLE A1. Predictability of economic activity for energy spot volatility (50% sample)

Energy price	Economic activity	μ	α	β	θ	w	m
WTI	GECON	8.95E-04** [4.54E-04]	4.28E-02*** [6.84E-03]	9.48E-01*** [8.44E-03]	-4.50E-02*** [8.10E-03]	3.24E+01** [1.39E+01]	3.85E-04*** [6.21E-05]
	RCPF	9.82E-04** [4.44E-04]	6.88E-02*** [8.35E-03]	9.21E-01*** [1.00E-02]	-2.12E-02*** [8.00E-03]	3.96E+01 [2.61E+01]	5.08E-04*** [1.19E-04]
	GSPF	9.16E-04** [4.53E-04]	6.95E-02*** [8.42E-03]	9.19E-01*** [1.07E-02]	-2.42E-02** [1.05E-02]	1.49E+01 [9.97E+00]	4.90E-04*** [1.03E-04]
	RSCF	1.12E-03*** [4.15E-04]	1.11E-01*** [1.01E-02]	8.71E-01*** [9.72E-03]	5.28E-02*** [1.21E-02]	4.98E+00*** [2.05E-02]	5.41E-04*** [1.24E-04]
	KINDX	9.47E-04** [4.52E-04]	8.00E-02*** [9.15E-03]	9.06E-01*** [1.13E-02]	2.33E-03 [2.02E-03]	2.05E+01 [2.97E+01]	5.08E-04*** [1.10E-04]
	OECDIP	7.83E-04* [4.60E-04]	6.42E-02*** [7.54E-03]	9.27E-01*** [8.63E-03]	-3.83E-02*** [1.20E-02]	9.87E+00*** [3.40E+00]	5.95E-04*** [1.51E-04]
BRENT	GECON	7.16E-04 [4.41E-04]	2.92E-02*** [6.37E-03]	9.67E-01*** [7.75E-03]	-3.65E-02*** [8.54E-03]	1.89E+01** [7.92E+00]	3.21E-04*** [6.24E-05]
	RCPF	5.78E-04 [4.11E-04]	8.40E-02*** [8.62E-03]	9.13E-01*** [8.53E-03]	7.63E-02* [4.17E-02]	5.04E+00*** [1.46E-02]	1.01E-03* [5.51E-04]
	GSPF	1.25E-03*** [2.93E-04]	8.79E-02*** [6.07E-03]	8.59E-01*** [6.40E-03]	3.41E-02*** [2.17E-03]	4.97E+00*** [4.02E-03]	1.48E-04*** [9.40E-06]
	RSCF	6.12E-04 [4.42E-04]	3.57E-02*** [6.79E-03]	9.62E-01*** [7.40E-03]	-3.15E-02** [1.40E-02]	1.30E+00*** [3.87E-01]	3.96E-04*** [1.04E-04]
	KINDX	6.09E-04 [4.42E-04]	3.70E-02*** [6.87E-03]	9.60E-01*** [7.43E-03]	-1.49E-02** [6.42E-03]	1.12E+00*** [3.13E-01]	3.88E-04*** [1.03E-04]
	OECDIP	5.65E-04 [4.40E-04]	2.69E-02*** [4.87E-03]	9.72E-01*** [5.55E-03]	-2.45E-02*** [7.36E-03]	7.21E+00*** [2.00E+00]	3.91E-04*** [9.90E-05]
HEATING	GECON	6.39E-04 [4.15E-04]	1.70E-02*** [4.47E-03]	9.80E-01*** [5.23E-03]	-3.15E-02*** [7.05E-03]	1.74E+01** [7.09E+00]	2.70E-04*** [4.53E-05]
	RCPF	6.98E-04* [4.14E-04]	2.69E-02*** [5.37E-03]	9.69E-01*** [5.66E-03]	-1.58E-02*** [4.86E-03]	1.10E+01*** [3.70E+00]	3.14E-04*** [6.65E-05]
	GSPF	5.91E-04 [4.09E-04]	2.94E-02*** [5.64E-03]	9.66E-01*** [6.06E-03]	-8.19E-03** [3.90E-03]	1.58E+01 [1.08E+01]	3.10E-04*** [5.71E-05]
	RSCF	5.42E-04 [4.10E-04]	2.55E-02*** [5.41E-03]	9.71E-01*** [5.81E-03]	-2.42E-02** [9.50E-03]	1.09E+00*** [2.73E-01]	3.23E-04*** [6.65E-05]

	KINDEX	5.73E-04 [4.08E-04]	3.47E-02*** [6.28E-03]	9.59E-01*** [6.69E-03]	4.32E-04 [1.09E-03]	9.20E+00 [4.00E+01]	3.22E-04*** [6.04E-05]
	OECDIP	5.49E-04 [4.08E-04]	2.30E-02*** [4.78E-03]	9.74E-01*** [5.05E-03]	-1.75E-02*** [6.12E-03]	5.09E+00*** [1.88E+00]	3.38E-04*** [7.04E-05]
NATURAL	GECON	-2.20E-04 [3.77E-04]	3.42E-06 [6.30E-03]	3.43E-01 [1.53E+03]	-5.15E-02*** [8.26E-04]	1.29E+00*** [1.33E-02]	1.56E-04*** [2.23E-06]
	RCPF	-3.10E-04 [2.66E-04]	5.00E-02*** [8.45E-03]	9.00E-01*** [8.92E-03]	1.00E-01*** [9.43E-03]	5.00E+00*** [8.98E-02]	1.56E-03*** [1.44E-04]
	GSPF	3.57E-03 [NaN]	4.95E-02 [NaN]	9.00E-01 [NaN]	3.66E-02 [NaN]	5.00E+00 [NaN]	6.98E-04 [NaN]
	RSCF	-2.91E-04 [3.25E-04]	5.00E-02** [2.00E-02]	9.00E-01*** [2.22E-02]	1.00E-01*** [2.21E-02]	5.00E+00*** [1.97E-01]	2.66E-03*** [5.67E-04]
	KINDEX	-2.86E-04 [3.72E-04]	5.00E-02 [3.47E-02]	9.00E-01*** [4.45E-02]	1.00E-01*** [3.54E-02]	5.00E+00*** [2.64E-01]	5.80E-03*** [2.03E-03]
	OECDIP	-6.15E-06 [4.74E-04]	4.52E-10 [1.48E-03]	9.40E-01 [1.85E+05]	-2.02E-02*** [3.63E-04]	4.45E+00*** [2.29E-01]	2.82E-04*** [3.85E-06]

TABLE A2. Predictability of economic activity for energy futures volatility (50% sample)

Energy price	Economic activity	μ	α	β	θ	w	m
WTI	GECON	8.27E-04* [4.67E-04]	3.68E-02*** [7.12E-03]	9.53E-01*** [8.64E-03]	-4.17E-02*** [7.57E-03]	3.94E+01** [1.67E+01]	3.74E-04*** [5.52E-05]
	RCPF	9.31E-05 [3.32E-04]	4.11E-02*** [2.54E-03]	9.25E-01*** [4.27E-03]	1.27E-02*** [6.49E-04]	5.01E+00*** [1.00E-02]	1.65E-04*** [8.43E-06]
	GSPF	7.99E-04* [4.54E-04]	5.29E-02*** [8.19E-03]	9.37E-01*** [9.89E-03]	-2.27E-02*** [8.22E-03]	1.52E+01* [8.27E+00]	4.46E-04*** [8.46E-05]
	RSCF	1.13E-03*** [4.22E-04]	1.16E-01*** [1.16E-02]	8.67E-01*** [1.07E-02]	6.08E-02*** [1.67E-02]	4.98E+00*** [2.11E-02]	6.24E-04*** [1.71E-04]
	KINDEX	7.94E-04* [4.66E-04]	6.33E-02*** [1.02E-02]	9.24E-01*** [1.26E-02]	-1.96E-02** [8.86E-03]	1.16E+00*** [3.74E-01]	4.61E-04*** [9.65E-05]
	OECDIP	5.86E-04 [4.59E-04]	4.11E-02*** [6.46E-03]	9.54E-01*** [6.70E-03]	-3.44E-02*** [9.42E-03]	9.76E+00*** [2.32E+00]	5.01E-04*** [1.27E-04]
BRENT	GECON	7.16E-04 [4.45E-04]	3.04E-02*** [6.19E-03]	9.64E-01*** [7.73E-03]	-3.69E-02*** [8.47E-03]	1.64E+01** [6.90E+00]	2.98E-04*** [5.15E-05]
	RCPF	7.15E-04* [4.25E-04]	3.51E-02*** [5.62E-03]	9.62E-01*** [6.15E-03]	-2.40E-02*** [8.11E-03]	7.52E+00*** [2.33E+00]	3.24E-04*** [9.61E-05]
	GSPF	6.32E-04 [4.34E-04]	4.08E-02*** [6.80E-03]	9.53E-01*** [7.91E-03]	-1.51E-02*** [5.66E-03]	1.41E+01* [8.06E+00]	3.35E-04*** [7.12E-05]
	RSCF	6.16E-04 [4.38E-04]	4.68E-02*** [7.75E-03]	9.47E-01*** [8.93E-03]	-3.51E-02** [1.49E-02]	1.05E+00*** [2.56E-01]	3.80E-04*** [9.58E-05]
	KINDEX	6.06E-04 [4.38E-04]	4.74E-02*** [7.85E-03]	9.46E-01*** [9.02E-03]	-1.63E-02** [6.41E-03]	1.03E+00*** [2.15E-01]	3.62E-04*** [9.37E-05]
	OECDIP	2.10E-04 [7.32E-04]	5.00E-02*** [3.47E-03]	9.00E-01*** [5.50E-03]	1.00E-01*** [4.35E-05]	5.00E+00*** [3.74E-03]	1.29E-03*** [2.12E-07]
HEATING	GECON	6.85E-04 [4.21E-04]	1.67E-02*** [4.20E-03]	9.81E-01*** [5.25E-03]	-3.08E-02*** [7.60E-03]	1.93E+01** [8.29E+00]	2.78E-04*** [5.41E-05]
	RCPF	-6.37E-04 [1.01E-03]	5.00E-02*** [5.64E-03]	9.00E-01*** [1.24E-02]	9.81E-02*** [5.63E-03]	5.00E+00*** [7.88E-03]	1.46E-03*** [8.37E-05]
	GSPF	6.34E-04 [4.05E-04]	2.70E-02*** [6.10E-03]	9.69E-01*** [7.12E-03]	-1.18E-02** [5.74E-03]	6.08E+00 [3.72E+00]	3.06E-04*** [6.26E-05]
	RSCF	5.98E-04 [4.09E-04]	2.43E-02*** [5.86E-03]	9.73E-01*** [6.79E-03]	-2.44E-02** [1.03E-02]	1.18E+00*** [3.07E-01]	3.34E-04*** [7.81E-05]
	KINDEX	6.43E-04 [4.09E-04]	3.36E-02*** [6.83E-03]	9.61E-01*** [8.01E-03]	1.91E-04 [8.54E-04]	1.77E+01 [1.53E+02]	3.21E-04*** [6.28E-05]

	OECDIP	6.09E-04 [4.21E-04]	2.02E-02*** [4.41E-03]	9.78E-01*** [5.10E-03]	-1.88E-02*** [5.95E-03]	6.06E+00*** [2.07E+00]	3.44E-04*** [8.15E-05]
NATURAL	GECON	-2.46E-04 [6.82E-04]	4.12E-02*** [8.36E-03]	9.36E-01*** [1.37E-02]	-8.52E-02*** [2.20E-02]	1.02E+00*** [3.91E-01]	7.74E-04*** [5.60E-05]
	RCPF	-3.28E-04 [6.18E-04]	7.66E-02*** [9.10E-03]	9.12E-01*** [9.08E-03]	9.52E-02*** [2.45E-02]	4.87E+00*** [2.03E-02]	1.23E-03*** [3.15E-04]
	GSPF	-2.39E-04 [6.76E-04]	4.60E-02*** [7.99E-03]	9.40E-01*** [1.05E-02]	-2.35E-02*** [8.59E-03]	4.97E+01 [4.52E+01]	9.21E-04*** [1.04E-04]
	`RSCF	-2.07E-04 [6.74E-04]	4.82E-02*** [9.17E-03]	9.36E-01*** [1.19E-02]	-5.68E-03 [6.89E-03]	1.97E+01 [4.18E+01]	9.33E-04*** [9.96E-05]
	KINDEX	-2.18E-04 [6.78E-04]	4.81E-02*** [8.72E-03]	9.37E-01*** [1.15E-02]	-4.45E-03* [2.36E-03]	3.59E+01 [5.15E+01]	9.25E-04*** [9.79E-05]
	OECDIP	-2.75E-03*** [4.02E-04]	5.11E-02*** [2.73E-03]	9.00E-01*** [3.63E-03]	9.09E-02*** [5.24E-03]	5.00E+00*** [2.38E-03]	1.38E-03*** [7.93E-05]