Appendix

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This not-for-publication appendix contains results omitted from the body of the paper to save space. Following are:

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I. Parameter estimates, T=432

A. GARCH(1,1)

1. Canada

	CONSTANT	ALPHA	BETA
EST	0.00000552	0.26072752	0.54451673
S.E.	0.00000131	0.02411562	0.06148268

2. France

	CONSTANT	ALPHA	BETA
EST	0.00001396	0.34547912	0.61122294
S.E.	0.00000266	0.05482124	0.04430997

3. Germany

	CONSTANT	ALPHA	BETA
EST	0.00002022	0.29526189	0.61345651
S.E.	0.00000447	0.04876142	0.05331147

4. Japan

	CONSTANT	ALPHA	BETA
EST	0.00000074	0.05327541	0.94455421
S.E.	0.00000035	0.00769470	0.00690244

5. U.K.

	CONSTANT	ALPHA	BETA
EST	0.00001888	0.11460277	0.73289811
S.E.	0.00000733	0.04635227	0.09907802

B. IGARCH

1. Canada

	ALPHA	
EST	0.12549316	0.87450684
S.E.	0.00630164	

2. France

	ALPHA	
EST	0.07941096	0.92058904
S.E.	0.00547796	

3. Germany

	ALPHA	
EST	0.08882797	0.91117203
S.E.	0.00033945	

4. Japan

	ALPHA	
EST	0.04363261	0.95636739
S.E.	0.00301078	

5. U.K.

	ALPHA	
EST	0.00007805	0.99992195
S.E.	0.00102633	

C. AR(12) in |e(t)|

```
DEPENDENT VARIABLE    1     EABSCAN
FROM 1973: 6: 6 UNTIL 1981: 6:17
TOTAL OBSERVATIONS    420     SKIPPED/MISSING        0
USABLE OBSERVATIONS   420     DEGREES OF FREEDOM   407
R**2              .06733482     RBAR**2          .03983609
SSR           .50911213E-02     SEE          .35367920E-02
DURBIN-WATSON  2.02197733
Q(  60)=   42.1373       SIGNIFICANCE LEVEL  .961263

DEPENDENT VARIABLE    2     EABSFRA
FROM 1973: 6: 6 UNTIL 1981: 6:17
TOTAL OBSERVATIONS    420     SKIPPED/MISSING        0
USABLE OBSERVATIONS   420     DEGREES OF FREEDOM   407
R**2              .15970723     RBAR**2          .13493201
SSR           .25915306E-01     SEE          .79795971E-02
DURBIN-WATSON  2.00114184
Q(  60)=   44.7489       SIGNIFICANCE LEVEL  .929113

DEPENDENT VARIABLE    3     EABSGER
FROM 1973: 6: 6 UNTIL 1981: 6:17
TOTAL OBSERVATIONS    420     SKIPPED/MISSING        0
USABLE OBSERVATIONS   420     DEGREES OF FREEDOM   407
R**2              .16477312     RBAR**2          .14014727
SSR           .30872286E-01     SEE          .87093790E-02
DURBIN-WATSON  1.98183755
Q(  60)=   40.9947       SIGNIFICANCE LEVEL  .971228

DEPENDENT VARIABLE    4     EABSJAP
FROM 1973: 6: 6 UNTIL 1981: 6:17
TOTAL OBSERVATIONS    420     SKIPPED/MISSING        0
USABLE OBSERVATIONS   420     DEGREES OF FREEDOM   407
R**2              .14225244     RBAR**2          .11696259
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SSR          .27958344E-01     SEE          .82881674E-02
DURBIN-WATSON  2.00295282
Q(  60)=   36.6313       SIGNIFICANCE LEVEL  .992541


DEPENDENT VARIABLE    5     EABSUKG
FROM 1973: 6: 6 UNTIL 1981: 6:17
TOTAL OBSERVATIONS    420     SKIPPED/MISSING        0
USABLE OBSERVATIONS   420     DEGREES OF FREEDOM    407
R**2              .12777411     RBAR**2          .10205737
SSR          .22111741E-01     SEE          .73707939E-02
DURBIN-WATSON  1.98334136
Q(  60)=   40.5622       SIGNIFICANCE LEVEL  .974435
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D. AR(12) in e(t)**2

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DEPENDENT VARIABLE    1     E2CAN
FROM 1973: 6: 6 UNTIL 1981: 6:17
TOTAL OBSERVATIONS    420     SKIPPED/MISSING        0
USABLE OBSERVATIONS   420     DEGREES OF FREEDOM    407
R**2              .01788668     RBAR**2         -.01106998
SSR          .34738170E-05     SEE          .92386022E-04
DURBIN-WATSON  2.00462169
Q(  60)=   9.69061       SIGNIFICANCE LEVEL  1.00000

DEPENDENT VARIABLE    2     E2FRA
FROM 1973: 6: 6 UNTIL 1981: 6:17
TOTAL OBSERVATIONS    420     SKIPPED/MISSING        0
USABLE OBSERVATIONS   420     DEGREES OF FREEDOM    407
R**2              .09352165     RBAR**2          .06679502
SSR          .34819148E-04     SEE          .29249057E-03
DURBIN-WATSON  1.99921420
Q(  60)=   52.2613       SIGNIFICANCE LEVEL  .751031

DEPENDENT VARIABLE    3     E2GER
FROM 1973: 6: 6 UNTIL 1981: 6:17
TOTAL OBSERVATIONS    420     SKIPPED/MISSING        0
USABLE OBSERVATIONS   420     DEGREES OF FREEDOM    407
R**2              .11641248     RBAR**2          .09036076
SSR          .63289013E-04     SEE          .39433648E-03
DURBIN-WATSON  1.98712955
Q(  60)=   37.1952       SIGNIFICANCE LEVEL  .990932

DEPENDENT VARIABLE    4     E2JAP
FROM 1973: 6: 6 UNTIL 1981: 6:17
TOTAL OBSERVATIONS    420     SKIPPED/MISSING        0
USABLE OBSERVATIONS   420     DEGREES OF FREEDOM    407
R**2              .05469587     RBAR**2          .02682449
SSR          .47371604E-04     SEE          .34116293E-03
DURBIN-WATSON  2.00251115
Q(  60)=   32.3521       SIGNIFICANCE LEVEL  .998669

DEPENDENT VARIABLE    5     E2UKG
FROM 1973: 6: 6 UNTIL 1981: 6:17
TOTAL OBSERVATIONS    420     SKIPPED/MISSING        0
USABLE OBSERVATIONS   420     DEGREES OF FREEDOM    407
R**2              .05186329     RBAR**2          .02390840
SSR          .26232018E-04     SEE          .25387424E-03
DURBIN-WATSON  1.99853815
Q(  60)=   34.3075       SIGNIFICANCE LEVEL  .996907
```

IIA. Ljung-Box Statistics for e(t)/sqrt(h(t))

			DEGREES OF FREEDOM		
COUNTRY	SAMPLE	MODEL	10	50	90
Canada	1-432	GARCH(1,1)	21.87	66.71	117.55

		IGARCH	25.69	72.33	154.49
France	1-432	GARCH(1,1)	44.06	71.26	113.83
		IGARCH	41.77	64.57	112.71
Germany	1-432	GARCH(1,1)	37.95	75.43	116.95
		IGARCH	45.53	84.20	123.71
Japan	1-432	GARCH(1,1)	36.08	70.26	92.30
		IGARCH	38.22	75.73	112.58
U.K.	1-432	GARCH(1,1)	24.53	70.46	117.80
		IGARCH	21.39	62.33	108.87

IIB. Ljung-Box Statistics for e(t)**2/h(t)

COUNTRY	SAMPLE	MODEL	10	50	90
Canada	1-432	GARCH(1,1)	6.81	56.35	82.84
		IGARCH	20.48	47.39	58.08
France	1-432	GARCH(1,1)	8.28	48.75	97.07
		IGARCH	14.05	39.95	79.14
Germany	1-432	GARCH(1,1)	6.89	53.61	84.87
		IGARCH	20.91	48.53	71.98
Japan	1-432	GARCH(1,1)	63.70	73.62	93.19
		IGARCH	16.97	28.33	43.63
U.K.	1-432	GARCH(1,1)	2.64	32.49	58.19
		IGARCH	20.04	64.58	100.09

IIC. GARCH(1,2) estimates

COUNTRY	SAMPLE	CONSTANT(10-5)	ALPHA	BETA1,	BETA2
Canada	1-432	.385	.270	.334	.272
		(.114	.025	.181	.174)
France	1-432	1.053	.208	.736	.00000152
		(.314	.075	.318	.250)
Germany	1-432	1.904	.279	.640	.00000100
		(.538	.071	.258	.189)
Japan	1-432	.189	.107	.00700	.880
		(.071	.015	.016	.018)
U.K.	1-432	1.757	.093	.808	.00000107
		(1.549	.084	.898	.766)

IID. GARCH(2,1) estimates

COUNTRY	SAMPLE	CONSTANT(10-5)	ALPHA		BETA1, BETA2
Canada	1-432	.383	.328	.00000146	.660
		(.175	.038	.112	.103)
France	1-432	1.977	.239	.159	.514
		(.380	.076	.073	.057)
Germany	1-432	2.252	.284	.037	.578
		(.559	.070	.083	.073)
Japan	1-432	.163	.055	.00000139	.943
		(.074	.040	.042	.012)

U.K.	1-432	2.254	.069	.071	.678
		(.809	.052	.063	.112)

IIE. LM test for one and two additional coefficients, and t-test for IGARCH

There are two entries under each of the "one more" and "two more" columns. The first gives the standard LM test, the second the TR-squared version of the test.

The column labeled "IGARCH" gives the t-statistic for testing alpha+beta=1 in the GARCH(1,1) model.

COUNTRY	SAMPLE	MODEL	ONE MORE	(TR2)	TWO MORE	(TR2)	IGARCH
Canada	1-432	GARCH(1,1)	2.185	0.845	2.287	0.884	-3.112
France	1-432	GARCH(1,1)	3.543	1.588	3.552	1.592	-1.194
Germany	1-432	GARCH(1,1)	1.394	0.726	1.465	0.762	-2.631
Japan	1-432	GARCH(1,1)	6.477	1.381	6.530	1.392	-0.480
U.K.	1-432	GARCH(1,1)	1.142	0.324	1.213	0.344	-2.548

III. Mean squared errors for additional GARCH models, using German data

These are one week ahead out of sample mean squared errors. All estimates used expanding rather than rolling samples. The estimates for IGARCH duplicates that given below, and is included for comparison.

	Horizon 1	12	24
GARCH(2,0)	25.11	22.38	20.08
GARCH(2,1)	23.67	52.04	290.27
GARCH(1,2)	23.24	24.47	20.78
IGARCH	22.05	23.35	20.42

IV. Estimates with Italian data

Sample mean: -.0011
(.0005)

	T	m	α	β
GARCH(1,1)	432	.1141e-4	.4350	.7563
	863	.0634e-4	.7452	.2609

V. Additional estimates for nonparametric model, using German data

A. These are one week ahead out of sample mean squared errors. All estimates used expanding rather than rolling samples. Alternative bandwidths, b=k x sigma x (N-j)**(-.2):

k=.1	k=.5	k=1.5	Reference: k=1.0
27.12	22.78	22.39	22.47

B. Mean squared error, one week ahead forecast, information set = {e(t),e(t-1),e(t-2),e(t-3)}

33.54

VI. Out of sample RMSPEs, expanding samples

FOR HORIZON 1 MSPES ARE

	CANADA	FRANCE	GERMANY	JAPAN	U.K.
HOMO	0.716	5.156	4.701	4.399	5.765

(1,1)	0.706	5.415	4.801	4.370	5.581
IG	0.706	5.150	4.696	4.360	5.643
E2(12)	0.702	5.231	4.848	4.410	5.854
|E|(12)	0.707	5.170	4.789	4.407	5.683
NONP	0.749	5.207	4.740	4.453	6.633

FOR HORIZON 12 MSPES ARE

	CANADA	FRANCE	GERMANY	JAPAN	U.K.
HOMO	0.698	5.212	4.751	4.460	5.816
(1,1)	0.698	5.880	4.934	4.506	5.704
IG	0.740	5.274	4.832	4.481	5.765
E2(12)	0.697	5.220	4.755	4.447	5.736
|E|(12)	0.703	5.274	4.798	4.481	5.708
NONP	0.704	5.227	4.756	4.468	5.862

FOR HORIZON 24 MSPES ARE

	CANADA	FRANCE	GERMANY	JAPAN	U.K.
HOMO	0.696	5.086	4.494	4.454	5.791
(1,1)	0.701	5.908	4.534	4.560	5.741
IG	0.758	5.075	4.519	4.516	5.831
E2(12)	0.696	5.081	4.492	4.445	5.748
|E|(12)	0.702	5.130	4.529	4.493	5.776
NONP	0.703	5.128	4.545	4.461	5.969

VII. Bandwidths used in estimation of variance-covariance matrices

Here are the values of k (in the notation of section II of the paper):

TABLE 4

	Canada	France	Germany	Japan	U.K.
			Horizon = 1		
Ha	10	1	4	4	8
Hb	10	4	6	6	8
Hc	10	0	4	4	8
			Horizon = 12		
Ha	9	3	1	3	8
Hb	n.a.	n.a.	n.a.	2	9
Hc	9	3	1	3	7
			Horizon = 24		
Ha	9	1	1	4	8
Hb	n.a.	1	2	3	9
Hc	9	0	0	3	8

TABLE 5

	Canada	France	Germany	Japan	U.K.
homo	12	4	6	6	9
(1,1)	2	8	17	8	20
ig	7	0	7	6	10
e2AR	6	3	2	2	9
|e|AR	8	4	7	3	6
nonp	4	4	5	6	10

TABLE 6

Canada	France	Germany	Japan	U.K.
11	15	14	15	15

VIII. Chi-squared statistics for tests of model in which h(t) = e(t)**2

Hd: RMSPEs are the same for all 7 models (degrees of freedom = 6)

He: RMSPE from this model = that of next worst model

Horizon=1

HD	16.88[0.010]	9.55[0.145]	14.39[0.026]	22.75 [0.001]	11.86[0.065]
HE	5.31[0.021]	5.73[0.017]	3.98[0.046]	16.40 [0.000]	2.08[0.150]

Horizon=12

HD	20.50[0.002]	15.06[0.020]	9.02[0.172]	27.58 [0.000]	12.24[0.057]
HE	6.34[0.012]	5.28[0.022]	4.28[0.038]	5.32 [0.021]	4.51[0.034]

Horizon=24

HD	23.69[0.001]	21.34[0.002]	21.92[0.001]	14.14 [0.028]	16.64[0.011]
HE	8.61[0.003]	3.79[0.052]	4.02[0.045]	6.45 [0.011]	9.67[0.002]

IX. Regression Tests of Efficiency, 12 and 24 Week Horizons

As in Table 5, for each model, the first row gives: b0, b1, R2, chi-squared(2); the second row gives the asymptotic s.e.s on b0 and b1 and the asymptotic p-value for the test. For the horizons of 12 and 24, k=11 and 23.

HORIZON = 12

Canada

homo	1.031107	-2.086976	0.004045	2.720807
	0.635373	1.935881		0.256557
(1,1)	0.239761	0.306861	0.002823	3.130597
	0.138759	0.395703		0.209026
ig	0.325918	0.070601	0.000641	21.860954
	0.081591	0.200034		0.000018
e2AR	0.635848	-0.857535	0.004974	7.458198
	0.244076	0.684274		0.024014
|e|AR	0.941119	-2.087409	0.011682	10.628475
	0.297204	0.951702		0.004921
nonp	0.778693	-1.278986	0.014399	14.128027
	0.245351	0.656947		0.000855

France

homo	3.954564	-0.700857	0.004090	12.516717
	1.117870	0.491569		0.001914
(1,1)				
	3.013126	-0.131535	0.002664	110.636750
	0.563462	0.124768		0.000000
ig	3.252295	-0.259269	0.002222	25.576913
	0.787861	0.257790		0.000003
e2AR	4.471275	-0.889827	0.010840	27.636828
	0.946556	0.367142		0.000001
|e|AR	4.755856	-1.115419	0.014636	24.963501
	1.011162	0.426649		0.000004
nonp	3.529092	-0.469122	0.004009	18.214883
	0.907890	0.350131		0.000111

Germany

homo	2.856675	-0.140829	0.000165	8.807277

	0.983517	0.432525		0.012233
(1,1)	3.516629	-0.373886	0.004351	62.679105
	0.638720	0.189023		0.000000
ig	2.397748	0.063889	0.000227	33.606139
	0.440861	0.167530		0.000000
e2AR	2.964122	-0.178361	0.000814	54.762376
	0.472303	0.159319		0.000000
|e|AR	3.417485	-0.415819	0.002155	20.968764
	0.760616	0.312536		0.000028
nonp	2.563571	-0.000120	0.000000	12.649732
	0.733208	0.285712		0.001791

Japan

homo	3.036565	-0.380043	0.000591	5.479012
	1.418420	0.716212		0.064602
(1,1)	1.828322	0.201602	0.001376	5.673686
	0.824140	0.335469		0.058610
ig	1.877058	0.203426	0.001263	3.685731
	0.978864	0.424832		0.158363
e2AR	1.716029	0.279284	0.001609	5.287437
	0.753440	0.356621		0.071096
|e|AR	1.395504	0.482387	0.005937	5.368715
	0.747720	0.406798		0.068265
nonp	1.850532	0.218355	0.001224	8.552924
	0.645056	0.274249		0.013892

U.K.

homo	3.795168	-0.520904	0.002444	10.309707
	1.204796	0.474912		0.005771
(1,1)	1.518268	0.443546	0.036217	24.192541
	0.377649	0.119811		0.000006
ig	1.431124	0.519181	0.023400	6.345943
	0.574939	0.249774		0.041879
e2AR	1.643902	0.463512	0.016752	3.829037
	0.900187	0.383171		0.147413
|e|AR	1.153074	0.744758	0.022204	4.052592
	0.946938	0.455275		0.131823
nonp	3.098772	-0.174430	0.000815	44.379059
	0.631164	0.179535		0.000000

HORIZON = 24

Canada

homo	1.044784	-2.146363	0.004287	2.157743
	0.713870	2.168065		0.339979
(1,1)	0.498992	-0.424593	0.002829	39.868374
	0.121621	0.254102		0.000000
ig	0.378053	-0.089148	0.001024	176.278541
	0.076067	0.098691		0.000000

e2AR	1.047510	-2.133744	0.006223	4.553071
	0.505369	1.484385		0.102639
|e|AR	0.707019	-1.293817	0.001763	2.631784
	0.567396	1.994728		0.268235
nonp	0.511663	-0.520394	0.003564	19.689142
	0.140400	0.355605		0.000053

France

homo	3.645760	-0.556886	0.002706	10.137907
	1.145648	0.504704		0.006289
(1,1)	1.421710	0.260133	0.023519	62.522168
	0.527811	0.129706		0.000000
ig	1.762603	0.284765	0.002808	8.411464
	0.655154	0.246662		0.014910
e2AR	3.497705	-0.467882	0.002061	8.716246
	1.184789	0.509745		0.012802
|e|AR	3.193164	-0.359209	0.001271	9.800441
	1.080187	0.517417		0.007445
nonp	3.544731	-0.484216	0.004382	17.067878
	0.932468	0.363921		0.000197

Germany

homo	2.442757	0.022702	0.000005	6.816709
	0.965627	0.429929		0.033096
(1,1)	2.099971	0.154788	0.000431	8.559282
	0.731753	0.292273		0.013848
ig	1.632552	0.330894	0.006760	16.809337
	0.418656	0.168766		0.000224
e2AR	2.239759	0.116155	0.000184	10.249447
	0.699890	0.292640		0.005948
|e|AR	1.911209	0.297094	0.001007	9.835476
	0.695115	0.348887		0.007316
nonp	2.531624	-0.019580	0.000010	31.031218
	0.459384	0.201048		0.000000

Japan

homo	2.193381	0.041427	0.000007	2.800451
	1.557754	0.777924		0.246541
(1,1)	2.406710	-0.055748	0.000118	30.332684
	0.638799	0.208558		0.000000
ig	2.357051	-0.040506	0.000050	8.636156
	0.879299	0.357531		0.013325
e2AR	2.278134	-0.001711	0.000000	2.933709
	1.377205	0.651277		0.230650
|e|AR	1.874575	0.226185	0.000310	6.136690
	0.906833	0.491861		0.046498
nonp	1.681275	0.291734	0.002343	20.068651
	0.393200	0.173606		0.000044

U.K.

homo	3.842574	-0.561865	0.002865	8.133512
	1.382245	0.547753		0.017133
(1,1)	1.354690	0.476903	0.055629	26.092876
	0.375641	0.108220		0.000002
ig	2.250555	0.180471	0.002850	17.956412
	0.547917	0.207882		0.000126
e2AR	1.972567	0.327213	0.002997	4.862904
	1.031143	0.469124		0.087909
|e|AR	1.848324	0.439689	0.002452	6.546378
	1.065496	0.555244		0.037885
nonp	3.121600	-0.194439	0.002357	88.465924
	0.587645	0.141139		0.000000

X. Monte Carlo Experiment

We generated 100 samples of size 863, according to a process described in the next paragraph. We generated only 100 samples because of computational constraints; even this small experiment required nonlinear, iterative estimation of 40,800 GARCH models and 40,800 IGARCH models. For each of the 100 samples, we repeated the Table 4 calculations, fitting and then forecasting with all six models 408 times, fitting our models first to observations 1 to 432, then to observations 2 to 433,..., and finally to observations 408 to 839. We then computed RMSPEs and χ^2 statistics.

Our data generating process assumed e_t ~ iid $N(0,\sigma_1^2)$ for observations 1 to 432, e_t ~ iid $N(0,\sigma_2^2)$ for observations 433 to 863. We allowed for two distinct variances in part because of evidence presented below that the unconditional variance in these data appears to have drifted upward during the sample, in part because estimates of our GARCH models did not converge in an initial attempt to use a constant variance model. Recall that the conceptual experiment that underlies our asymptotic inference is one in which the number of observations used for estimation (=432, in the sample that we have) and the number used for forecasting (=408) both go to infinity. Here, we further assume that there is a one-time shift in the variance in the first observation that is forecast. Intuition suggests that our estimators might then yield equal out-of-sample RMSPEs in a large sample. (We have not, however, proved this formally.)

The standard deviations σ_1 and σ_2 were set to match estimates for U.K. exchange rates, σ_1=1.093 (3/14/73-6/17/81), σ_2=1.663 (6/14/81-9/20/89). The choice of the U.K. was arbitrary.

The attached has the results. The first part of the table repeats the ranks and RMSPEs reported in Table 4. Beneath the RMSPEs are 95 percent confidence intervals, for which the lower bound is the third smallest RMSPE, the upper bound the 98th smallest. The point estimates all fall within the 95 percent confidence intervals.

The bottom of the table repeats the χ^2 statistics and asymptotic p-values from Table 4, and adds the Monte Carlo p-values. The Monte Carlo p-value of "0.99" figure for H_A for the one week horizon, for example, indicates that 99 of the 100 samples yielded a χ^2 statistic larger than the 3.76 produced in our actual data. Seven of the remaining eight Monte-Carlo p-values also are higher than those derived from the asymptotic chi-square distribution, confirming a pattern of a small sample bias towards undersized tests that we have seen in related Monte Carlo work (Newey and West (1992)). There does not, then, appear to be a tendency for these tests to reject too infrequently.

Monte Carlo Results, U.K. Data

95 percent confidence intervals around point estimates of RMSPEs, from Monte Carlo:

	One Week Horizon		Twelve Week Horizon		Twenty Four Week Horizon	
	Rank	RMSPE	Rank	RMSPE	Rank	RMSPE
homo	4	5.745 (4.284,7.536)	5	5.794 (4.152,7.557)	4	5.770 (4.142,7.443)
(1,1)	2	5.632 (4.267,7.785)	4	5.756 (4.129,8.011)	1	5.708 (4.136,8.031)
ig	1	5.563 (4.278,7.514)	2	5.692 (4.136,7.561)	5	5.834 (4.131,7.410)
e2AR	5	6.033 (4.321,7.804)	3	5.726 (4.158,7.792)	2	5.721 (4.133,7.639)
|e|AR	6	5.726 (4.336,7.649)	1	5.674 (4.170,7.653)	3	5.729 (4.186,7.529)
nonp	3	6.537 (4.309,7.723)	6	5.841 (4.319,7.594)	6	5.943 (4.188,7.750)

Hypothesis tests:

	χ^2	p-value		χ^2	p-value		χ^2	p-value	
		Asymp-totic	Monte Carlo		Asymp-totic	Monte Carlo		Asymp-totic	Monte Carlo
H_A	3.76	[0.584]	[0.99]	8.49	[0.131]	[0.89]	5.82	[0.324]	[1.00]
H_B	1.52	[0.217]	[0.13]	1.29	[0.256]	[0.26]	0.07	[0.789]	[0.91]
H_C	3.59	[0.310]	[0.84]	5.66	[0.129]	[0.84]	1.95	[0.583]	[1.00]

Notes:
1. The entries in the "Rank" column and the point estimates of the RMSPEs are repeated from the Table 4 entries for the U.K., as are the χ^2 statistics and asymptotic p-values for H_A, H_B and H_C.
2. Parameters for the Monte Carlo simulation were chosen to match U.K. data in certain respects. Details are described on the previous page. For a given model and horizon, the numbers in parentheses are interpreted as: 2.5% of the artificial data sets had RMSPEs smaller than the first number, 2.5% had RMSPEs higher than the second number.
3. The Monte-Carlo p-value gives the fraction of artificial data sets for which the χ^2 statistic was higher than the one computed from the actual data.

XI. RMSPE for prediction made using average forecast

(Comparable to Table 4)

horizon	Canada		France		Germany		Japan		U.K.	
1	1	0.696	1	5.155	2	4.695	2	4.335	2	5.687
12	3	0.698	2	5.237	2	4.760	1	4.416	1	5.652
14	4	0.699	1	4.997	1	4.474	2	4.423	1	5.662

XII. RMSPE for the split samples, One-week

(Comparable to Table 4, Panel A)

A. 6/17/81 - 9/18/85

	Canada		France		Germany		Japan		U.K.	
homo	5	0.617	2	5.224	3	3.781	6	3.262	4	6.249
(1,1)	1	0.582	6	5.454	4	3.792	2	3.141	2	6.059
ig	2	0.599	1	5.219	1	3.731	1	3.119	1	5.955
e2AR	3	0.600	5	5.316	5	3.882	3	3.155	5	6.413
|e|AR	4	0.603	4	5.283	6	3.899	4	3.156	3	6.152
nonp	6	0.634	3	5.261	2	3.779	5	3.250	6	7.516

B. 9/18/85 - 4/5/89

	Canada		France		Germany		Japan		U.K.	
homo	2	0.814	2	5.097	1	5.602	2	5.412	3	5.085
(1,1)	4	0.821	6	5.225	5	5.737	1	5.396	2	5.082
ig	3	0.815	1	5.091	3	5.625	3	5.445	1	5.061
e2AR	5	0.825	5	5.221	6	5.925	6	5.539	6	5.552
|e|AR	1	0.807	3	5.100	2	5.622	4	5.498	5	5.177
nonp	6	0.842	4	5.129	4	5.641	5	5.530	4	5.144