

ภาคผนวก จ

อัตราความเสี่ยงจาก Multivariate GARCH model ในช่วง In-sample

ตาราง จ.1

อัตราความเสี่ยงที่ได้จากการประมาณการตามแบบจำลอง DVEC-GARCH(1,1)

Date	Hedge ratio	Date	Hedge ratio	Date	Hedge ratio	Date	Hedge ratio	Date	Hedge ratio
3/7/2549	1.1566	14/9/2549	1.1676	28/11/2549	1.2172	13/2/2550	0.8991	2/5/2550	0.8572
4/7/2549	0.9869	15/9/2549	0.8626	29/11/2549	1.2854	14/2/2550	1.1067	3/5/2550	0.8606
5/7/2549	1.2119	18/9/2549	0.9600	30/11/2549	1.1438	15/2/2550	0.8940	4/5/2550	0.8583
6/7/2549	1.4256	19/9/2549	0.9872	1/12/2549	0.9155	16/2/2550	0.9929	8/5/2550	1.0368
7/7/2549	0.9734	21/9/2549	0.8602	4/12/2549	0.9267	19/2/2550	1.1736	9/5/2550	1.0481
10/7/2549	0.9798	22/9/2549	1.1468	6/12/2549	0.8874	20/2/2550	0.9939	10/5/2550	1.1836
12/7/2549	0.9242	25/9/2549	1.1331	7/12/2549	0.8872	21/2/2550	0.9433	11/5/2550	0.8777
13/7/2549	0.7711	26/9/2549	0.8677	8/12/2549	0.9380	22/2/2550	0.8794	14/5/2550	0.9368
14/7/2549	1.0309	27/9/2549	0.9012	12/12/2549	1.0987	23/2/2550	0.9118	15/5/2550	0.9824
17/7/2549	1.1399	28/9/2549	0.9291	13/12/2549	1.0141	26/2/2550	0.9756	16/5/2550	0.9280
18/7/2549	0.8423	29/9/2549	1.0396	14/12/2549	0.9086	27/2/2550	0.9842	17/5/2550	1.1554
19/7/2549	0.8387	2/10/2549	0.2400	15/12/2549	0.8211	28/2/2550	0.9552	18/5/2550	0.8636
20/7/2549	0.8738	3/10/2549	0.7596	18/12/2549	0.8964	1/3/2550	0.9520	21/5/2550	0.6980
21/7/2549	0.9230	4/10/2549	0.9663	19/12/2549	1.1360	2/3/2550	0.8501	22/5/2550	0.9325
24/7/2549	1.1147	5/10/2549	0.8732	20/12/2549	1.6923	6/3/2550	0.9669	23/5/2550	0.8368
25/7/2549	0.7958	6/10/2549	1.0428	21/12/2549	1.6011	7/3/2550	1.1343	24/5/2550	0.9397
26/7/2549	0.9298	9/10/2549	0.9917	22/12/2549	0.9937	8/3/2550	1.0252	25/5/2550	1.2523
27/7/2549	0.9206	10/10/2549	1.0119	25/12/2549	0.6561	9/3/2550	0.8608	28/5/2550	0.8021
28/7/2549	0.8811	11/10/2549	1.0256	26/12/2549	0.7833	12/3/2550	0.9744	29/5/2550	0.9387
31/7/2549	0.7818	12/10/2549	1.0278	27/12/2549	0.9113	13/3/2550	0.7349	30/5/2550	0.8928
1/8/2549	0.8424	13/10/2549	1.1735	28/12/2549	0.9639	14/3/2550	0.8909	1/6/2550	1.0956
2/8/2549	1.1206	16/10/2549	0.9136	29/12/2549	1.1675	15/3/2550	1.0816	4/6/2550	0.8891
3/8/2549	0.8801	17/10/2549	0.9788	3/1/2550	0.9049	16/3/2550	0.8829	5/6/2550	0.9119
4/8/2549	1.0693	18/10/2549	1.3241	4/1/2550	1.1479	19/3/2550	1.0138	6/6/2550	0.9157
7/8/2549	0.9327	19/10/2549	1.0412	5/1/2550	1.0135	20/3/2550	0.9673	7/6/2550	0.6511
8/8/2549	0.9201	20/10/2549	0.8888	8/1/2550	1.3626	21/3/2550	0.8148	8/6/2550	0.4877
9/8/2549	0.7644	24/10/2549	0.9445	9/1/2550	0.8699	22/3/2550	1.0086	11/6/2550	0.8309
10/8/2549	0.9563	25/10/2549	0.8814	10/1/2550	1.0338	23/3/2550	0.9153	12/6/2550	0.7602
11/8/2549	1.3229	26/10/2549	0.8391	11/1/2550	0.7191	26/3/2550	0.8836	13/6/2550	1.0967
15/8/2549	1.1343	27/10/2549	1.0734	12/1/2550	1.0035	27/3/2550	0.9157	14/6/2550	1.0163
16/8/2549	0.9122	30/10/2549	0.9357	15/1/2550	0.6295	28/3/2550	0.9570	15/6/2550	0.7863
17/8/2549	0.8614	31/10/2549	1.3217	16/1/2550	0.9163	29/3/2550	1.1711	18/6/2550	0.7901
18/8/2549	0.9794	1/11/2549	0.8915	17/1/2550	0.7715	30/3/2550	0.8602	19/6/2550	1.0024
21/8/2549	0.9711	2/11/2549	1.1015	18/1/2550	0.9535	2/4/2550	0.6419	20/6/2550	0.7758
22/8/2549	0.8760	3/11/2549	0.9971	19/1/2550	0.4784	3/4/2550	0.9073	21/6/2550	1.0211
23/8/2549	0.8956	6/11/2549	0.9098	22/1/2550	0.7390	4/4/2550	0.6265	22/6/2550	0.8361
24/8/2549	1.2295	7/11/2549	0.8211	23/1/2550	0.9057	5/4/2550	0.8624	25/6/2550	1.0499
25/8/2549	1.0747	8/11/2549	0.9260	24/1/2550	1.0046	9/4/2550	0.8004	26/6/2550	1.0166
28/8/2549	0.9957	9/11/2549	0.8174	25/1/2550	0.8470	10/4/2550	1.0887	27/6/2550	0.8193
29/8/2549	1.1199	10/11/2549	0.7914	26/1/2550	0.8528	11/4/2550	0.9119	28/6/2550	0.8969
30/8/2549	0.8925	13/11/2549	0.9055	29/1/2550	1.0547	12/4/2550	1.0061	29/6/2550	0.9635
31/8/2549	1.0079	14/11/2549	0.9480	30/1/2550	1.0161	17/4/2550	1.0051		
1/9/2549	0.9721	15/11/2549	0.9167	31/1/2550	0.9449	18/4/2550	0.8967		
4/9/2549	0.8237	16/11/2549	0.9018	1/2/2550	0.8856	19/4/2550	0.9556		
5/9/2549	0.9156	17/11/2549	0.8562	2/2/2550	0.9111	20/4/2550	1.1597		
6/9/2549	0.9451	20/11/2549	0.8470	5/2/2550	0.9981	23/4/2550	0.9514		
7/9/2549	0.7653	21/11/2549	1.1107	6/2/2550	0.8017	24/4/2550	1.0070		
8/9/2549	1.4555	22/11/2549	0.9030	7/2/2550	0.9465	25/4/2550	0.9833		
11/9/2549	0.7066	23/11/2549	0.8962	8/2/2550	0.8997	26/4/2550	0.9454		
12/9/2549	1.1190	24/11/2549	0.8620	9/2/2550	1.3456	27/4/2550	0.8269		
13/9/2549	0.8694	27/11/2549	1.0457	12/2/2550	0.8914	30/4/2550	0.9240		

ตาราง ๑.2

อัตราวัดความเสี่ยงที่ได้จากการประมาณการตามแบบจำลอง CC-GARCH(1,1)

Date	Hedge ratio	Date	Hedge ratio	Date	Hedge ratio	Date	Hedge ratio	Date	Hedge ratio
3/7/2549	1.2192	14/9/2549	1.2055	28/11/2549	1.2871	13/2/2550	0.8646	2/5/2550	0.8639
4/7/2549	0.9730	15/9/2549	0.8383	29/11/2549	1.4381	14/2/2550	1.1371	3/5/2550	0.8752
5/7/2549	1.2892	18/9/2549	0.9575	30/11/2549	1.1794	15/2/2550	0.8700	4/5/2550	0.8782
6/7/2549	1.5067	19/9/2549	0.9915	1/12/2549	0.8838	16/2/2550	1.0028	8/5/2550	1.0912
7/7/2549	0.9180	21/9/2549	0.8827	4/12/2549	0.9084	19/2/2550	1.2237	9/5/2550	1.0683
10/7/2549	0.9692	22/9/2549	1.2458	6/12/2549	0.8846	20/2/2550	1.0158	10/5/2550	1.2392
12/7/2549	0.9010	25/9/2549	1.1702	7/12/2549	0.8831	21/2/2550	0.9446	11/5/2550	0.8517
13/7/2549	0.8360	26/9/2549	0.8159	8/12/2549	0.9352	22/2/2550	0.8785	14/5/2550	0.9399
14/7/2549	1.0890	27/9/2549	0.8703	12/12/2549	1.1296	23/2/2550	0.9000	15/5/2550	0.9859
17/7/2549	1.1834	28/9/2549	0.9094	13/12/2549	1.0290	26/2/2550	0.9775	16/5/2550	0.9226
18/7/2549	0.8505	29/9/2549	1.0668	14/12/2549	0.9183	27/2/2550	1.0808	17/5/2550	1.2220
19/7/2549	0.8251	2/10/2549	1.0105	15/12/2549	0.8207	28/2/2550	0.9790	18/5/2550	0.8755
20/7/2549	0.8387	3/10/2549	0.8158	18/12/2549	0.8783	1/3/2550	0.9627	21/5/2550	0.8511
21/7/2549	0.9351	4/10/2549	0.9786	19/12/2549	1.1728	2/3/2550	0.8227	22/5/2550	0.9398
24/7/2549	1.1590	5/10/2549	0.8633	20/12/2549	1.8127	6/3/2550	0.9622	23/5/2550	0.8484
25/7/2549	1.0120	6/10/2549	1.1040	21/12/2549	1.6157	7/3/2550	1.1822	24/5/2550	0.9416
26/7/2549	0.9482	9/10/2549	1.0031	22/12/2549	0.8458	8/3/2550	1.0372	25/5/2550	1.3124
27/7/2549	0.9150	10/10/2549	1.0166	25/12/2549	0.5070	9/3/2550	0.8424	28/5/2550	0.7950
28/7/2549	0.8873	11/10/2549	1.0428	26/12/2549	0.6835	12/3/2550	0.9752	29/5/2550	0.9502
31/7/2549	0.8160	12/10/2549	1.0377	27/12/2549	0.8502	13/3/2550	0.8412	30/5/2550	0.8830
1/8/2549	0.8352	13/10/2549	1.3053	28/12/2549	0.9456	14/3/2550	0.8856	1/6/2550	1.1162
2/8/2549	1.1564	16/10/2549	0.8927	29/12/2549	1.2082	15/3/2550	1.1095	4/6/2550	0.9311
3/8/2549	0.8834	17/10/2549	1.0230	3/1/2550	1.0113	16/3/2550	0.8589	5/6/2550	0.9340
4/8/2549	1.1584	18/10/2549	1.4605	4/1/2550	1.2168	19/3/2550	1.0276	6/6/2550	0.9352
7/8/2549	0.9079	19/10/2549	1.0395	5/1/2550	1.0147	20/3/2550	1.0408	7/6/2550	0.6381
8/8/2549	0.9080	20/10/2549	0.8626	8/1/2550	1.4176	21/3/2550	0.8607	8/6/2550	0.8103
9/8/2549	0.8013	24/10/2549	0.9320	9/1/2550	0.7675	22/3/2550	1.0250	11/6/2550	0.8710
10/8/2549	0.9751	25/10/2549	0.9133	10/1/2550	1.0849	23/3/2550	0.9063	12/6/2550	0.7416
11/8/2549	1.3935	26/10/2549	0.8638	11/1/2550	0.6647	26/3/2550	0.8706	13/6/2550	1.1372
15/8/2549	1.1399	27/10/2549	1.2147	12/1/2550	1.0327	27/3/2550	0.8992	14/6/2550	1.0619
16/8/2549	0.8689	30/10/2549	0.9436	15/1/2550	1.0390	28/3/2550	0.9514	15/6/2550	0.7357
17/8/2549	0.8551	31/10/2549	1.4610	16/1/2550	0.9400	29/3/2550	1.2251	18/6/2550	0.7911
18/8/2549	0.9921	1/11/2549	0.8645	17/1/2550	0.7625	30/3/2550	0.8045	19/6/2550	1.0498
21/8/2549	0.9758	2/11/2549	1.1706	18/1/2550	0.9660	2/4/2550	0.7351	20/6/2550	0.7268
22/8/2549	0.8803	3/11/2549	0.9942	19/1/2550	0.6024	3/4/2550	0.9128	21/6/2550	1.0287
23/8/2549	0.8786	6/11/2549	0.8842	22/1/2550	0.7730	4/4/2550	0.6825	22/6/2550	0.8035
24/8/2549	1.2858	7/11/2549	0.8651	23/1/2550	0.9172	5/4/2550	0.8804	25/6/2550	1.0610
25/8/2549	1.0883	8/11/2549	0.9444	24/1/2550	1.0177	9/4/2550	0.9308	26/6/2550	1.0442
28/8/2549	0.9874	9/11/2549	0.8412	25/1/2550	0.8457	10/4/2550	1.1170	27/6/2550	0.7754
29/8/2549	1.1520	10/11/2549	0.8137	26/1/2550	0.8319	11/4/2550	0.8805	28/6/2550	0.8662
30/8/2549	0.8681	13/11/2549	0.9187	29/1/2550	1.0725	12/4/2550	1.0216	29/6/2550	1.0138
31/8/2549	1.0081	14/11/2549	1.0945	30/1/2550	1.0233	17/4/2550	1.0119		
1/9/2549	0.9623	15/11/2549	0.9245	31/1/2550	0.9528	18/4/2550	0.8710		
4/9/2549	0.8456	16/11/2549	0.8958	1/2/2550	0.8781	19/4/2550	0.9658		
5/9/2549	0.9178	17/11/2549	0.8606	2/2/2550	0.8946	20/4/2550	1.2304		
6/9/2549	0.9480	20/11/2549	0.9029	5/2/2550	1.0420	23/4/2550	0.9325		
7/9/2549	0.7947	21/11/2549	1.1527	6/2/2550	0.7627	24/4/2550	1.0133		
8/9/2549	1.5964	22/11/2549	1.0012	7/2/2550	0.9301	25/4/2550	1.0212		
11/9/2549	0.9664	23/11/2549	0.8810	8/2/2550	0.8763	26/4/2550	0.9361		
12/9/2549	1.1642	24/11/2549	0.8671	9/2/2550	1.4207	27/4/2550	0.8418		
13/9/2549	0.8492	27/11/2549	1.0714	12/2/2550	0.8346	30/4/2550	0.9230		

ตาราง ๑.3

อัตราความเสี่ยงที่ได้จากการประมาณการตามแบบจำลอง BEKK-GARCH(1,1)

Date	Hedge ratio	Date	Hedge ratio	Date	Hedge ratio	Date	Hedge ratio	Date	Hedge ratio
3/7/2549	0.9524	14/9/2549	1.1667	28/11/2549	1.1553	13/2/2550	0.8183	2/5/2550	0.9312
4/7/2549	0.9756	15/9/2549	0.8658	29/11/2549	1.2081	14/2/2550	1.1757	3/5/2550	1.0485
5/7/2549	1.1409	18/9/2549	0.9570	30/11/2549	1.0823	15/2/2550	0.9063	4/5/2550	0.8045
6/7/2549	1.3583	19/9/2549	0.9113	1/12/2549	0.8170	16/2/2550	1.1051	8/5/2550	0.9732
7/7/2549	0.9738	21/9/2549	1.1086	4/12/2549	0.8300	19/2/2550	1.1775	9/5/2550	1.1729
10/7/2549	1.0711	22/9/2549	1.1462	6/12/2549	0.8854	20/2/2550	0.9519	10/5/2550	1.2064
12/7/2549	0.9364	25/9/2549	1.2389	7/12/2549	0.8442	21/2/2550	0.8380	11/5/2550	0.9108
13/7/2549	0.8072	26/9/2549	0.8063	8/12/2549	1.0108	22/2/2550	0.8767	14/5/2550	0.8941
14/7/2549	1.2610	27/9/2549	0.8426	12/12/2549	1.1904	23/2/2550	0.8818	15/5/2550	0.9082
17/7/2549	1.1600	28/9/2549	0.8282	13/12/2549	1.0343	26/2/2550	1.0394	16/5/2550	0.8527
18/7/2549	1.1019	29/9/2549	1.1695	14/12/2549	1.1094	27/2/2550	0.9800	17/5/2550	1.1443
19/7/2549	0.8393	2/10/2549	0.6863	15/12/2549	0.9487	28/2/2550	1.1673	18/5/2550	0.8165
20/7/2549	0.8413	3/10/2549	0.9913	18/12/2549	0.8325	1/3/2550	1.1277	21/5/2550	0.8196
21/7/2549	1.0064	4/10/2549	1.0219	19/12/2549	1.1854	2/3/2550	0.7981	22/5/2550	0.9688
24/7/2549	1.1911	5/10/2549	0.9158	20/12/2549	1.4601	6/3/2550	1.0087	23/5/2550	0.9368
25/7/2549	0.8489	6/10/2549	0.9478	21/12/2549	1.4013	7/3/2550	1.1251	24/5/2550	1.0350
26/7/2549	0.8360	9/10/2549	0.9313	22/12/2549	1.0320	8/3/2550	1.1429	25/5/2550	1.2880
27/7/2549	0.8111	10/10/2549	1.0342	25/12/2549	0.7933	9/3/2550	0.7986	28/5/2550	1.0184
28/7/2549	0.9323	11/10/2549	0.9639	26/12/2549	0.7998	12/3/2550	0.9545	29/5/2550	1.0878
31/7/2549	1.0893	12/10/2549	1.0462	27/12/2549	0.8094	13/3/2550	0.8059	30/5/2550	0.8686
1/8/2549	0.8753	13/10/2549	1.1123	28/12/2549	0.8275	14/3/2550	0.8200	1/6/2550	1.0723
2/8/2549	1.0789	16/10/2549	0.8462	29/12/2549	0.9718	15/3/2550	1.1606	4/6/2550	1.2031
3/8/2549	1.0119	17/10/2549	0.8986	3/1/2550	0.8206	16/3/2550	0.8290	5/6/2550	1.1505
4/8/2549	0.9885	18/10/2549	1.2993	4/1/2550	1.2416	19/3/2550	1.1280	6/6/2550	1.1481
7/8/2549	0.8549	19/10/2549	1.1140	5/1/2550	1.0982	20/3/2550	0.9547	7/6/2550	0.8920
8/8/2549	0.8149	20/10/2549	0.8336	8/1/2550	1.2438	21/3/2550	0.8397	8/6/2550	0.7825
9/8/2549	1.0261	24/10/2549	0.8872	9/1/2550	0.8366	22/3/2550	1.0477	11/6/2550	1.0742
10/8/2549	1.0909	25/10/2549	0.8156	10/1/2550	1.2116	23/3/2550	0.9516	12/6/2550	0.7867
11/8/2549	1.2752	26/10/2549	0.8474	11/1/2550	0.8615	26/3/2550	0.8288	13/6/2550	1.1469
15/8/2549	1.1234	27/10/2549	1.1230	12/1/2550	1.1171	27/3/2550	0.8606	14/6/2550	1.2125
16/8/2549	0.8638	30/10/2549	1.1110	15/1/2550	0.7989	28/3/2550	0.9871	15/6/2550	0.8708
17/8/2549	0.8720	31/10/2549	1.2963	16/1/2550	1.0149	29/3/2550	1.2891	18/6/2550	0.9720
18/8/2549	1.0928	1/11/2549	0.8301	17/1/2550	0.8878	30/3/2550	0.8013	19/6/2550	1.1854
21/8/2549	0.9600	2/11/2549	1.0762	18/1/2550	1.0046	2/4/2550	0.9002	20/6/2550	0.8781
22/8/2549	1.0207	3/11/2549	1.0761	19/1/2550	0.8625	3/4/2550	0.9323	21/6/2550	1.0401
23/8/2549	0.8655	6/11/2549	0.8158	22/1/2550	0.8041	4/4/2550	1.0338	22/6/2550	0.8884
24/8/2549	1.2421	7/11/2549	0.8225	23/1/2550	0.9804	5/4/2550	0.9350	25/6/2550	0.9775
25/8/2549	1.1793	8/11/2549	0.8433	24/1/2550	1.0217	9/4/2550	0.8196	26/6/2550	1.1109
28/8/2549	1.0521	9/11/2549	1.0096	25/1/2550	0.9394	10/4/2550	1.0896	27/6/2550	0.7891
29/8/2549	1.2105	10/11/2549	0.9397	26/1/2550	0.8061	11/4/2550	0.8439	28/6/2550	0.8092
30/8/2549	0.8127	13/11/2549	1.0907	29/1/2550	1.0086	12/4/2550	0.9119	29/6/2550	0.8339
31/8/2549	0.9997	14/11/2549	0.9602	30/1/2550	1.0502	17/4/2550	1.0691		
1/9/2549	0.8905	15/11/2549	1.0648	31/1/2550	0.8805	18/4/2550	0.8077		
4/9/2549	1.0391	16/11/2549	0.9934	1/2/2550	0.9030	19/4/2550	1.0895		
5/9/2549	0.9955	17/11/2549	1.0057	2/2/2550	0.8289	20/4/2550	1.1572		
6/9/2549	1.0707	20/11/2549	0.8194	5/2/2550	1.2157	23/4/2550	0.8958		
7/9/2549	0.8536	21/11/2549	1.2209	6/2/2550	0.7805	24/4/2550	1.0114		
8/9/2549	1.2977	22/11/2549	0.8926	7/2/2550	0.9473	25/4/2550	0.9516		
11/9/2549	0.7831	23/11/2549	0.8815	8/2/2550	0.8492	26/4/2550	0.9435		
12/9/2549	1.2074	24/11/2549	0.9825	9/2/2550	1.3068	27/4/2550	0.9456		
13/9/2549	0.8052	27/11/2549	1.1507	12/2/2550	0.7922	30/4/2550	0.8498		