

9. Appendices

Appendix I: Computation of target and path surprises - Event study (FOMC).

Dates of announcements - FOMC	Events	Last price of 30 day FED futures on date T	Last price of 30 day FED futures on date T-1	Target Surprise - FOMC	Last price of 1 year Eurodollar on date T	Last price of 1 year Eurodollar on date T-1	Variation on day T - FOMC	Path Surprise - FOMC	Holiday/Weekend (Before-On-After)
05-03-05	FOMC meeting		97	0	95,805	95,855	0,05	0,057	Yes (CN & HK)
06-30-05	FOMC meeting	96,74	96,74	0	95,995	95,99	-0,005	0,002	Yes(HK)
08-09-05	FOMC meeting	96,535	96,535	0	95,4	95,365	-0,035	-0,028	
09-20-05	FOMC meeting	96,39	96,395	0,015	95,625	95,69	0,065	0,065835	Yes(HK)
11-01-05	FOMC meeting	95,995	95,995	0	95,125	95,16	0,035	0,042	
12-13-05	FOMC meeting	95,84	95,84	0	95,16	95,125	-0,035	-0,028	
01-31-06	FOMC meeting	95,505	95,505	0	95,16	95,175	0,015	0,022	Yes (CN & HK)
03-28-06	FOMC meeting	95,235	95,24	0,005	94,875	94,97	0,095	0,099945	
05-10-06	FOMC meeting	95,045	95,04	-0,007380952	94,665	94,685	0,02	0,030033571	
06-29-06	FOMC meeting	94,735	94,72	-0,015	94,445	94,355	-0,09	-0,076835	
08-08-06	FOMC meeting	94,74	94,71	-0,040434783	94,885	94,845	-0,04	-0,016381304	
09-20-06	FOMC meeting	94,75	94,75	0	94,975	94,97	-0,005	0,002	
10-25-06	FOMC meeting	94,755	94,755	0	95,005	94,955	-0,05	-0,043	
12-12-06	FOMC meeting	94,765	94,765	0	95,345	95,28	-0,065	-0,058	
01-31-07	FOMC meeting	94,755	94,755	0	94,89	94,84	-0,05	-0,043	
03-21-07	FOMC meeting	94,75	94,75	0	95,4	95,285	-0,115	-0,108	
05-09-07	FOMC meeting	94,755	94,755	0	95,15	95,215	0,065	0,072	
06-28-07	FOMC meeting	94,755	94,755	0	94,74	94,825	0,085	0,092	
08-07-07	FOMC meeting	94,755	94,775	0,025833333	95,195	95,21	0,015	0,0113825	
08-10-07	FOMC meeting	94,795	94,795	0	95,24	95,235	-0,005	0,002	Yes (CN & HK)
08-17-07	FOMC meeting	94,97	95,04	0,155	95,43	95,51	0,08	0,023295	Yes (CN & HK)
09-18-07	FOMC meeting	95,07	95,01	-0,15	95,74	95,61	-0,13	-0,06135	
10-31-07	FOMC meeting	95,505	95,485	-0,02	95,7	95,84	0,14	0,15522	
12-11-07	FOMC meeting	95,74	95,745	0,00775	96,505	96,33	-0,175	-0,17118525	
01-22-08	FOMC meeting	96,09	95,875	-0,740555556	97,555	97,32	-0,235	0,076368333	
01-30-08	FOMC meeting	97,04	96,945	-0,095	97,18	97,205	0,025	0,071045	
03-11-08	FOMC meeting	97,275	97,365	0,1395	97,535	97,71	0,175	0,1246655	
03-18-08	FOMC meeting	97,395	97,465	0,166923077	97,9	98,095	0,195	0,133394615	
04-30-08	FOMC meeting	98,005	97,95	-0,055	96,83	96,745	-0,085	-0,055395	Yes (CN & HK)
06-25-08	FOMC meeting	97,985	97,975	-0,01	96,235	96,165	-0,07	-0,05889	
08-05-08	FOMC meeting	97,99	97,985	-0,005961538	96,44	96,425	-0,015	-0,005549808	Yes(HK)
09-16-08	FOMC meeting	98,0525	98,08	0,058928571	97,34	97,465	0,125	0,107780357	Yes (CN & HK)
10-08-08	Unscheduled FOMC meeting	98,5	98,395	-0,141521739	97,305	97,405	0,1	0,165165435	Yes(HK)
10-13-08	Announcement of FX swap arrangements	98,705	98,675	-0,051666667	96,795	97,1	0,305	0,333235	Yes (CN & HK)
10-20-08	Offer of \$150 billion in 28-day credit	98,8675	98,8025	-0,183181818	97,4	97,39	-0,01	0,072287727	Yes (CN & HK)
10-29-08	FOMC meeting	99,175	99,115	-0,06	97,385	97,265	-0,12	-0,08834	
11-25-08	Announcement concerning results of auction of \$150 billion in 13-day credit and Starts of QE1	99,58	99,53	-0,05	97,88	97,595	-0,285	-0,25745	
12-01-08	Announcement concerning results of auction of \$150 billion in 84-day credit and Starts of QE1	99,5925	99,6	0,00775	98,07	97,93	-0,14	-0,13618525	Yes (CN & HK)
12-16-08	FOMC meeting	99,8325	99,775	-0,118833333	98,56	98,28	-0,28	-0,2241595	
01-28-09	FOMC meeting	99,79	99,79	0	98,51	98,545	0,035	0,042	Yes (CN & HK)
03-18-09	FOMC meeting	99,7975	99,795	-0,005961538	98,62	98,3	-0,32	-0,310549808	
04-29-09	FOMC meeting	99,82	99,815	-0,005	98,4	98,39	-0,01	-0,000945	
06-24-09	FOMC meeting	99,78	99,78	0	98,38	98,42	0,04	0,047	
08-12-09	FOMC meeting	99,8325	99,8275	-0,008157895	98,18	98,06	-0,12	-0,109647105	
09-23-09	FOMC meeting and extension of asset purchase program	99,83	99,825	-0,005	98,695	98,605	-0,09	-0,080945	
11-04-09	FOMC meeting	99,865	99,865	0	98,44	98,41	-0,03	-0,023	
12-16-09	FOMC meeting	99,87	99,865	-0,010333333	98,705	98,655	-0,05	-0,038753	
01-27-10	FOMC meeting	99,865	99,865	0	98,545	98,62	0,075	0,082	
03-16-10	FOMC meeting and end of QE1	99,8275	99,8275	0	98,865	98,795	-0,07	-0,063	
04-28-10	FOMC meeting	99,785	99,785	0	98,535	98,555	0,02	0,027	
05-10-10	Unscheduled FOMC meeting	99,7875	99,7725	-0,022142857	98,71	98,68	-0,03	-0,013899286	Yes (CN & HK)
06-23-10	FOMC meeting	99,795	99,795	0	99	98,99	-0,01	-0,003	
08-10-10	FOMC meeting and announcements related to MBSs	99,82	99,82	0	99,255	99,215	-0,04	-0,033	
08-27-10	Bernanke Jackson Hole speech	99,82	99,82	0	99,25	99,295	0,045	0,052	Yes (CN & HK)
09-21-10	FOMC meeting and announcement for the maintain of existing policy	99,8075	99,8075	0	99,415	99,34	-0,075	-0,068	Yes (CN)
10-15-10	Unscheduled FOMC meeting	99,8075	99,8075	0	99,4	99,395	-0,005	0,002	Yes (CN & HK)
11-03-10	FOMC meeting and QE2 starts	99,8125	99,815	0,002777778	99,485	99,46	-0,025	-0,019141667	
12-14-10	FOMC meeting	99,825	99,825	0	99,11	99,165	0,055	0,062	
01-26-11	FOMC meeting	99,83	99,83	0	99,075	99,095	0,02	0,027	
03-15-11	FOMC meeting	99,8575	99,8575	0	99,265	99,28	0,015	0,022	
04-27-11	FOMC meeting and announcement of end of QE2 by June 2011	99,89	99,89	0	99,1	99,115	0,015	0,022	
06-22-11	FOMC meeting	99,9025	99,9	-0,009375	99,41	99,395	-0,015	-0,004146875	
08-01-11	Unscheduled FOMC meeting	99,88	99,89	0,010333333	99,395	99,37	-0,025	-0,022247	Yes (CN & HK)
08-09-11	FOMC meeting	99,9125	99,9125	0	99,595	99,47	-0,125	-0,118	
08-26-11	Bernanke Jackson Hole speech	99,91	99,91	0	99,51	99,495	-0,015	-0,008	Yes (CN & HK)
09-21-11	FOMC meeting and Maturity Extension Programme	99,915	99,9175	0,008333333	99,505	99,55	0,045	0,048575	
11-02-11	FOMC meeting	99,92	99,92	0	99,43	99,415	-0,015	-0,008	
11-28-11	Unscheduled FOMC meeting	99,905	99,905	0	99,16	99,145	-0,015	-0,008	Yes (CN & HK)
12-13-11	FOMC meeting	99,9225	99,92	-0,004305556	99,29	99,31	0,02	0,028769583	

Dates of announcements - FOMC	Events	Last price of 30 day FED futures on date T	Last price of 30 day FED futures on date T-1	Target Surprise - FOMC	Last price of 1 year Eurodollar on date T	Last price of 1 year Eurodollar on date T-1	Variation on day T - FOMC	Path Surprise - FOMC	Holiday/Weekend (Before-On-After)
01-25-12	FOMC meeting	99,915	99,915	0	99,42	99,42	-0,02	-0,013	Yes (CN & HK)
03-13-12	FOMC meeting	99,8825	99,885	0,004305556	99,4	99,435	0,035	0,040230417	
04-25-12	FOMC meeting	99,865	99,87	0,005	99,44	99,415	-0,025	-0,020055	
06-20-12	FOMC meeting and Maturity Extension Programme	99,835	99,835	0	99,47	99,465	-0,005	0,002	
08-01-12	FOMC meeting	99,855	99,86	0,005166667	99,575	99,585	0,01	0,0148765	
08-31-12	Bernanke Jackson Hole speech	99,865	99,865	0	99,62	99,585	-0,035	-0,028	Yes (CN & HK)
09-13-12	FOMC meeting and QE3 starts	99,8575	99,8625	0,008823529	99,645	99,62	-0,025	-0,021626471	
10-24-12	FOMC meeting	99,855	99,855	0	99,605	99,59	-0,015	-0,008	Yes(HK)
12-12-12	FOMC meeting	99,8425	99,8425	0	99,65	99,65	0	0,007	
01-30-13	FOMC meeting	99,865	99,865	0	99,55	99,535	-0,015	-0,008	
03-20-13	FOMC meeting and Bernanke warns of "premature tightening" in monetary policy	99,85	99,85	0	99,59	99,575	-0,015	-0,008	
05-01-13	FOMC meeting	99,875	99,875	0	99,65	99,645	-0,005	0,002	Yes (CN & HK)
05-22-13	Economic outlook before the Joint Economic Committee, US Congress and Bernanke warns of "premature tightening" in monetary policy	99,885	99,885	0	99,605	99,61	0,005	0,012	
06-19-13	FOMC meeting and Bernanke warns of "premature tightening" in monetary policy	99,9025	99,9075	0,013636364	99,565	99,605	0,04	0,041395455	
07-31-13	FOMC meeting	99,9	99,9	0	99,495	99,495	0	0,007	
09-18-13	FOMC meeting	99,9175	99,9175	0	99,55	99,5	-0,05	-0,043	Yes (CN)
10-16-13	Unscheduled FOMC meeting	99,9075	99,9	-0,0155	99,49	99,48	-0,01	0,0033705	
10-30-13	FOMC meeting	99,915	99,915	0	99,545	99,545	0	0,007	
12-18-13	FOMC meeting	99,9125	99,915	0,005961538	99,645	99,64	-0,005	-0,000450192	
01-29-14	FOMC meeting	99,92	99,92	0	99,515	99,495	-0,02	-0,013	
03-04-14	Unscheduled FOMC meeting	99,925	99,925	0	99,59	99,605	0,015	0,022	
03-19-14	FOMC meeting	99,9225	99,9225	0	99,54	99,58	0,04	0,047	
04-30-14	FOMC meeting	99,91	99,91	0	99,455	99,43	-0,025	-0,018	Yes (CN & HK)
06-18-14	FOMC meeting	99,905	99,905	0	99,41	99,41	0	0,007	
07-15-14	Semiannual Monetary Policy Report to the Congress	99,9075	99,9075	0	99,2	99,24	0,04	0,047	
07-30-14	FOMC meeting	99,905	99,905	0	99,13	99,165	0,035	0,042	
08-22-14	Yellen Jackson Hole speech	99,91	99,91	0	99,23	99,255	0,025	0,032	Yes (CN & HK)
09-17-14	FOMC meeting	99,91	99,91	0	99,185	99,205	0,02	0,027	
10-29-14	FOMC meeting	99,91	99,915	0,005	99,16	99,245	0,085	0,089945	
12-17-14	FOMC meeting	99,885	99,89	0,011071429	99,145	99,175	0,03	0,032449643	
01-28-15	FOMC meeting	99,875	99,875	0	99,12	99,075	-0,045	-0,038	
02-24-15	Semiannual Monetary Policy Report to the Congress	99,88	99,875	-0,005	99,035	98,965	-0,07	-0,060945	Yes (CN)
03-18-15	FOMC meeting	99,8825	99,88	-0,005961538	99,12	98,985	-0,135	-0,125549808	
04-29-15	FOMC meeting	99,875	99,875	0	99,04	99,045	0,005	0,012	
06-17-15	FOMC meeting	99,87	99,87	0	99,005	98,965	-0,04	-0,033	
07-15-15	Semiannual Monetary Policy Report to the Congress	99,87	99,87	0	98,915	98,885	-0,03	-0,023	
07-29-15	FOMC meeting	99,865	99,865	0	98,88	98,895	0,015	0,022	
09-17-15	FOMC meeting	99,86	99,835	-0,057692308	99,12	99,01	-0,11	-0,079288462	
10-28-15	FOMC meeting	99,865	99,865	0	99,04	99,135	0,095	0,102	
12-16-15	FOMC meeting	99,7675	99,7775	0,020666667	98,84	98,88	0,04	0,038506	
01-27-16	FOMC meeting	99,635	99,635	0	99,015	99,02	0,005	0,012	
02-10-16	Semiannual Monetary Policy Report to the Congress	99,6275	99,6275	0	99,235	99,22	-0,015	-0,008	Yes (CN & HK)
03-16-16	FOMC meeting	99,6375	99,6325	-0,010333333	99,025	98,92	-0,105	-0,093753	
04-27-16	FOMC meeting	99,635	99,63	-0,005	98,96	98,935	-0,025	-0,015945	
06-15-16	FOMC meeting	99,6325	99,6325	0	99,135	99,095	-0,04	-0,033	
06-21-16	Semiannual Monetary Policy Report to the Congress	99,6275	99,6275	0	99,08	99,095	0,015	0,022	
07-27-16	FOMC meeting	99,605	99,6	-0,005	99	98,97	-0,03	-0,020945	
08-26-16	Yellen Jackson Hole speech	99,575	99,585	0,01	98,89	98,96	0,07	0,07289	Yes (CN & HK)
09-21-16	FOMC meeting	99,6025	99,59	-0,041666667	98,935	98,95	0,015	0,039125	
11-02-16	FOMC meeting	99,5925	99,5875	-0,005357143	98,9	98,885	-0,015	-0,005798214	
12-14-16	FOMC meeting	99,465	99,465	0	98,43	98,545	0,115	0,122	
02-01-17	FOMC meeting	99,3425	99,34	-0,002592593	98,365	98,38	0,015	0,023065556	Yes (CN & HK)
03-15-17	FOMC meeting	99,215	99,2175	0,00484375	98,285	98,215	-0,07	-0,064990781	
05-03-17	FOMC meeting	99,095	99,095	0	98,33	98,35	0,02	0,027	Yes(HK)

Appendix II: Computation of target and path surprises – Event study (ECB).

Dates of announcements - ECB	Events	Last price of 30 day Eonia futures on date T	Last price of 30 day Eonia futures on date T-1	Target Surprise - ECB	Last price of 1 year Euribor on date T	Last price of 1 year Euribor on date T-1	Variation on day T - ECB	Path Surprise - ECB	Holiday/Weekend (Before-On-After)
05-04-05	GC meeting	97,925	97,925	0	97,61	97,635	0,025	0,029	Yes (CN)
06-02-05	GC meeting	NA	NA	NA	97,835	97,86	0,025	NA	
07-07-05	GC meeting	97,925	97,93	0,006458333	97,75	97,68	-0,07	-0,067265833	
08-04-05	GC meeting	97,92	97,92	0	97,545	97,56	0,015	0,019	
09-01-05	GC meeting	97,92	97,925	0,005172414	97,78	97,685	-0,095	-0,092013793	
10-06-05	GC meeting	97,905	97,905	0	97,355	97,39	0,035	0,039	Yes (CN)
11-03-05	GC meeting	97,915	97,895	-0,022222222	97,06	97,065	0,005	0,013355556	
12-01-05	GC meeting	97,66	97,67	0,010333333	97,09	97,02	-0,07	-0,068025333	
01-12-06	GC meeting	97,685	97,67	-0,024473684	96,955	96,905	-0,05	-0,041203158	
02-02-06	GC meeting	97,67	97,645	-0,026923077	96,76	96,745	-0,015	-0,005723077	Yes (CN)
03-02-06	GC meeting	97,435	97,445	0,010689655	96,665	96,72	0,055	0,056904828	
04-06-06	GC meeting	97,41	97,41	0	96,385	96,365	-0,02	-0,016	Yes(HK)
05-04-06	GC meeting	97,41	97,405	-0,005740741	96,24	96,265	0,025	0,030125185	Yes (CN & HK)
06-08-06	GC meeting	97,255	97,27	0,020454545	96,375	96,285	-0,09	-0,090009091	
07-06-06	GC meeting	97,175	97,16	-0,0186	96,03	96,05	0,02	0,0276456	
08-03-06	GC meeting	96,995	97,01	0,016607143	96,175	96,245	0,07	0,070745	
08-31-06	GC meeting	97	96,945	-0,055	96,315	96,29	-0,025	-0,01022	
10-05-06	GC meeting	96,76	96,75	-0,011923077	96,27	96,275	0,005	0,011336923	Yes (CN)
11-02-06	GC meeting	96,665	96,685	0,021428571	96,22	96,255	0,035	0,0348	
12-07-06	GC meeting	96,495	96,545	0,064583333	96,175	96,235	0,06	0,051341667	
01-11-07	GC meeting	96,42	96,435	0,02325	95,93	95,9	-0,03	-0,030557	
02-08-07	GC meeting	96,465	96,435	-0,042	95,895	95,93	0,035	0,047232	
03-08-07	GC meeting	96,285	96,465	0,242608696	96	96,025	0,025	-0,018551304	
04-12-07	GC meeting	96,195	96,195	0	95,76	95,79	0,03	0,034	
05-10-07	GC meeting	96,2	96,205	0,007380952	95,67	95,67	0	0,002553333	
06-06-07	GC meeting	96,05	96,045	-0,00625	95,4	95,33	-0,07	-0,064775	
07-05-07	GC meeting	95,98	95,945	-0,041730769	95,235	95,275	0,04	0,052179231	
08-02-07	GC meeting	95,935	95,935	0	95,44	95,47	0,03	0,034	
08-09-07	Special fine tuning operations	96,03	95,91	-0,169090909	95,465	95,385	-0,08	-0,042858182	
08-22-07	Supplementary LTRO (announcement)	96,005	95,975	-0,103333333	95,775	95,895	0,12	0,144253333	
08-23-07	Supplementary LTRO (allotment)	95,98	96,005	0,096875	95,77	95,775	0,005	-0,0099875	
09-06-07	GC meeting	95,87	95,865	-0,00625	95,81	95,78	-0,03	-0,024775	
10-04-07	GC meeting	95,98	96,015	0,040185185	95,805	95,765	-0,04	-0,043876296	Yes (CN)
11-08-07	GC meeting	95,965	95,975	0,013636364	95,865	95,805	-0,06	-0,058672727	
12-06-07	GC meeting	96,02	96,025	0,0062	95,97	95,995	0,025	0,0277848	
01-10-08	GC meeting	95,975	95,98	0,007380952	96,06	96,045	-0,015	-0,012446667	
02-07-08	GC meeting	95,97	95,98	0,013181818	96,69	96,55	-0,14	-0,138583636	Yes (CN & HK)
03-06-08	GC meeting	95,98	96,005	0,031	96,5	96,545	0,045	0,042924	
03-28-08	Introduction of 6-m LTROs	96,01	96	-0,01	96,14	96,155	0,015	0,02096	Yes (CN & HK)
04-10-08	GC meeting	96,025	96,005	-0,03	96,21	96,165	-0,045	-0,03512	
05-08-08	GC meeting	95,96	95,975	0,020217391	95,965	95,875	-0,09	-0,089962609	
06-05-08	GC meeting	95,99	95,98	-0,012	94,865	95,165	0,3	0,306352	
07-03-08	GC meeting	95,775	95,795	0,022142857	94,93	94,73	-0,2	-0,20034	
08-07-08	GC meeting	95,73	95,715	-0,019375	95,595	95,435	-0,16	-0,1522025	Yes(HK)
09-04-08	GC meeting	95,705	95,745	0,046153846	95,635	95,575	-0,06	-0,065046154	
10-02-08	GC meeting	95,835	95,875	0,042758621	96,14	96,005	-0,135	-0,13938069	Yes (CN & HK)
10-08-08	Unscheduled GC meeting	96,04	95,905	-0,181956522	96,47	96,34	-0,13	-0,090336522	Yes(HK)
10-13-08	FX swap arrangements	96,11	96,185	0,129166667	96,155	96,245	0,09	0,068683333	Yes (CN & HK)
10-15-08	Fixed-rate full allotment (FRFA) on MRO	96,125	96,115	-0,019375	96,15	96,135	-0,015	-0,0072025	
11-06-08	GC meeting	96,885	96,81	-0,09375	96,95	96,905	-0,045	-0,022625	
12-04-08	GC meeting	97,595	97,555	-0,045925926	97,325	97,495	0,17	0,183001481	
01-15-09	GC meeting	97,835	97,755	-0,155	97,835	97,92	0,085	0,11938	
02-05-09	GC meeting	98,705	98,66	-0,054782609	98,03	97,98	-0,05	-0,035262609	
03-05-09	GC meeting	99,07	99,075	0,005961538	98,31	98,28	-0,03	-0,027168462	
04-02-09	GC meeting	99,19	99,255	0,069642857	98,11	98,33	0,22	0,21035	
05-07-09	GC meeting and 1-year LTRO, CBPP	99,295	99,34	0,058125	98,33	98,32	-0,01	-0,0173925	
06-04-09	GC meeting and the announcement of CBPP details	99,17	99,18	0,011538462	98,345	98,5	0,155	0,156738462	
07-02-09	GC meeting	99,515	99,455	-0,064137931	98,27	98,115	-0,155	-0,138428966	Yes(HK)
08-06-09	GC meeting	99,565	99,585	0,0248	97,96	97,98	0,02	0,0191392	
09-03-09	GC meeting	99,55	99,605	0,061111111	98,35	98,31	-0,04	-0,047977778	
10-08-09	GC meeting	99,57	99,55	-0,026956522	98,175	98,18	0,005	0,014283478	Yes (CN)
11-05-09	GC meeting	99,545	99,565	0,024	98,015	98,03	0,015	0,014296	

Dates of announcements - ECB	Events	Last price of 30 day Eonia futures on date T	Last price of 30 day Eonia futures on date T-1	Target Surprise - ECB	Last price of 1 year Euribor on date T	Last price of 1 year Euribor on date T-1	Variation on day T - ECB	Path Surprise - ECB	Holiday/Weekend (Before-On-After)
12-03-09	GC meeting and phasing out of 6m LTROs, indexation of 1Y LTROs	99,58	99,565	-0,016607143	98,225	98,305	0,08	0,087255	
01-14-10	GC meeting	99,59	99,59	0	98,205	98,18	-0,025	-0,021	
02-04-10	GC meeting	99,625	99,655	0,035	98,325	98,255	-0,07	-0,07286	
03-04-10	GC meeting and phasing out of 3m LTROs, indexation of 6m LTROs	99,655	99,62	-0,040185185	98,61	98,635	0,025	0,036876296	
04-08-10	GC meeting	99,62	99,625	0,006818182	98,555	98,505	-0,05	-0,047336364	
05-06-10	GC meeting	99,58	99,645	0,0806	98,95	98,9	-0,05	-0,0617976	
05-09-10	* GC meeting and Securities Market Programme (SMP)	NA	NA	NA	NA	NA	NA	NA	Yes (CN & HK)
06-10-10	GC meeting	99,6	99,6	0	98,95	98,98	0,03	0,034	
07-08-10	GC meeting	99,48	99,505	0,033695652	98,635	98,67	0,035	0,032395652	
07-28-10	Collateral rules tightened, revised haircuts	99,48	99,475	-0,005	98,62	98,585	-0,035	-0,03002	
08-05-10	GC meeting	99,505	99,51	0,005961538	98,73	98,745	0,015	0,017831538	
09-02-10	GC meeting	99,55	99,555	0,005357143	98,91	98,935	0,025	0,02795	
10-07-10	GC meeting	99,285	99,32	0,045208333	98,68	98,705	0,025	0,020139167	Yes (CN)
11-04-10	GC meeting	99,245	99,25	0,005769231	98,515	98,485	-0,03	-0,027130769	
12-02-10	GC meeting	99,34	99,345	0,005344828	98,555	98,565	0,01	0,012952414	
01-13-11	GC meeting	99,455	99,465	0,017222222	98,215	98,33	0,115	0,115624444	
02-03-11	GC meeting	99,22	99,2	-0,0224	97,965	97,855	-0,11	-0,1016096	Yes (CN & HK)
03-03-11	GC meeting and FRFA extended to July 2011	99,235	99,27	0,03875	97,625	97,86	0,235	0,231405	
04-07-11	GC meeting	99,055	99,105	0,065217391	97,435	97,41	-0,025	-0,033782609	
05-05-11	GC meeting	98,87	98,855	-0,017884615	97,615	97,445	-0,17	-0,162494615	
06-09-11	GC meeting	98,91	98,885	-0,035714286	97,93	97,86	-0,07	-0,059	
07-07-11	GC meeting	98,785	98,845	0,0775	97,855	97,885	0,03	0,01881	
08-04-11	GC meeting and SMP covers Spain and Italy	98,915	98,84	-0,086111111	98,625	98,41	-0,215	-0,194122222	
08-07-11	* SMP on Italy and Spain acknowledged by ECB	NA	NA	NA	NA	NA	NA	NA	Yes (CN & HK)
09-08-11	GC meeting	99,1	99,16	0,081818182	98,97	98,915	-0,055	-0,067036364	
10-06-11	GC meeting and launch of CBPP2	99,01	99,095	0,1054	98,745	98,89	0,145	0,1283416	Yes (CN & HK)
11-03-11	GC meeting	99,26	99,165	-0,105555556	98,96	98,92	-0,04	-0,015311111	
12-01-11	VLTRO - Draghi's speech at European parliament	99,415	99,4	-0,0155	98,975	98,96	-0,015	-0,007962	
12-08-11	GC meeting and two 3-year LTROs, reserve ration to 1%	99,35	99,385	0,047173913	99,025	98,975	-0,05	-0,055246087	
12-21-11	Results of first 3-year LTRO	99,345	99,34	-0,0155	99	99,025	0,025	0,032038	
01-12-12	GC meeting	99,62	99,615	-0,008157895	99,17	99,135	-0,035	-0,029401053	
02-09-12	GC meeting and approved criteria of EC for credit claims for 7 NCBS	99,63	99,635	0,00725	99,185	99,2	0,015	0,017579	
03-08-12	GC meeting	99,65	99,65	0	99,285	99,305	0,02	0,024	
04-04-12	GC meeting	99,64	99,64	0	99,18	99,155	-0,025	-0,021	Yes (CN & HK)
05-03-12	GC meeting	99,665	99,66	-0,00535714	99,395	99,405	0,01	0,015085	
06-06-12	GC meeting	99,67	99,685	0,01875	99,415	99,465	0,05	0,050325	
07-05-12	GC meeting, deposit facility rate at 0	99,82	99,745	-0,089423077	99,55	99,495	-0,055	-0,033473077	
07-26-12	"Whatever it takes" London speech of Draghi	99,89	99,885	-0,005	99,59	99,595	0,005	0,00998	
08-02-12	GC meeting and OMT	99,88	99,905	0,026724138	99,68	99,655	-0,025	-0,026237931	
09-06-12	GC meeting and OMT details	99,895	99,9	0,00625	99,72	99,755	0,035	0,037775	
10-04-12	GC meeting	99,905	99,91	0,005740741	99,685	99,7	0,015	0,017874815	Yes (CN)
11-08-12	GC meeting	99,915	99,915	0	99,765	99,76	-0,005	-0,001	
12-06-12	GC meeting	99,925	99,925	0	99,85	99,785	-0,065	-0,061	
01-10-13	GC meeting	99,925	99,93	0,007380952	99,65	99,72	0,07	0,072553333	
02-07-13	GC meeting	99,92	99,915	-0,006666667	99,5	99,45	-0,05	-0,044693333	
03-07-13	GC meeting	99,93	99,93	0	99,655	99,695	0,04	0,044	
03-22-13	Collateral rule changes for some uncovered gov-guaranteed bank bonds	99,81	99,93	0,413333333	99,645	99,645	0	-0,077013333	Yes (CN & HK)
04-04-13	GC meeting	99,92	99,92	0	99,695	99,655	-0,04	-0,036	Yes (CN & HK)
05-02-13	GC meeting and FRFA extended to July 2014	99,92	99,925	0,005344828	99,785	99,745	-0,04	-0,037047586	Yes (CN & HK)
06-06-13	GC meeting	99,915	99,92	0,00625	99,58	99,65	0,07	0,072775	
07-04-13	GC meeting	99,91	99,905	-0,005740741	99,54	99,465	-0,075	-0,069874815	
08-01-13	GC meeting	99,9	99,9	0	99,515	99,52	0,005	0,009	
09-05-13	GC meeting	99,91	99,91	0	99,4	99,455	0,055	0,059	
10-02-13	GC meeting	99,915	99,905	-0,010689655	99,51	99,5	-0,01	-0,003904828	Yes (CN & HK)
11-07-13	GC meeting and 3-month LTROs decision	99,905	99,905	0	99,66	99,59	-0,07	-0,066	

Dates of announcements - ECB	Events	Last price of 30 day Eonia futures on date T	Last price of 30 day Eonia futures on date T-1	Target Surprise - ECB	Last price of 1 year Euribor on date T	Last price of 1 year Euribor on date T-1	Variation on day T - ECB	Path Surprise - ECB	Holiday/Weekend (Before-On-After)
12-05-13	GC meeting	99,85	99,855	0,005961538	99,65	99,675	0,025	0,027831538	
01-09-14	GC meeting	99,85	99,855	0,007045455	99,575	99,555	-0,02	-0,017380909	
02-06-14	GC meeting	99,82	99,835	0,019090909	99,675	99,71	0,035	0,035258182	Yes (CN)
03-06-14	GC meeting	99,82	99,855	0,0434	99,66	99,7	0,04	0,0354936	
03-25-14	QE announcement Draghi	99,82	99,805	-0,015	99,67	99,645	-0,025	-0,01806	
04-03-14	GC meeting	99,785	99,81	0,027777778	99,64	99,615	-0,025	-0,026444444	
04-24-14	QE announcement Draghi	99,785	99,795	0,01	99,655	99,665	0,01	0,01204	
05-08-14	GC meeting	99,775	99,805	0,040434783	99,73	99,68	-0,05	-0,053925217	
06-05-14	GC meeting and announcement of TLTROs	99,89	99,855	-0,042	99,805	99,815	0,01	0,022232	
07-03-14	GC meeting and details of TLTROs	99,96	99,955	-0,005535714	99,81	99,8	-0,01	-0,004915	
08-07-14	GC meeting	99,95	99,945	-0,006458333	99,81	99,805	-0,005	0,000265833	
08-22-14	APP - Draghi's speech at Jackson Hole	99,97	99,965	-0,017222222	99,835	99,835	0	0,007375556	Yes (CN & HK)
09-04-14	GC meeting and announcement of CBPP3 & ABSPP	100,065	99,97	-0,109615385	99,925	99,87	-0,055	-0,029515385	
10-02-14	GC meeting and details of ABSPP & CBPP3	100,04	100,04	0	99,91	99,92	0,01	0,014	Yes (CN & HK)
11-06-14	GC meeting	100	100	0	99,905	99,9	-0,005	-0,001	
11-21-14	APP - Draghi's speech at the Frankfurt European Banking Congress	100,005	100,005	0	99,91	99,9	-0,01	-0,006	Yes (CN & HK)
12-04-14	GC meeting and introduction of the QE-PSPP	100,005	100,01	0,005740741	99,9	99,915	0,015	0,017874815	
01-22-15	GC meeting and announcement of PSPP	100,02	100,025	0,017222222	99,985	99,965	-0,02	-0,019375556	
03-05-15	GC meeting	100,02	100,02	0	99,99	99,99	0	0,004	
03-09-15	Start of the PSPP purchases	100,025	100,025	0	99,995	99,985	-0,01	-0,006	Yes (CN & HK)
04-15-15 *	GC meeting	NA	NA	NA	100,02	100,025	0,005	NA	
06-03-15	GC meeting	100,05	100,05	0	99,96	99,965	0,005	0,009	
07-16-15	GC meeting	100,06	100,06	0	99,975	99,98	0,005	0,009	
09-03-15	GC meeting and Draghi speech about the possibility of extension concerning QE program	100,06	100,06	0	100,02	100,005	-0,015	-0,011	Yes (CN & HK)
10-22-15	GC meeting	100,07	100,07	0	100,12	100,06	-0,06	-0,056	Yes(HK)
12-03-15	GC meeting and new period of PSPP	100,07	100,07	0	100,125	100,285	0,16	0,164	
01-21-16	GC meeting and decisions of extension of asset purchases	100,115	100,115	0	100,28	100,245	-0,035	-0,031	
03-10-16	GC meeting and expansion of CSPP and APP, also announcement of 4-year TLTRO II	100,12	100,12	0	100,265	100,34	0,075	0,079	
04-21-16	GC meeting and extension of asset purchases	100,165	100,17	0,016666667	100,285	100,3	0,015	0,015733333	
06-02-16	GC meeting	100,17	100,17	0	100,295	100,3	0,005	0,009	
07-21-16	GC meeting	100,16	100,16	0	100,37	100,37	0	0,004	
09-08-16	GC meeting	100,165	100,17	0,006818182	100,365	100,385	0,02	0,022663636	
10-20-16	GC meeting	100,175	100,175	0	100,32	100,32	0	0,004	Yes(HK)
12-08-16	GC meeting	100,175	100,175	0	100,265	100,25	-0,015	-0,011	
01-19-17	GC meeting	100,17	100,175	0,012916667	100,25	100,26	0,01	0,011468333	
03-09-17 *	GC meeting	NA	NA	NA	100,175	100,19	0,015	NA	
04-27-17	GC meeting	100,175	100,175	0	100,21	100,185	-0,025	-0,021	

* means no data available about the daily price

Appendix III: Computations of factors related to FOMC announcements in the Mainland China.

Dates of announcements - FOMC	Events	Return on day T - CSI (log)	Variation on day T - FOMC	Target Surprise - FOMC	Path Surprise FOMC	One day before the announcements - FOMC	Return on day T-1 - CSI (log)	Variation on day T-1 - FOMC
06-30-05	FOMC meeting	-0.009594856	0.03	0	0.002	06-29-05	-0.009875697	0.015
08-09-05	FOMC meeting	0.003287473	0	0	-0.028	08-08-05	0.002811008	0.01
09-20-05	FOMC meeting	-0.007978378	0.095	0.015	0.065835	09-19-05	-0.004142888	-0.04
11-01-05	FOMC meeting	0.004755304	0.005	0	0.042	10-31-05	-0.001693332	0
12-13-05	FOMC meeting	0.004398264	0.0025	0	-0.028	12-12-05	0.000283402	0.0025
03-28-06	FOMC meeting	0.003812157	0.065	0.005	0.099945	03-27-06	0.002172827	0.005
05-10-06	FOMC meeting	-0.003752124	0.005	-0.007380952	0.030033571	05-09-06	0.004940668	0
06-29-06	FOMC meeting	-0.000361253	-0.065	-0.015	-0.076835	06-28-06	0.010153946	-0.01
08-08-06	FOMC meeting	-0.000378147	-0.035	-0.040434783	-0.016381304	08-07-06	0.009922693	0.015
09-20-06	FOMC meeting	0.002798131	0	0	0.002	09-19-06	5.35631E-05	-0.03
10-25-06	FOMC meeting	0.002776698	-0.015	0	-0.043	10-24-06	0.002036932	0.005
12-12-06	FOMC meeting	0.000257688	-0.0025	0	-0.058	12-11-06	0.00311152	0
01-31-07	FOMC meeting	0.001787873	0	0	-0.043	01-30-07	-0.029311778	0
03-21-07	FOMC meeting	0.001399005	-0.045	0	-0.108	03-20-07	0.004820184	0
05-09-07	FOMC meeting	0.002717204	0.005	0	0.072	05-08-07	0.001793075	0.005
06-28-07	FOMC meeting	-0.010761911	0.015	0	0.092	06-27-07	-0.020012206	-0.005
08-07-07	FOMC meeting	-0.005221229	0.065	0.025833333	0.0113825	08-06-07	0.001894983	0.01
09-18-07	FOMC meeting	-0.004589265	-0.195	-0.15	-0.06135	09-17-07	-0.001746558	0.02
10-31-07	FOMC meeting	-0.006407379	0.05	-0.02	0.15522	10-30-07	0.007117678	0.015
12-11-07	FOMC meeting	-0.005322596	0.11	0.00775	-0.17118525	12-10-07	0.000544477	-0.0175
01-22-08	FOMC meeting	0.019755386	-0.455	-0.740555556	0.076368333	01-21-08	-0.034399693	-0.06
01-30-08	FOMC meeting	-0.008401262	-0.075	-0.095	0.071045	01-29-08	-0.00471585	0.025
03-11-08	FOMC meeting	-0.013056374	0.275	0.1395	0.1246655	03-10-08	0.000938802	-0.015
03-18-08	FOMC meeting	0.014178463	0.225	0.166923077	0.133394615	03-17-08	-0.022630014	-0.15
06-25-08	FOMC meeting	0.001659684	-0.05	-0.01	-0.05889	06-24-08	0.017551841	-0.05
08-05-08	FOMC meeting	0.002979758	-0.015	-0.005961538	-0.005549808	08-04-08	-0.011114462	0.01
10-08-08	Unscheduled FOMC meeting	-0.005961918	0.125	-0.141521739	0.165165435	10-07-08	-0.016755556	-0.025
10-29-08	FOMC meeting	0.010208567	-0.08	-0.06	-0.08834	10-28-08	-0.012291053	-0.12
11-25-08	Announcement concerning results of auction of \$150 billion in 13-day credit and Starts of QE1	0.002172788	-0.0375	-0.05	-0.25745	11-24-08	-0.000792437	0.065
12-16-08	FOMC meeting	0.001515082	-0.315	-0.118833333	-0.2241595	12-15-08	0.004249456	-0.015
03-18-09	FOMC meeting	0.009194266	-0.195	-0.005961538	-0.310549808	03-17-09	0.001912558	-0.025
04-29-09	FOMC meeting	0.002917292	-0.045	-0.005	-0.000945	04-28-09	0.01472228	0.015
06-24-09	FOMC meeting	-0.000391228	-0.005	0	0.047	06-23-09	0.005157317	-0.02
08-12-09	FOMC meeting	0.005515271	-0.015	-0.008157895	-0.109647105	08-11-09	-0.019861477	-0.015
09-23-09	FOMC meeting and extension of asset purchase program	0.00295047	-0.045	-0.005	-0.080945	09-22-09	-0.009955868	-0.02
11-04-09	FOMC meeting	0.001309499	-0.015	0	-0.023	11-03-09	0.002327398	0
12-16-09	FOMC meeting	-0.009939861	-0.02	-0.010333333	-0.038753	12-15-09	-0.002750194	0.015
01-27-10	FOMC meeting	0.001084865	0	0	0.082	01-26-10	-0.005964305	0
03-16-10	FOMC meeting and end of QE1	0.009379622	-0.02	0	-0.063	03-15-10	0.002827244	0
04-28-10	FOMC meeting	-0.005260341	-0.005	0	0.027	04-27-10	-0.001548014	0.055
06-23-10	FOMC meeting	-0.000157467	0.03	0	-0.003	06-22-10	-0.003952561	0.02
08-10-10	FOMC meeting and announcements related to MBSs	0.002685476	-0.025	0	-0.033	08-09-10	-0.012929622	-0.005
11-03-10	FOMC meeting and QE2 starts	0.007572359	-0.005	0.002777778	-0.019141667	11-02-10	-0.005399515	-0.005
12-14-10	FOMC meeting	-0.002909475	0	0	0.062	12-13-10	0.001118567	-0.02
01-26-11	FOMC meeting	0.006948976	0	0	0.027	01-25-11	0.005839534	0
03-15-11	FOMC meeting	0.005955677	0.01	0	0.022	03-14-11	-0.00791934	0
04-27-11	FOMC meeting and announcement for the maintain of existing policy	-0.006505732	0	0	0.022	04-26-11	-0.002894201	0
06-22-11	FOMC meeting	0.007262829	-0.005	-0.009375	-0.004146875	06-21-11	-7.31582E-05	-0.025
08-09-11	FOMC meeting	0.004005946	-0.025	0	-0.118	08-08-11	0.000666343	0.06
09-21-11	FOMC meeting and Maturity Extension Programme	-0.013582211	0.035	0.008333333	0.048575	09-20-11	0.012911645	-0.02
11-02-11	FOMC meeting	0.000302369	0.005	0	-0.008	11-01-11	0.007162933	0.01
12-13-11	FOMC meeting	-0.004406594	0.005	-0.004305556	0.028769583	12-12-11	-0.009885381	0
03-13-12	FOMC meeting	-0.012482087	0.005	0.004305556	0.040230417	03-12-12	0.004341784	0.0025
04-25-12	FOMC meeting	0.000908656	-0.01	0.005	-0.020055	04-24-12	0.003507014	-0.005
06-20-12	FOMC meeting and Maturity Extension Programme	-0.006931984	-0.01	0	0.002	06-19-12	-0.001021324	-0.01
08-01-12	FOMC meeting	-0.004398936	0	0.005166667	0.0148765	07-31-12	0.004763654	0.005
09-13-12	FOMC meeting and QE3 starts	0.003215338	-0.0025	0.008823529	-0.021626471	09-12-12	-0.004064138	0
10-24-12	FOMC meeting	-0.003123823	0	0	-0.008	10-23-12	-0.000808452	0.005
12-12-12	FOMC meeting	-0.004839442	0	0	0.007	12-11-12	0.001778911	0
01-30-13	FOMC meeting	-0.000295692	-0.01	0	-0.008	01-29-13	0.002078952	0
03-20-13	FOMC meeting and Bernanke warns of "premature tightening" in monetary policy	0.000801239	0	0	-0.008	03-19-13	0.014390212	0.035
05-22-13	Economic outlook before the Joint Economic Committee, US Congress and Bernanke warns of "premature tightening" in monetary policy	-0.005875434	-0.0025	0	0.012	05-21-13	0.000527838	0
06-19-13	FOMC meeting and Bernanke warns of "premature tightening" in monetary policy	-0.014585671	0.005	0.013636364	0.041395455	06-18-13	-0.003242236	0

Dates of announcements - FOMC	Events	Return on day T - CSI (log)	Variation on day T - FOMC	Target Surprise - FOMC	Path Surprise FOMC	One day before the announcements - FOMC	Return on day T-1 - CSI (log)	Variation on day T-1 - FOMC
07-31-13	FOMC meeting	0,010243389	-0,005	0	0,007	07-30-13	0,000719462	0
10-16-13	Unscheduled FOMC meeting	-0,001444446	-0,015	-0,0155	0,0033705	10-15-13	-0,008199524	-0,01
10-30-13	FOMC meeting	-0,006131395	0	0	0,007	10-29-13	0,006437045	0
12-18-13	FOMC meeting	-0,004597065	0	0,005961538	-0,000450192	12-17-13	0,000156632	-0,01
01-29-14	FOMC meeting	-0,004966243	0	0	-0,013	01-28-14	0,001546715	0
03-04-14	Unscheduled FOMC meeting	-0,004053078	0	0	0,022	03-03-14	-0,001211162	0,0004
03-19-14	FOMC meeting	-0,006997843	0	0	0,047	03-18-14	-0,003520058	0
06-18-14	FOMC meeting	-0,00675289	0	0	0,007	06-17-14	-0,001891681	0
07-15-14	Semiannual Monetary Policy Report to the Congress	-0,000821451	0	0	0,047	07-14-14	0,000643438	-0,005
07-30-14	FOMC meeting	0,005249976	0,005	0	0,042	07-29-14	-0,001747118	0
09-17-14	FOMC meeting	0,001323654	0	0	0,027	09-16-14	0,002279328	0
10-29-14	FOMC meeting	0,003098138	0	0,005	0,089945	10-28-14	0,006196882	0
12-17-14	FOMC meeting	-0,001899972	0	0,011071429	0,032449643	12-16-14	0,007455659	0
01-28-15	FOMC meeting	-0,005394724	0	0	-0,038	01-27-15	-0,006068998	0
03-18-15	FOMC meeting	-0,000713108	-0,04	-0,005961538	-0,125549808	03-17-15	0,01015986	0
04-29-15	FOMC meeting	-0,002228882	0	0	0,012	04-28-15	0,002963706	0
06-17-15	FOMC meeting	-0,017968884	-0,03	0	-0,033	06-16-15	0,006300235	-0,01
07-15-15	Semiannual Monetary Policy Report to the Congress	0,003337337	0,005	0	-0,023	07-14-15	-0,015633023	-0,015
07-29-15	FOMC meeting	-0,012893328	0	0	0,022	07-28-15	0,013385336	0,005
09-17-15	FOMC meeting	0,001910337	-0,07	-0,057692308	-0,079288462	09-16-15	-0,009586878	0,01
10-28-15	FOMC meeting	0,001032478	0,035	0	0,102	10-27-15	-0,008293447	-0,01
12-16-15	FOMC meeting	0,008223519	0,015	0,020666667	0,038506	12-15-15	-0,001053395	0
01-27-16	FOMC meeting	-0,011502049	-0,01	0	0,012	01-26-16	-0,001503165	-0,005
03-16-16	FOMC meeting	0,004776132	-0,075	-0,010333333	-0,093753	03-15-16	0,002148648	0,01
04-27-16	FOMC meeting	-0,000733149	-0,015	-0,005	-0,015945	04-26-16	-0,001812449	-0,005
06-15-16	FOMC meeting	-0,00303467	-0,025	0	-0,033	06-14-16	0,005665508	0,015
06-21-16	Semiannual Monetary Policy Report to the Congress	0,003847256	0	0	0,022	06-20-16	-0,000886887	0,03
07-27-16	FOMC meeting	0,000391172	-0,01	-0,005	-0,020945	07-26-16	-0,006874868	0
09-21-16	FOMC meeting	0,003242442	-0,005	-0,041666667	0,039125	09-20-16	0,001230184	0,015
11-02-16	FOMC meeting	0,004114477	-0,005	-0,005357143	-0,005798214	11-01-16	-0,003335552	-0,01
12-14-16	FOMC meeting	-0,00497939	0,005	0	0,122	12-13-16	-0,003340453	0,005
03-15-17	FOMC meeting	0,0022349	-0,025	0,00484375	-0,064990781	03-14-17	0,000872313	-0,005
05-03-17	FOMC meeting	-0,001113524	0,01	0	0,027	05-02-17	-0,001708046	-0,01

Appendix IV: Computations of factors related to ECB announcements in the Mainland China.

Dates of announcements - ECB	Events	Return on day T - CSI (log)	Variation on day T - ECB	Target Surprise - ECB	Path Surprise ECB	One day before the announcements - ECB	Return on day T-1 - CSI (log)	Variation on day T-1 - ECB
07-07-05	GC meeting	-0,007906763	-0,02	0,006458333	-0,067265833	07-06-05	0,001117081	0,01
08-04-05	GC meeting	0,009337471	0,005	0	0,019	08-03-05	-0,006928502	0
09-01-05	GC meeting	0,001519228	-0,005	0,005172414	-0,092013793	08-31-05	0,007719015	0
11-03-05	GC meeting	0,001873008	-0,01	-0,022222222	0,013355556	11-02-05	-0,00390533	0,015
12-01-05	GC meeting	-0,001559765	-0,035	0,010333333	-0,068025333	11-30-05	-0,000377885	0,005
01-12-06	GC meeting	-0,002173103	-0,02	-0,024473684	-0,041203158	01-11-06	0,004544468	0,02
03-02-06	GC meeting	0,001256738	0	0,010689655	0,056904828	03-01-06	-0,007441239	0,005
04-06-06	GC meeting	-3,54303E-05	-0,11	0	-0,016	04-05-06	0,001289159	-0,005
06-08-06	GC meeting	-0,010538934	-0,06	0,020454545	-0,090009091	06-07-06	0,001887376	-0,005
07-06-06	GC meeting	-0,002532909	0,01	-0,0186	0,0276456	07-05-06	0,007930212	0,02
08-03-06	GC meeting	-0,010308207	0,015	0,016607143	0,070745	08-02-06	-0,001142508	0
08-31-06	GC meeting	-0,006657037	0	-0,055	-0,01022	08-30-06	0,001332382	0
11-02-06	GC meeting	0,00252563	0,005	0,021428571	0,0348	11-01-06	7,92548E-05	-0,005
12-07-06	GC meeting	-0,015974837	0,01	0,064583333	0,051341667	12-06-06	-0,000903986	-0,005
01-11-07	GC meeting	-0,011412596	-0,02	0,02325	-0,030557	01-10-07	-0,004711129	0,005
02-08-07	GC meeting	-0,002411825	0,01	-0,042	0,047232	02-07-07	0,00741529	0,005
03-08-07	GC meeting	-0,002692475	0	0,242608696	-0,018551304	03-07-07	0,006358359	0,005
04-12-07	GC meeting	-0,000986898	0	0	0,034	04-11-07	0,007602361	0,01
05-10-07	GC meeting	-0,002561175	0,005	0,007380952	0,002553333	05-09-07	0,002717204	0
06-06-07	GC meeting	0,014484251	-0,01	-0,00625	-0,064775	06-05-07	0,005101922	0,005
07-05-07	GC meeting	0,020717603	0,01	-0,041730769	0,052179231	07-04-07	-0,024598036	0,01
08-02-07	GC meeting	0,015594719	0,025	0	0,034	08-01-07	0,014504257	-0,01
08-09-07	Special fine tuning operations	-0,004625404	-0,025	-0,169090909	-0,042858182	08-08-07	0,010042385	0,015
08-22-07	Supplementary LTRO (announcement)	0,007182404	0,085	-0,103333333	0,144253333	08-21-07	0,006843559	0,015
08-23-07	Supplementary LTRO (allotment)	0,006850021	0,07	0,096875	-0,0099875	08-22-07	0,007182404	0,085
09-06-07	GC meeting	-0,009512258	-0,025	-0,00625	-0,024775	09-05-07	0,003932956	-0,02
11-08-07	GC meeting	-0,004555463	-0,04	0,013636364	-0,058672727	11-07-07	-0,021374115	-0,015
12-06-07	GC meeting	0,006097845	0,05	0,0062	0,0277848	12-05-07	0,000446663	-0,015
01-10-08	GC meeting	0,00206238	0,02	0,007380952	-0,012446667	01-09-08	0,004493866	-0,005
03-06-08	GC meeting	-0,005911564	0,035	0,031	0,042924	03-05-08	0,005251466	0,025
04-10-08	GC meeting	0,003342582	0,01	-0,03	-0,03512	04-09-08	0,007771335	0,04
05-08-08	GC meeting	-0,005133264	-0,01	0,020217391	-0,089962609	05-07-08	0,01163068	0,01
06-05-08	GC meeting	-0,002808617	0,155	-0,012	0,306352	06-04-08	-0,004279574	0
07-03-08	GC meeting	-0,002961365	-0,06	0,022142857	-0,20034	07-02-08	0,009705637	0,02
08-07-08	GC meeting	-0,021094642	-0,03	-0,019375	-0,1522025	08-06-08	-0,000199506	-0,005
09-04-08	GC meeting	-0,013265161	-0,005	0,046153846	-0,065046154	09-03-08	0,001002417	0
10-08-08	Unscheduled GC meeting	-0,005961918	-0,025	-0,181956522	-0,090336522	10-07-08	-0,016755556	-0,06
10-15-08	FX swap arrangements	-0,021737515	0,135	-0,019375	-0,0072025	10-14-08	-0,004572062	0,045
11-06-08	GC meeting	0,007321921	-0,06	-0,09375	-0,022625	11-05-08	-0,010825427	-0,01
12-04-08	GC meeting	0,006575224	0,055	-0,045925926	0,183001481	12-03-08	0,006678529	-0,045
01-15-09	GC meeting	0,007781022	0,06	-0,155	0,11938	01-14-09	-8,21915E-05	0,04
02-05-09	GC meeting	0,017085987	-0,06	-0,054782609	-0,035262609	02-04-09	-0,003106298	-0,045
03-05-09	GC meeting	-0,003469456	0,04	0,005961538	-0,027168462	03-04-09	0,003741143	-0,015
04-02-09	GC meeting	-0,000995682	0,115	0,069642857	0,21035	04-01-09	0,00477637	-0,03
05-07-09	GC meeting and 1-year LTRO, CBPP	0,003461055	-0,05	0,058125	-0,0173925	05-06-09	0,000329721	-0,025
06-04-09	GC meeting and the announcement of CBPP details	-0,002128342	0,065	0,011538462	0,156738462	06-03-09	0,002116522	0,015
07-02-09	GC meeting	0,005884864	-0,06	-0,064137931	-0,138428966	07-01-09	0,00592278	-0,01
08-06-09	GC meeting	-0,013000546	-0,01	0,0248	0,0191392	08-05-09	-0,009129597	0,02
09-03-09	GC meeting	0,003568418	-0,02	0,061111111	-0,047977778	09-02-09	0,023541261	0,01
11-05-09	GC meeting	0,002337967	-0,02	0,024	0,014296	11-04-09	0,001309499	0,01
12-03-09	GC meeting and phasing out of 6m LTROs, indexation of 1Y LTROs	0,00631669	-0,015	-0,016607143	0,087255	12-02-09	-0,000779387	-0,005
01-14-10	GC meeting	0,001710494	-0,015	0	-0,021	01-13-10	0,006039713	0
02-04-10	GC meeting	-0,008957625	-0,01	0,035	-0,07286	02-03-10	-0,001605328	0
03-04-10	GC meeting and phasing out of 3m LTROs, indexation of 6m LTROs	0,001226103	-0,01	-0,040185185	0,036876296	03-03-10	-0,011146733	0,005
04-08-10	GC meeting	0,004188067	-0,005	0,006818182	-0,047336364	04-07-10	-0,005186811	-0,005
05-06-10	GC meeting	-0,00910032	0,055	0,0806	-0,0617976	05-05-10	-0,020430045	-0,025
06-10-10	GC meeting	0,001395384	0	0	0,034	06-09-10	-0,005041567	0
07-08-10	GC meeting	0,011837977	0,035	0,033695652	0,032395652	07-07-10	-0,000768126	0,01
07-28-10	Collateral rules tightened, revised haircuts	0,002157219	-0,01	-0,005	-0,03002	07-27-10	0,010436879	0

Dates of announcements - ECB	Events	Return on day T - CSI (log)	Variation on day T - ECB	Target Surprise - ECB	Path Surprise ECB	One day before the announcements - ECB	Return on day T-1 - CSI (log)	Variation on day T-1 - ECB
08-05-10	GC meeting	0,007076105	0,015	0,005961538	0,017831538	08-04-10	-0,003882489	0,005
09-02-10	GC meeting	-0,000175454	-0,005	0,005357143	0,02795	09-01-10	0,005588259	-0,005
11-04-10	GC meeting	0,004999717	0	0,005769231	-0,027130769	11-03-10	0,007572359	-0,01
12-02-10	GC meeting	0,000426506	-0,005	0,005344828	0,012952414	12-01-10	0,002628799	-0,01
01-13-11	GC meeting	-0,006886828	0,05	0,017222222	0,115624444	01-12-11	-0,000146525	0,005
03-03-11	GC meeting and FRFA extended to July 2011	0,006548934	0,09	0,03875	0,231405	03-02-11	-0,002899329	-0,005
04-07-11	GC meeting	0,003764293	0,025	0,065217391	-0,033782609	04-06-11	0,001747524	0,005
05-05-11	GC meeting	-0,000656219	-0,09	-0,017884615	-0,162494615	05-04-11	-0,000404082	0,025
06-09-11	GC meeting	0,001474621	-0,005	-0,035714286	-0,059	06-08-11	-0,008271499	0,005
07-07-11	GC meeting	0,001048876	0	0,0775	0,01881	07-06-11	-0,001681172	0
08-04-11	GC meeting and SMP covers Spain and Italy	-0,009325739	-0,095	-0,086111111	-0,194122222	08-03-11	0,000798813	-0,01
09-08-11	GC meeting	-0,000791749	0,03	0,081818182	-0,067036364	09-07-11	-0,003606065	0,035
11-03-11	GC meeting	0,00306717	-0,085	-0,105555556	-0,015311111	11-02-11	0,000302369	-0,015
12-01-11	VLTRO - Draghi's speech at European parliament	-0,00444358	-0,015	-0,0155	-0,007962	11-30-11	0,01056454	-0,095
12-08-11	GC meeting and two 3-year LTROs, reserve ration to 1%	-0,003720726	0,105	0,047173913	-0,055246087	12-07-11	-0,000555198	-0,025
12-21-11	Results of first 3-year LTRO	0,000411984	0,035	-0,0155	0,032038	12-20-11	-0,006991325	-0,02
01-12-12	GC meeting	-0,007354195	-0,025	-0,008157895	-0,029401053	01-11-12	-6,95466E-05	-0,02
02-09-12	GC meeting and approved criteria of EC for credit claims for 7 NCBs	0,000753154	0,005	0,00725	0,017579	02-08-12	0,000170026	0,005
03-08-12	GC meeting	0,004672319	0,005	0	0,024	03-07-12	0,005436638	0,01
05-03-12	GC meeting	0,003912966	0,015	-0,005535714	0,015085	05-02-12	0,00129763	-0,01
06-06-12	GC meeting	-0,002592363	0,025	0,01875	0,050325	06-05-12	-0,00024447	0,005
07-05-12	GC meeting, deposit facility rate at 0	0,007483226	-0,045	-0,089423077	-0,033473077	07-04-12	-0,006130433	0
07-26-12	"Whatever it takes" London speech of Draghi	0,000299603	0	-0,005	0,00998	07-25-12	-0,002322974	-0,005
08-02-12	GC meeting and OMT	0,003493923	0,015	0,026724138	-0,026237931	08-01-12	-0,004398936	0,01
09-06-12	GC meeting and OMT details	0,019033476	0,01	0,00625	0,037775	09-05-12	0,003527304	0
11-08-12	GC meeting	-0,0008693	0	0	-0,001	11-07-12	-0,00806545	-0,01
12-06-12	GC meeting	0,00842392	0	0	-0,061	12-05-12	-0,000842702	0
01-10-13	GC meeting	-0,008201409	0,025	0,007380952	0,072553333	01-09-13	0,000762659	-0,005
02-07-13	GC meeting	0,001862297	-0,01	-0,006666667	-0,044693333	02-06-13	-0,002505804	-0,005
03-07-13	GC meeting	-0,002085717	0,025	0	0,044	03-06-13	-0,005063563	-0,01
06-06-13	GC meeting	-0,007570017	0,01	0,00625	0,072775	06-05-13	-0,005581983	0
07-04-13	GC meeting	0,000950819	-0,04	-0,005740741	-0,069874815	07-03-13	0,003562055	0,01
08-01-13	GC meeting	0,00036734	-0,005	0	0,009	07-31-13	0,010243389	0
09-05-13	GC meeting	0,002964605	0,005	0	0,059	09-04-13	-0,001658533	-0,005
11-07-13	GC meeting and 3-month LTROs decision	-0,006091527	-0,025	0	-0,066	11-06-13	-0,002409196	0
12-05-13	GC meeting	-0,002808521	0,015	0,005961538	0,027831538	12-04-13	-0,001219421	0
01-09-14	GC meeting	-0,003408003	-0,01	0,007045455	-0,017380909	01-08-14	-0,003831122	0,02
03-06-14	GC meeting	-0,001054232	0,03	0,0434	0,0354936	03-05-14	0,001932377	0,01
03-25-14	QE announcement Draghi	-0,000677603	-0,02	-0,015	-0,01806	03-24-14	-0,00042122	-0,015
04-03-14	GC meeting	0,004084943	0,015	0,027777778	-0,026444444	04-02-14	-0,003141991	-0,005
04-24-14	QE announcement Draghi	-0,004512088	0,005	0,01	0,01204	04-23-14	-0,000831918	0,01
05-08-14	GC meeting	-0,000323477	-0,02	0,040434783	-0,053925217	05-07-14	-0,000369974	0
06-05-14	GC meeting and announcement of TLTROs	-0,003218722	-0,02	-0,042	0,022232	06-04-14	0,004532918	-0,005
07-03-14	GC meeting and details of TLTROs	-0,00029691	-0,005	-0,005535714	-0,004915	07-02-14	0,001860526	0,01
08-07-14	GC meeting	0,000684268	-0,005	-0,006458333	0,000265833	08-06-14	-0,006621928	-0,005
09-04-14	GC meeting and announcement of CBPP3 & ABSPP	0,004104711	-0,04	-0,109615385	-0,029515385	09-03-14	0,003122224	-0,005
11-06-14	GC meeting	-0,000679856	0	0	-0,001	11-05-14	0,000454276	-0,005
12-04-14	GC meeting and introduction of the QE-PSPP	0,002864054	0,005	0,005740741	0,017874815	12-03-14	0,019572635	0
01-22-15	GC meeting and announcement of PSPP	0,000501249	0	0,017222222	-0,019375556	01-21-15	0,002284834	0,005
03-05-15	GC meeting	-0,002219154	-0,005	0	0,004	03-04-15	-0,004261919	0
06-03-15	GC meeting	0,003182454	-0,005	0	0,009	06-02-15	-0,001540719	0
07-16-15	GC meeting	0,01643178	-0,005	0	0,009	07-15-15	0,003337337	0,005
10-22-15	GC meeting	0,005717826	-0,035	0	-0,056	10-21-15	0,006365167	-0,005

Dates of announcements - ECB	Events	Return on day T - CSI (log)	Variation on day T - ECB	Target Surprise - ECB	Path Surprise ECB	One day before the announcements- ECB	Return on day T-1 -CSI (log)	Variation on day T-1 - ECB
12-03-15	GC meeting and new period of PSPP	-0,008386882	0,075	0	0,164	12-02-15	0,00317849	0,005
01-21-16	GC meeting and decisions of extension of asset purchases	0,004503669	-0,025	0	-0,031	01-20-16	-0,012919293	-0,02
03-10-16	GC meeting and expansion of CSPP and APP, also announcement of 4-year TLTRO II	0,000738774	0,015	0	0,079	03-09-16	-0,008387736	0,005
04-21-16	GC meeting and extension of asset purchases	0,001960515	0	0,016666667	0,015733333	04-20-16	-0,002798229	0,005
06-02-16	GC meeting	0,003037682	-0,005	0	0,009	06-01-16	0,000899111	0
07-21-16	GC meeting	-0,003668711	-0,005	0	0,004	07-20-16	0,001995443	0,005
09-08-16	GC meeting	-0,002807633	0,01	0,006818182	0,022663636	09-07-16	-0,000163826	-0,005
10-20-16	GC meeting	0,001194478	-0,005	0	0,004	10-19-16	0,000308955	-0,005
12-08-16	GC meeting	0,002938613	-0,005	0	-0,011	12-07-16	-0,000701535	0
01-19-17	GC meeting	0,003326659	-0,005	0,012916667	0,011468333	01-18-17	-0,001312915	0,005
04-27-17	GC meeting	-0,000879125	-0,005	0	-0,021	04-26-17	0,000194087	0

Appendix V: Computations of factors related to FOMC announcements in Hong Kong.

Dates of announcements - FOMC	Events	Return on day T HSI (log)	Variation on day T - FOMC	Target Surprise - FOMC	Path Surprise FOMC	One day before the announcements - FOMC	Return on day T-1 HSI (log)	Variation on day T-1 - FOMC
08-09-05	FOMC meeting	0,008532632	0	0	-0,028	08-08-05	-0,001759832	0,01
11-01-05	FOMC meeting	0,000750978	0,005	0	0,042	10-31-05	0,005575686	0
12-13-05	FOMC meeting	0,000976619	0,0025	0	-0,028	12-12-05	-0,001212606	0,0025
03-28-06	FOMC meeting	-0,003063824	0,065	0,005	0,099945	03-27-06	0,001116436	0,005
05-10-06	FOMC meeting	0,001527713	0,005	-0,007380952	0,030033571	05-09-06	-0,001355641	0
06-29-06	FOMC meeting	0,01087792	-0,065	-0,015	-0,076835	06-28-06	0,003367983	0,01
08-08-06	FOMC meeting	0,007535332	-0,035	-0,040434783	-0,016381304	08-07-06	0,00241788	0,015
09-20-06	FOMC meeting	0,002645609	0	0	0,002	09-19-06	0,004142688	-0,03
10-25-06	FOMC meeting	0,004657998	-0,015	0	-0,043	10-24-06	0,00010836	0,005
12-12-06	FOMC meeting	-0,004362678	-0,0025	0	-0,058	12-11-06	-0,000401557	0
01-31-07	FOMC meeting	0,006937018	0	0	-0,043	01-30-07	-0,007580643	0
03-21-07	FOMC meeting	0,003851297	-0,045	0	-0,108	03-20-07	0,003564127	0
05-09-07	FOMC meeting	-0,00205729	0,005	0	0,072	05-08-07	0,002893765	0,005
06-28-07	FOMC meeting	-0,0032885	0,015	0	0,092	06-27-07	0,004630392	-0,005
08-07-07	FOMC meeting	0,012287211	0,065	0,025833333	0,0113825	08-06-07	-0,000569356	0,01
09-18-07	FOMC meeting	0,016943548	-0,195	-0,15	-0,06135	09-17-07	-0,000397236	0,02
10-31-07	FOMC meeting	0,001939094	0,05	-0,02	0,15522	10-30-07	-0,003938757	0,015
12-11-07	FOMC meeting	-0,0106162	0,11	0,00775	-0,17118525	12-10-07	0,01092024	-0,0175
01-22-08	FOMC meeting	0,044228278	-0,455	-0,740555556	0,076368333	01-21-08	-0,039309385	-0,06
01-30-08	FOMC meeting	-0,003649762	-0,075	-0,095	0,071045	01-29-08	-0,011560796	0,025
03-11-08	FOMC meeting	0,007998044	0,075	0,1395	0,1246655	03-10-08	0,005517562	-0,015
03-18-08	FOMC meeting	0,009686679	0,225	0,166923077	0,133394615	03-17-08	0,006135762	-0,15
06-25-08	FOMC meeting	-0,003457551	-0,05	-0,01	-0,05889	06-24-08	0,003450782	-0,05
10-29-08	FOMC meeting	0,052367143	-0,08	-0,06	-0,08834	10-28-08	0,003631851	-0,12
11-25-08	Announcement concerning results of auction of \$150 billion in 13-day credit and Starts of QE1	0,016244887	-0,0375	-0,05	-0,25745	11-24-08	0,01442242	0,065
12-16-08	FOMC meeting	0,009379141	-0,315	-0,118833333	-0,2241595	12-15-08	0,002396478	-0,015
03-18-09	FOMC meeting	0,000455008	-0,195	-0,005961538	-0,310549808	03-17-09	0,007988691	-0,025
04-29-09	FOMC meeting	0,016076377	-0,045	-0,005	-0,000945	04-28-09	0,01182755	0,015
06-24-09	FOMC meeting	0,009195568	-0,005	0	0,047	06-23-09	0,008673302	-0,02
08-12-09	FOMC meeting	0,008961626	-0,015	-0,008157895	-0,109647105	08-11-09	-0,013371561	-0,015
09-23-09	FOMC meeting and extention of asset purchase program	-0,011096505	-0,045	-0,005	-0,080945	09-22-09	-0,002118883	-0,02
11-04-09	FOMC meeting	-0,002734943	-0,015	0	-0,023	11-03-09	0,007594879	0
12-16-09	FOMC meeting	-0,005340067	-0,02	-0,010333333	-0,038753	12-15-09	-0,004043982	0,015
01-27-10	FOMC meeting	0,006952828	0	0	0,082	01-26-10	-0,001650093	0
03-16-10	FOMC meeting and end of QE1	0,007405653	-0,02	0	-0,063	03-15-10	-0,00115882	0
04-28-10	FOMC meeting	-0,003548618	-0,005	0	0,027	04-27-10	-0,006428235	0,055
06-23-10	FOMC meeting	-0,002571309	0,03	0	-0,003	06-22-10	0,000782186	0,02
08-10-10	FOMC meeting and announcements related to MBSS	-0,003636596	-0,025	0	-0,033	08-09-10	-0,006583309	-0,005
09-21-10	FOMC meeting and announcement for the maintain of existing policy	0,000889682	-0,03	0	-0,068	09-20-10	0,000498679	-0,015
11-03-10	FOMC meeting and QE2 starts	0,00697594	-0,005	0,002777778	-0,019141667	11-02-10	0,008596963	-0,005
12-14-10	FOMC meeting	-0,00853221	0	0	0,062	12-13-10	0,002110311	-0,02
01-26-11	FOMC meeting	-0,00116036	0	0	0,027	01-25-11	0,000992188	0
03-15-11	FOMC meeting	0,000433154	0,01	0	0,022	03-14-11	-0,01260071	0
04-27-11	FOMC meeting and announcement of end of QE2 by June 2011	-0,001588096	0	0	0,022	04-26-11	-0,002076992	0
06-22-11	FOMC meeting	-0,002007835	-0,005	-0,009375	-0,004146875	06-21-11	0,000186394	-0,025
08-09-11	FOMC meeting	0,010059278	-0,025	0	-0,118	08-08-11	-0,025306459	0,06
09-21-11	FOMC meeting and Maturity Extension Programme	-0,021572968	0,035	0,008333333	0,048575	09-20-11	-0,004375926	-0,02
11-02-11	FOMC meeting	-0,010947246	0,005	0	-0,008	11-01-11	0,008080018	0,01
12-13-11	FOMC meeting	-0,002188848	0,005	-0,004305556	0,028769583	12-12-11	-0,003014503	0
03-13-12	FOMC meeting	-0,000647864	0,005	0,004305556	0,040230417	03-12-12	0,004202908	0,0025
04-25-12	FOMC meeting	0,003424005	-0,01	0,005	-0,020055	04-24-12	-0,000648865	-0,005
06-20-12	FOMC meeting and Maturity Extension Programme	-0,005683635	-0,01	0	0,002	06-19-12	0,002279477	-0,01

Dates of announcements - FOMC	Events	Return on day T HSI (log)	Variation on day T - FOMC	Target Surprise - FOMC	Path Surprise FOMC	One day before the announcements - FOMC	Return on day T-1 HSI (log)	Variation on day T-1 - FOMC
08-01-12	FOMC meeting	-0,002861849	0	0,005166667	0,0148765	07-31-12	0,000516762	0,005
09-13-12	FOMC meeting and QE3 starts	0,012431558	-0,0025	0,008823529	-0,021626471	09-12-12	-0,000600953	0
12-12-12	FOMC meeting	-0,001116343	0	0	0,007	12-11-12	0,003476328	0
01-30-13	FOMC meeting	-0,001690178	-0,01	0	-0,008	01-29-13	0,003053241	0
03-20-13	FOMC meeting and Bernanke warns of "premature tightening" in monetary policy	-0,000596733	0	0	-0,008	03-19-13	0,004207459	0,035
05-22-13	Economic outlook before the Joint Economic Committee, US Congress and Bernanke warns of "premature tightening" in monetary policy	-0,011184485	-0,0025	0	0,012	05-21-13	-0,001961374	0
06-19-13	FOMC meeting and Bernanke warns of "premature tightening" in monetary policy	-0,012682752	0,005	0,013636364	0,041395455	06-18-13	-0,004917618	0
07-31-13	FOMC meeting	0,004051968	-0,005	0	0,007	07-30-13	-0,00139291	0
09-18-13	FOMC meeting	0,007174319	-0,005	0	-0,043	09-17-13	-0,001183247	-0,005
10-16-13	Unscheduled FOMC meeting	-0,002502277	-0,015	-0,0155	0,0033705	10-15-13	-0,002018106	-0,01
10-30-13	FOMC meeting	-0,001823632	0	0	0,007	10-29-13	0,008610407	0
12-18-13	FOMC meeting	-0,004812967	0	0,005961538	-0,000450192	12-17-13	0,001401944	-0,01
01-29-14	FOMC meeting	-0,002087864	0	0	-0,013	01-28-14	0,003564204	0
03-04-14	Unscheduled FOMC meeting	-0,001494774	0	0	0,022	03-03-14	0,00301903	0,0004
03-19-14	FOMC meeting	-0,007853524	0	0	0,047	03-18-14	-0,000298103	0
06-18-14	FOMC meeting	-0,000262173	0	0	0,007	06-17-14	-0,000409527	0
07-15-14	Semiannual Monetary Policy Report to the Congress	0,001170611	0	0	0,047	07-14-14	0,002102323	-0,005
07-30-14	FOMC meeting	0,00043246	0,005	0	0,042	07-29-14	0,00161288	0
09-17-14	FOMC meeting	-0,003716096	0	0	0,027	09-16-14	0,004304269	0
10-29-14	FOMC meeting	-0,00215366	0	0,005	0,089945	10-28-14	0,005495422	0
12-17-14	FOMC meeting	0,004711703	0	0,011071429	0,032449643	12-16-14	-0,001624851	0
01-28-15	FOMC meeting	-0,004670907	0	0	-0,038	01-27-15	0,000953595	0
02-24-15	Semiannual Monetary Policy Report to the Congress	0,000494725	-0,01	-0,005	-0,060945	02-23-15	-0,001518509	-0,0025
03-18-15	FOMC meeting	0,006235525	-0,04	-0,005961538	-0,125549808	03-17-15	0,003953769	0
04-29-15	FOMC meeting	-0,004107493	0	0	0,012	04-28-15	-0,000648045	0
06-17-15	FOMC meeting	-0,00096092	-0,03	0	-0,033	06-16-15	0,003047702	-0,01
07-15-15	Semiannual Monetary Policy Report to the Congress	0,00185104	0,005	0	-0,023	07-14-15	-0,001127787	-0,015
07-29-15	FOMC meeting	-0,002148071	0	0	0,022	07-28-15	0,002042426	0,005
09-17-15	FOMC meeting	0,001313536	-0,07	-0,057692308	-0,079288462	09-16-15	-0,00222057	0,01
10-28-15	FOMC meeting	-0,002592501	0,035	0	0,102	10-27-15	-0,003507589	-0,01
12-16-15	FOMC meeting	0,003405739	0,015	0,020666667	0,038506	12-15-15	0,008627241	0
01-27-16	FOMC meeting	0,003256065	-0,01	0	0,012	01-26-16	0,004390721	-0,005
03-16-16	FOMC meeting	0,005244433	-0,075	-0,010333333	-0,093753	03-15-16	-0,000665584	0,01
04-27-16	FOMC meeting	0,000537006	-0,015	-0,005	-0,015945	04-26-16	-0,000927508	-0,005
06-15-16	FOMC meeting	-0,009201748	-0,025	0	-0,033	06-14-16	0,00170061	0,015
06-21-16	Semiannual Monetary Policy Report to the Congress	0,002653732	0	0	0,022	06-20-16	0,003337803	0,03
07-27-16	FOMC meeting	-0,000873611	-0,01	-0,005	-0,020945	07-26-16	0,001748198	0
09-21-16	FOMC meeting	0,001646357	-0,005	-0,041666667	0,039125	09-20-16	0,002558623	0,015
11-02-16	FOMC meeting	-0,002424548	-0,005	-0,005357143	-0,005798214	11-01-16	-0,00636122	-0,01
12-14-16	FOMC meeting	-0,007750694	0,005	0	0,122	12-13-16	0,000191888	0,005
03-15-17	FOMC meeting	0,008950294	-0,025	0,00484375	-0,064990781	03-14-17	-0,000640213	-0,005

Appendix VI: Computations of factors related to ECB announcements in Hong Kong.

Dates of announcements - ECB	Events	Return on day T - HSI (log)	Variation on day T - ECB	Target Surprise ECB	Path Surprise ECB	One day before the announcements - ECB	Return on day T-1 - HSI (log)	Variation on day T-1 - ECB
05-04-05	GC meeting	0,003617752	0,01	0	0,029	05-03-05	0,001593406	-0,01
07-07-05	GC meeting	-0,002058286	-0,02	0,006458333	-0,067265833	07-06-05	-0,003671548	0,01
08-04-05	GC meeting	-0,001734136	0,005	0	0,019	08-03-05	-0,000199979	0
09-01-05	GC meeting	0,002235148	-0,005	0,005172414	-0,092013793	08-31-05	0,006943703	0
10-06-05	GC meeting	0,000248402	0,01	0	0,039	10-05-05	-0,009315292	0,005
11-03-05	GC meeting	-0,000470193	-0,01	-0,022222222	0,013355556	11-02-05	0,000122261	0,015
12-01-05	GC meeting	0,003797969	-0,035	0,010333333	-0,068025333	11-30-05	0,003789025	0,005
01-12-06	GC meeting	0,001891156	-0,02	-0,024473684	-0,041203158	01-11-06	0,001896375	0,02
02-02-06	GC meeting	-0,007311393	-0,005	-0,026923077	-0,005723077	02-01-06	-0,001398465	0
03-02-06	GC meeting	-0,002205439	0	0,010689655	0,056904828	03-01-06	0,001763455	0,005
06-08-06	GC meeting	0,004991001	-0,06	0,020454545	-0,090009091	06-07-06	-0,010180183	-0,005
07-06-06	GC meeting	0,000496061	0,01	-0,0186	0,0276456	07-05-06	0,004615693	0,02
08-03-06	GC meeting	-0,004111059	0,015	0,016607143	0,070745	08-02-06	0,000399364	0
08-31-06	GC meeting	0,000784614	0	-0,055	-0,01022	08-30-06	0,002694171	0
10-05-06	GC meeting	-0,00010381	0	-0,011923077	0,011336923	10-04-06	0,006806232	-0,005
11-02-06	GC meeting	0,000809366	0,005	0,021428571	0,0348	11-01-06	0,006102447	-0,005
12-07-06	GC meeting	-0,002380463	0,01	0,064583333	0,051341667	12-06-06	-0,004205892	-0,005
01-11-07	GC meeting	0,005079012	-0,02	0,02325	-0,030557	01-10-07	-0,004079891	0,005
02-08-07	GC meeting	-0,001203697	0,01	-0,042	0,047232	02-07-07	0,001161063	0,005
03-08-07	GC meeting	-0,00091348	0	0,242608696	-0,018551304	03-07-07	0,00584931	0,005
04-12-07	GC meeting	-0,000836995	0	0	0,034	04-11-07	-0,001472552	0,01
05-10-07	GC meeting	-0,005860162	0,005	0,007380952	0,002553333	05-09-07	-0,00205729	0
06-06-07	GC meeting	-0,000385054	-0,01	-0,00625	-0,064775	06-05-07	-0,000490788	0,005
07-05-07	GC meeting	0,005406358	0,01	-0,041730769	0,052179231	07-04-07	0,00067266	0,01
08-02-07	GC meeting	0,001838106	0,025	0	0,034	08-01-07	-0,000234275	-0,01
08-09-07	Special fine tuning operations	-0,012699226	-0,025	-0,169090909	-0,042858182	08-08-07	-0,001879279	0,015
08-22-07	Supplementary LTRO (announcement)	0,011886806	0,085	-0,103333333	0,144253333	08-21-07	0,012170162	0,015
09-06-07	GC meeting	-0,001225859	-0,025	-0,00625	-0,024775	09-05-07	-0,000338811	-0,02
10-04-07	GC meeting	0,013591895	-0,03	0,040185185	-0,043876296	10-03-07	-0,008070749	-0,005
11-08-07	GC meeting	0,00035004	-0,04	0,013636364	-0,058672727	11-07-07	-0,014094807	-0,015
12-06-07	GC meeting	-0,010656113	0,05	0,0062	0,0277848	12-05-07	0,003147788	-0,015
01-10-08	GC meeting	-0,00584202	0,02	0,007380952	-0,012446667	01-09-08	-0,006097058	-0,005
03-06-08	GC meeting	-0,015943458	0,035	0,031	0,042924	03-05-08	0,004270149	0,025
04-10-08	GC meeting	0,008546442	0,01	-0,03	-0,03512	04-09-08	0,003651863	0,04
05-08-08	GC meeting	-0,006648203	-0,01	0,020217391	-0,089962609	05-07-08	-0,002728937	0,01
06-05-08	GC meeting	0,002622155	0,155	-0,012	0,306352	06-04-08	0,002370654	0
07-03-08	GC meeting	0,003685559	-0,06	0,022142857	-0,20034	07-02-08	-0,009337434	0,02
09-04-08	GC meeting	-0,009827383	-0,005	0,046153846	-0,065046154	09-03-08	-0,004145987	0
10-15-08	Fixed-rate full allotment (FRFA) on MRO	-0,021359105	0,135	-0,019375	-0,0072025	10-14-08	-0,022084591	0,045
11-06-08	GC meeting	0,01404906	-0,06	-0,09375	-0,022625	11-05-08	-0,031873057	-0,01
12-04-08	GC meeting	0,010678873	0,055	-0,045925926	0,183001481	12-03-08	-0,002528356	-0,045
01-15-09	GC meeting	0,000411374	0,06	-0,155	0,11938	01-14-09	-0,014881614	0,04
02-05-09	GC meeting	0,015413814	-0,06	-0,054782609	-0,035262609	02-04-09	0,003806648	-0,045
03-05-09	GC meeting	-0,010428135	0,04	0,005961538	-0,027168462	03-04-09	-0,004243814	-0,015
04-02-09	GC meeting	0,000708792	0,115	0,069642857	0,21035	04-01-09	0,03106362	-0,03
05-07-09	GC meeting and 1-year LTRO, CBPP	0,004316406	-0,05	0,058125	-0,0173925	05-06-09	0,009777901	-0,025
06-04-09	GC meeting and the announcement of CBPP details	0,004129194	0,065	0,011538462	0,156738462	06-03-09	-0,00172644	0,015
08-06-09	GC meeting	-0,011024989	-0,01	0,0248	0,0191392	08-05-09	0,008487444	0,02
09-03-09	GC meeting	0,012070346	-0,02	0,061111111	-0,047977778	09-02-09	0,005299554	0,01
10-08-09	GC meeting	0,00013213	0,015	-0,026956522	0,014283478	10-07-09	0,005107996	0,045
11-05-09	GC meeting	0,00703249	-0,02	0,024	0,014296	11-04-09	-0,002734943	0,01
12-03-09	GC meeting and phasing out of 6m LTROs, indexation of 1y LTROs	-0,001074265	-0,015	-0,016607143	0,087255	12-02-09	0,005119382	-0,005
01-14-10	GC meeting	-0,00125749	-0,015	0	-0,021	01-13-10	-0,000632474	0
02-04-10	GC meeting	-0,014690247	-0,01	0,035	-0,07286	02-03-10	-0,008047382	0
03-04-10	GC meeting and phasing out of 3m LTROs, indexation of 6m LTROs	0,004455774	-0,01	-0,040185185	0,036876296	03-03-10	-0,006307415	0,005

Dates of announcements - ECB	Events	Return on day T - HSI (log)	Variation on day T - ECB	Target Surprise ECB	Path Surprise ECB	One day before the announcements - ECB	Return on day T-1 - HSI (log)	Variation on day T-1 - ECB
04-08-10	<i>GC meeting</i>	0,006729227	-0,005	0,006818182	-0,047336364	04-07-10	-0,001224273	-0,005
05-06-10	<i>GC meeting</i>	-0,004621681	0,055	0,0806	-0,0617976	05-05-10	-0,004167487	-0,025
06-10-10	<i>GC meeting</i>	0,005269853	0	0	0,034	06-09-10	0,00025358	0
07-08-10	<i>GC meeting</i>	0,007049117	0,035	0,033695652	0,032395652	07-07-10	0,00421134	0,01
07-28-10	<i>Collateral rules tightened, revised haircuts</i>	5,43576E-05	-0,01	-0,005	-0,03002	07-27-10	0,002432246	0
08-05-10	<i>GC meeting</i>	0,002553303	0,015	0,005961538	0,017831538	08-04-10	3,70799E-05	0,005
09-02-10	<i>GC meeting</i>	0,002129521	-0,005	0,005357143	0,02795	09-01-10	0,005130654	-0,005

Appendix VII: Computation of variances in interest rates – Heteroskedasticity (FOMC).

Dates of announcements - FOMC	Events	Last price of 3 month FED futures on date T	Last price of 3 month FED futures on date T-1	Variation on day T - FOMC	One day before the announcements- FOMC	Last price of 3 month Eurodollar on date T-2	Variation on day T-1 - FOMC	Holiday/Weekend (Before-On-After)
05-03-05	FOMC meeting	96,57	96,575	0,005	05-02-05	96,575	0	Yes (CN & HK)
06-30-05	FOMC meeting	96,15	96,18	0,03	06-29-05	96,195	0,015	Yes(HK)
08-09-05	FOMC meeting	96	96	0	08-08-05	96,01	0,01	
09-20-05	FOMC meeting	95,775	95,87	0,095	09-19-05	95,83	-0,04	Yes(HK)
11-01-05	FOMC meeting	95,515	95,52	0,005	10-31-05	95,52	0	
12-13-05	FOMC meeting	95,4925	95,495	0,0025	12-12-05	95,4975	0,0025	
01-31-06	FOMC meeting	95,175	95,185	0,01	01-30-06	95,2	0,015	Yes (CN & HK)
03-28-06	FOMC meeting	94,84	94,905	0,065	03-27-06	94,91	0,005	
05-10-06	FOMC meeting	94,75	94,755	0,005	05-09-06	94,755	0	
06-29-06	FOMC meeting	94,395	94,33	-0,065	06-28-06	94,34	0,01	
08-08-06	FOMC meeting	94,57	94,535	-0,035	08-07-06	94,55	0,015	
09-20-06	FOMC meeting	94,62	94,62	0	09-19-06	94,59	-0,03	
10-25-06	FOMC meeting	94,6	94,585	-0,015	10-24-06	94,59	0,005	
12-12-06	FOMC meeting	94,6375	94,635	-0,0025	12-11-06	94,635	0	
01-31-07	FOMC meeting	94,63	94,63	0	01-30-07	94,63	0	
03-21-07	FOMC meeting	94,785	94,74	-0,045	03-20-07	94,74	0	
05-09-07	FOMC meeting	94,655	94,66	0,005	05-08-07	94,665	0,005	
06-28-07	FOMC meeting	94,66	94,675	0,015	06-27-07	94,67	-0,005	
08-07-07	FOMC meeting	94,705	94,77	0,065	08-06-07	94,78	0,01	
08-10-07	FOMC meeting	94,765	94,76	-0,005	08-09-07	94,67	-0,09	Yes (CN & HK)
08-17-07	FOMC meeting	94,8875	94,805	-0,0825	08-16-07	94,7375	-0,0675	Yes (CN & HK)
09-18-07	FOMC meeting	95,285	95,09	-0,195	09-17-07	95,11	0,02	
10-31-07	FOMC meeting	95,25	95,3	0,05	10-30-07	95,315	0,015	
12-11-07	FOMC meeting	94,9225	95,0325	0,11	12-10-07	95,015	-0,0175	
01-22-08	FOMC meeting	96,965	96,51	-0,455	01-21-08	96,45	-0,06	
01-30-08	FOMC meeting	97,045	96,97	-0,075	01-29-08	96,995	0,025	
03-11-08	FOMC meeting	97,185	97,26	0,075	03-10-08	97,245	-0,015	
03-18-08	FOMC meeting	97,84	98,065	0,225	03-17-08	97,915	-0,15	
04-30-08	FOMC meeting	97,325	97,245	-0,08	04-29-08	97,195	-0,05	Yes (CN & HK)
06-25-08	FOMC meeting	96,945	96,895	-0,05	06-24-08	96,845	-0,05	
08-05-08	FOMC meeting	97,165	97,15	-0,015	08-04-08	97,16	0,01	Yes(HK)
09-16-08	FOMC meeting	97,085	97,36	0,275	09-15-08	97,065	-0,295	Yes (CN & HK)
10-08-08	Unscheduled FOMC meeting	97,135	97,26	0,125	10-07-08	97,235	-0,025	Yes(HK)
10-13-08	Announcement of FX swap arrangements	97,24	97,145	-0,095	10-12-08	97,055	-0,09	Yes (CN & HK)
10-20-08	Offer of \$150 billion in 28-day credit	97,48	97,46	-0,02	10-19-08	97,265	-0,195	Yes (CN & HK)
10-29-08	FOMC meeting	97,665	97,585	-0,08	10-28-08	97,465	-0,12	
11-25-08	Announcement concerning results of auction of \$150 billion in 13-day credit and Starts of QE1	97,97	97,9325	-0,0375	11-24-08	97,9975	0,065	
12-01-08	Announcement concerning results of auction of \$150 billion in 84-day credit and Starts of QE1	97,8525	97,875	0,0225	11-30-08	97,945	0,07	Yes (CN & HK)
12-16-08	FOMC meeting	98,785	98,47	-0,315	12-15-08	98,455	-0,015	
01-28-09	FOMC meeting	98,975	98,92	-0,055	01-27-09	98,855	-0,065	Yes (CN & HK)
03-18-09	FOMC meeting	98,82	98,625	-0,195	03-17-09	98,6	-0,025	
04-29-09	FOMC meeting	99,04	98,995	-0,045	04-28-09	99,01	0,015	
06-24-09	FOMC meeting	99,28	99,275	-0,005	06-23-09	99,255	-0,02	
08-12-09	FOMC meeting	99,55	99,535	-0,015	08-11-09	99,52	-0,015	
09-23-09	FOMC meeting and extension of asset purchase program	99,61	99,565	-0,045	09-22-09	99,545	-0,02	
11-04-09	FOMC meeting	99,695	99,68	-0,015	11-03-09	99,68	0	
12-16-09	FOMC meeting	99,605	99,585	-0,02	12-15-09	99,6	0,015	
01-27-10	FOMC meeting	99,71	99,71	0	01-26-10	99,71	0	
03-16-10	FOMC meeting and end of QE1	99,635	99,615	-0,02	03-15-10	99,615	0	
04-28-10	FOMC meeting	99,545	99,54	-0,005	04-27-10	99,595	0,055	
05-10-10	Unscheduled FOMC meeting	99,49	99,35	-0,14	05-09-10	99,29	-0,06	Yes (CN & HK)
06-23-10	FOMC meeting	99,29	99,32	0,03	06-22-10	99,34	0,02	
08-10-10	FOMC meeting and announcements related to MBSs	99,63	99,605	-0,025	08-09-10	99,6	-0,005	

Dates of announcements - FOMC	Events	Last price of 3 month FED futures on date T	Last price of 3 month FED futures on date T-1	Variation on day T - FOMC	One day before the announcements- FOMC	Last price of 3 month Eurodollar on date T-2	Variation on day T-1 - FOMC	Holiday/Weekend (Before-On-After)
08-27-10	<i>Bernanke Jackson Hole speech</i>	99,68	99,6775	-0,0025	08-26-10	99,6625	-0,015	Yes (CN & HK)
09-21-10	<i>FOMC meeting and announcement for the maintain of existing policy</i>	99,635	99,605	-0,03	09-20-10	99,59	-0,015	Yes (CN)
10-15-10	<i>Unscheduled FOMC meeting</i>	99,65	99,655	0,005	10-14-10	99,675	0,02	Yes (CN & HK)
11-03-10	<i>FOMC meeting and QE2 starts</i>	99,685	99,68	-0,005	11-02-10	99,675	-0,005	
12-14-10	<i>FOMC meeting</i>	99,585	99,585	0	12-13-10	99,565	-0,02	
01-26-11	<i>FOMC meeting</i>	99,655	99,655	0	01-25-11	99,655	0	
03-15-11	<i>FOMC meeting</i>	99,63	99,64	0,01	03-14-11	99,64	0	
04-27-11	<i>FOMC meeting and announcement of end of QE2 by June 2011</i>	99,695	99,695	0	04-26-11	99,695	0	
06-22-11	<i>FOMC meeting</i>	99,63	99,625	-0,005	06-21-11	99,6	-0,025	
08-01-11	<i>Unscheduled FOMC meeting</i>	99,635	99,625	-0,01	07-31-11	99,63	0,005	Yes (CN & HK)
08-09-11	<i>FOMC meeting</i>	99,62	99,595	-0,025	08-08-11	99,655	0,06	
08-26-11	<i>Bernanke Jackson Hole speech</i>	99,6275	99,625	-0,0025	08-25-11	99,625	0	Yes (CN & HK)
09-21-11	<i>FOMC meeting and Maturity Extension Programme</i>	99,505	99,54	0,035	09-20-11	99,52	-0,02	
11-02-11	<i>FOMC meeting</i>	99,48	99,485	0,005	11-01-11	99,495	0,01	
11-28-11	<i>Unscheduled FOMC meeting</i>	99,385	99,3675	-0,0175	11-27-11	99,355	-0,0125	Yes (CN & HK)
12-13-11	<i>FOMC meeting</i>	99,4425	99,4475	0,005	12-12-11	99,4475	0	
01-25-12	<i>FOMC meeting</i>	99,505	99,5	-0,005	01-24-12	99,495	-0,005	Yes (CN & HK)
03-13-12	<i>FOMC meeting</i>	99,525	99,53	0,005	03-12-12	99,5325	0,0025	
04-25-12	<i>FOMC meeting</i>	99,525	99,515	-0,01	04-24-12	99,51	-0,005	
06-20-12	<i>FOMC meeting and Maturity Extension Programme</i>	99,535	99,525	-0,01	06-19-12	99,515	-0,01	
08-01-12	<i>FOMC meeting</i>	99,615	99,615	0	07-31-12	99,62	0,005	
08-31-12	<i>Bernanke Jackson Hole speech</i>	99,61	99,605	-0,005	08-30-12	99,605	0	Yes (CN & HK)
09-13-12	<i>FOMC meeting and QE3 starts</i>	99,62	99,6175	-0,0025	09-12-12	99,6175	0	
10-24-12	<i>FOMC meeting</i>	99,7	99,7	0	10-23-12	99,705	0,005	Yes(HK)
12-12-12	<i>FOMC meeting</i>	99,69	99,69	0	12-11-12	99,69	0	
01-30-13	<i>FOMC meeting</i>	99,7	99,69	-0,01	01-29-13	99,69	0	
03-20-13	<i>FOMC meeting and Bernanke warns of "premature tightening" in monetary policy</i>	99,665	99,665	0	03-19-13	99,7	0,035	
05-01-13	<i>FOMC meeting</i>	99,725	99,725	0	04-30-13	99,725	0	Yes (CN & HK)
05-22-13	<i>Economic outlook before the Joint Economic Committee, US Congress and Bernanke warns of "premature tightening" in monetary policy</i>	99,7275	99,725	-0,0025	05-21-13	99,725	0	
06-19-13	<i>FOMC meeting and Bernanke warns of "premature tightening" in monetary policy</i>	99,705	99,71	0,005	06-18-13	99,71	0	
07-31-13	<i>FOMC meeting</i>	99,72	99,715	-0,005	07-30-13	99,715	0	
09-18-13	<i>FOMC meeting</i>	99,72	99,715	-0,005	09-17-13	99,71	-0,005	Yes (CN)
10-16-13	<i>Unscheduled FOMC meeting</i>	99,725	99,71	-0,015	10-15-13	99,7	-0,01	
10-30-13	<i>FOMC meeting</i>	99,75	99,75	0	10-29-13	99,75	0	
12-18-13	<i>FOMC meeting</i>	99,74	99,74	0	12-17-13	99,73	-0,01	
01-29-14	<i>FOMC meeting</i>	99,745	99,745	0	01-28-14	99,745	0	
03-04-14	<i>Unscheduled FOMC meeting</i>	99,765	99,765	0	03-03-14	99,7654	0,0004	
03-19-14	<i>FOMC meeting</i>	99,745	99,745	0	03-18-14	99,745	0	
04-30-14	<i>FOMC meeting</i>	99,77	99,77	0	04-29-14	99,77	0	Yes (CN & HK)
06-18-14	<i>FOMC meeting</i>	99,755	99,755	0	06-17-14	99,755	0	

Dates of announcements - FOMC	Events	Last price of 3 month FED futures on date T	Last price of 3 month FED futures on date T-1	Variation on day T - FOMC	One day before the announcements- FOMC	Last price of 3 month Eurodollar on date T-2	Variation on day T-1 - FOMC	Holiday/Weekend (Before-On-After)
07-15-14	<i>Semiannual Monetary Policy Report to the Congress</i>	99,765	99,765	0	07-14-14	99,76	-0,005	
07-30-14	<i>FOMC meeting</i>	99,76	99,765	0,005	07-29-14	99,765	0	
08-22-14	<i>Yellen Jackson Hole speech</i>	99,7625	99,765	0,0025	08-21-14	99,7675	0,0025	Yes (CN & HK)
09-17-14	<i>FOMC meeting</i>	99,745	99,745	0	09-16-14	99,745	0	
10-29-14	<i>FOMC meeting</i>	99,76	99,76	0	10-28-14	99,76	0	
12-17-14	<i>FOMC meeting</i>	99,705	99,705	0	12-16-14	99,705	0	
01-28-15	<i>FOMC meeting</i>	99,73	99,73	0	01-27-15	99,73	0	
02-24-15	<i>Semiannual Monetary Policy Report to the Congress</i>	99,7325	99,7225	-0,01	02-23-15	99,72	-0,0025	Yes (CN)
03-18-15	<i>FOMC meeting</i>	99,655	99,615	-0,04	03-17-15	99,615	0	
04-29-15	<i>FOMC meeting</i>	99,695	99,695	0	04-28-15	99,695	0	
06-17-15	<i>FOMC meeting</i>	99,595	99,565	-0,03	06-16-15	99,555	-0,01	
07-15-15	<i>Semiannual Monetary Policy Report to the Congress</i>	99,645	99,65	0,005	07-14-15	99,635	-0,015	
07-29-15	<i>FOMC meeting</i>	99,625	99,625	0	07-28-15	99,63	0,005	
09-17-15	<i>FOMC meeting</i>	99,56	99,49	-0,07	09-16-15	99,5	0,01	
10-28-15	<i>FOMC meeting</i>	99,59	99,625	0,035	10-27-15	99,615	-0,01	
12-16-15	<i>FOMC meeting</i>	99,325	99,34	0,015	12-15-15	99,34	0	
01-27-16	<i>FOMC meeting</i>	99,345	99,335	-0,01	01-26-16	99,33	-0,005	
02-10-16	<i>Semiannual Monetary Policy Report to the Congress</i>	99,355	99,345	-0,01	02-09-16	99,34	-0,005	Yes (CN & HK)
03-16-16	<i>FOMC meeting</i>	99,265	99,19	-0,075	03-15-16	99,2	0,01	
04-27-16	<i>FOMC meeting</i>	99,31	99,295	-0,015	04-26-16	99,29	-0,005	
06-15-16	<i>FOMC meeting</i>	99,29	99,265	-0,025	06-14-16	99,28	0,015	
06-21-16	<i>Semiannual Monetary Policy Report to the Congress</i>	99,26	99,26	0	06-20-16	99,29	0,03	
07-27-16	<i>FOMC meeting</i>	99,18	99,17	-0,01	07-26-16	99,17	0	
08-26-16	<i>Yellen Jackson Hole speech</i>	99,095	99,13	0,035	08-25-16	99,1375	0,0075	Yes (CN & HK)
09-21-16	<i>FOMC meeting</i>	99,055	99,05	-0,005	09-20-16	99,065	0,015	
11-02-16	<i>FOMC meeting</i>	99,07	99,065	-0,005	11-01-16	99,055	-0,01	
12-14-16	<i>FOMC meeting</i>	99,005	99,01	0,005	12-13-16	99,015	0,005	
02-01-17	<i>FOMC meeting</i>	98,925	98,925	0	01-31-17	98,92	-0,005	Yes (CN & HK)
03-15-17	<i>FOMC meeting</i>	98,675	98,65	-0,025	03-14-17	98,645	-0,005	
05-03-17	<i>FOMC meeting</i>	98,71	98,72	0,01	05-02-17	98,71	-0,01	Yes(HK)

Appendix VIII: Computation of variances in interest rates – Heteroskedasticity (ECB).

Dates of announcements - ECB	Events	Last price of 3 month Euribor futures on date T	Last price of 3 month Euribor futures on date T-1	Variation on day T - ECB	One day before the announcement - ECB	Last price of 3 month Euribor on date T-2	Variation on day T-1 - ECB	Holiday/Weekend (Before-On-After)
05-04-05	GC meeting	97,875	97,885	0,01	05-03-05	97,875	-0,01	Yes (CN)
06-02-05	GC meeting	97,885	97,89	0,005	06-01-05	97,88	-0,01	
07-07-05	GC meeting	97,925	97,905	-0,02	07-06-05	97,915	0,01	
08-04-05	GC meeting	97,865	97,87	0,005	08-03-05	97,87	0	
09-01-05	GC meeting	97,87	97,865	-0,005	08-31-05	97,865	0	
10-06-05	GC meeting	97,76	97,77	0,01	10-05-05	97,775	0,005	Yes (CN)
11-03-05	GC meeting	97,61	97,6	-0,01	11-02-05	97,615	0,015	
12-01-05	GC meeting	97,515	97,48	-0,035	11-30-05	97,485	0,005	
01-12-06	GC meeting	97,32	97,3	-0,02	01-11-06	97,32	0,02	
02-02-06	GC meeting	97,31	97,305	-0,005	02-01-06	97,305	0	Yes (CN)
03-02-06	GC meeting	97,305	97,305	0	03-01-06	97,31	0,005	
04-06-06	GC meeting	97,02	96,91	-0,11	04-05-06	96,905	-0,005	Yes(HK)
05-04-06	GC meeting	96,97	96,975	0,005	05-03-06	96,97	-0,005	Yes (CN & HK)
06-08-06	GC meeting	97,025	96,965	-0,06	06-07-06	96,96	-0,005	
07-06-06	GC meeting	96,655	96,665	0,01	07-05-06	96,685	0,02	
08-03-06	GC meeting	96,66	96,675	0,015	08-02-06	96,675	0	
08-31-06	GC meeting	96,665	96,665	0	08-30-06	96,665	0	
10-05-06	GC meeting	96,32	96,32	0	10-04-06	96,315	-0,005	Yes (CN)
11-02-06	GC meeting	96,285	96,29	0,005	11-01-06	96,285	-0,005	
12-07-06	GC meeting	96,31	96,32	0,01	12-06-06	96,315	-0,005	
01-11-07	GC meeting	96,08	96,06	-0,02	01-10-07	96,065	0,005	
02-08-07	GC meeting	96,075	96,085	0,01	02-07-07	96,09	0,005	
03-08-07	GC meeting	96,095	96,095	0	03-07-07	96,1	0,005	
04-12-07	GC meeting	95,865	95,865	0	04-11-07	95,875	0,01	
05-10-07	GC meeting	95,855	95,86	0,005	05-09-07	95,86	0	
06-06-07	GC meeting	95,845	95,835	-0,01	06-05-07	95,84	0,005	
07-05-07	GC meeting	95,62	95,63	0,01	07-04-07	95,64	0,01	
08-02-07	GC meeting	95,615	95,64	0,025	08-01-07	95,63	-0,01	
08-09-07	Special fine tuning operations	95,63	95,605	-0,025	08-08-07	95,62	0,015	
08-22-07	Supplementary LTRO (announcement)	95,515	95,6	0,085	08-21-07	95,615	0,015	
08-23-07	Supplementary LTRO (allotment)	95,445	95,515	0,07	08-22-07	95,6	0,085	
09-06-07	GC meeting	95,335	95,31	-0,025	09-05-07	95,29	-0,02	
10-04-07	GC meeting	95,41	95,38	-0,03	10-03-07	95,375	-0,005	Yes (CN)
11-08-07	GC meeting	95,49	95,45	-0,04	11-07-07	95,435	-0,015	
12-06-07	GC meeting	95,135	95,185	0,05	12-05-07	95,17	-0,015	
01-10-08	GC meeting	95,48	95,5	0,02	01-09-08	95,495	-0,005	
02-07-08	GC meeting	95,79	95,7	-0,09	02-06-08	95,695	-0,005	Yes (CN & HK)
03-06-08	GC meeting	95,525	95,56	0,035	03-05-08	95,585	0,025	
03-28-08	Introduction of 6-m LTROs	95,53	95,495	-0,035	03-27-08	95,475	-0,02	Yes (CN & HK)
04-10-08	GC meeting	95,375	95,385	0,01	04-09-08	95,425	0,04	
05-08-08	GC meeting	95,26	95,25	-0,01	05-07-08	95,26	0,01	
06-05-08	GC meeting	94,96	95,115	0,155	06-04-08	95,115	0	
07-03-08	GC meeting	94,955	94,895	-0,06	07-02-08	94,915	0,02	
08-07-08	GC meeting	95,035	95,005	-0,03	08-06-08	95	-0,005	Yes(HK)
09-04-08	GC meeting	95,025	95,02	-0,005	09-03-08	95,02	0	
10-02-08	GC meeting	95,175	95,05	-0,125	10-01-08	94,99	-0,06	Yes (CN & HK)
10-08-08	Unscheduled GC meeting	95,56	95,535	-0,025	10-07-08	95,475	-0,06	Yes(HK)
10-13-08	FX swap arrangements	96,025	95,855	-0,17	10-12-08	95,54	-0,315	Yes (CN & HK)
10-15-08	Fixed-rate full allotment (FRFA) on MRO	95,845	95,98	0,135	10-14-08	96,025	0,045	
11-06-08	GC meeting	96,325	96,265	-0,06	11-05-08	96,255	-0,01	
12-04-08	GC meeting	96,53	96,585	0,055	12-03-08	96,54	-0,045	
01-15-09	GC meeting	97,99	98,05	0,06	01-14-09	98,09	0,04	
02-05-09	GC meeting	98,25	98,19	-0,06	02-04-09	98,145	-0,045	
03-05-09	GC meeting	98,355	98,395	0,04	03-04-09	98,38	-0,015	
04-02-09	GC meeting	98,66	98,775	0,115	04-01-09	98,745	-0,03	
05-07-09	GC meeting and 1-year LTRO, CBPP	98,825	98,775	-0,05	05-06-09	98,75	-0,025	

Dates of announcements - ECB	Events	Last price of 3 month Euribor futures on date T	Last price of 3 month Euribor futures on date T-1	Variation on day T - ECB	One day before the announcements - ECB	Last price of 3 month Euribor on date T-2	Variation on day T-1 - ECB	Holiday/Weekend (Before-On-After)
06-04-09	GC meeting and the announcement of CBPP details	98,725	98,79	0,065	06-03-09	98,805	0,015	
07-02-09	GC meeting	99,02	98,96	-0,06	07-01-09	98,95	-0,01	Yes(HK)
08-06-09	GC meeting	99,145	99,135	-0,01	08-05-09	99,155	0,02	
09-03-09	GC meeting	99,225	99,205	-0,02	09-02-09	99,215	0,01	
10-08-09	GC meeting	99,195	99,21	0,015	10-07-09	99,255	0,045	Yes (CN)
11-05-09	GC meeting	99,255	99,235	-0,02	11-04-09	99,245	0,01	
12-03-09	GC meeting and phasing out of 6m LTROs, indexation of 1Y LTROs	99,27	99,255	-0,015	12-02-09	99,25	-0,005	
01-14-10	GC meeting	99,32	99,305	-0,015	01-13-10	99,305	0	
02-04-10	GC meeting	99,315	99,305	-0,01	02-03-10	99,305	0	
03-04-10	GC meeting and phasing out of 3m LTROs, indexation of 6m LTROs	99,35	99,34	-0,01	03-03-10	99,345	0,005	
04-08-10	GC meeting	99,27	99,265	-0,005	04-07-10	99,26	-0,005	
05-06-10	GC meeting	99,105	99,16	0,055	05-05-10	99,135	-0,025	
05-09-10	GC meeting and Securities Market Programme (SMP)	NA	NA	NA	05-08-10	NA	NA	Yes (CN & HK)
06-10-10	GC meeting	99,275	99,275	0	06-09-10	99,275	0	
07-08-10	GC meeting	98,99	99,025	0,035	07-07-10	99,035	0,01	
07-28-10	Collateral rules tightened, revised haircuts	99,025	99,015	-0,01	07-27-10	99,015	0	
08-05-10	GC meeting	99,035	99,05	0,015	08-04-10	99,055	0,005	
09-02-10	GC meeting	99,13	99,125	-0,005	09-01-10	99,12	-0,005	
10-07-10	GC meeting	98,94	98,96	0,02	10-06-10	98,95	-0,01	Yes (CN)
11-04-10	GC meeting	98,875	98,875	0	11-03-10	98,865	-0,01	
12-02-10	GC meeting	98,965	98,96	-0,005	12-01-10	98,95	-0,01	
01-13-11	GC meeting	98,875	98,925	0,05	01-12-11	98,93	0,005	
02-03-11	GC meeting	98,84	98,815	-0,025	02-02-11	98,825	0,01	Yes (CN & HK)
03-03-11	GC meeting and FRFA extended to July 2011	98,78	98,87	0,09	03-02-11	98,865	-0,005	
04-07-11	GC meeting	98,45	98,475	0,025	04-06-11	98,48	0,005	
05-05-11	GC meeting	98,495	98,405	-0,09	05-04-11	98,43	0,025	
06-09-11	GC meeting	98,515	98,51	-0,005	06-08-11	98,515	0,005	
07-07-11	GC meeting	98,24	98,24	0	07-06-11	98,24	0	
08-04-11	GC meeting and SMP covers Spain and Italy	98,505	98,41	-0,095	08-03-11	98,4	-0,01	
08-07-11	SMP on Italy and Spain acknowledged by ECB	NA	NA	#VALUE!	08-06-11	NA	#VALUE!	Yes (CN & HK)
09-08-11	GC meeting	98,495	98,525	0,03	09-07-11	98,56	0,035	
10-06-11	GC meeting and launch of CBPP2	98,65	98,755	0,105	10-05-11	98,725	-0,03	Yes (CN & HK)
11-03-11	GC meeting	98,785	98,7	-0,085	11-02-11	98,685	-0,015	
12-01-11	VLTRO - Draghi's speech at European parliament	98,78	98,765	-0,015	11-30-11	98,67	-0,095	
12-08-11	GC meeting and two 3-year LTROs, reserve ration to 1%	98,615	98,72	0,105	12-07-11	98,695	-0,025	
12-21-11	Results of first 3-year LTRO	98,845	98,88	0,035	12-20-11	98,86	-0,02	
01-12-12	GC meeting	99,01	98,985	-0,025	01-11-12	98,965	-0,02	
02-09-12	GC meeting and approved criteria of EC for credit claims for 7 NCBs	99,1	99,105	0,005	02-08-12	99,11	0,005	
03-08-12	GC meeting	99,16	99,165	0,005	03-07-12	99,175	0,01	
04-04-12	GC meeting	99,305	99,32	0,015	04-03-12	99,34	0,02	Yes (CN & HK)
05-03-12	GC meeting	99,4	99,415	0,015	05-02-12	99,405	-0,01	
06-06-12	GC meeting	99,35	99,375	0,025	06-05-12	99,38	0,005	
07-05-12	GC meeting, deposit facility rate at 0	99,57	99,525	-0,045	07-04-12	99,525	0	

Dates of announcements - ECB	Events	Last price of 3 month Euribor futures on date T	Last price of 3 month Euribor futures on date T-1	Variation on day T - ECB	One day before the announcements - ECB	Last price of 3 month Euribor on date T-2	Variation on day T-1 - ECB	Holiday/Weekend (Before-On-After)
07-26-12	"Whatever it takes" London speech of Draghi	99,64	99,64	0	07-25-12	99,635	-0,005	
08-02-12	GC meeting and OMT	99,695	99,71	0,015	08-01-12	99,72	0,01	
09-06-12	GC meeting and OMT details	99,75	99,76	0,01	09-05-12	99,76	0	
10-04-12	GC meeting	99,81	99,805	-0,005	10-03-12	99,8	-0,005	Yes (CN)
11-08-12	GC meeting	99,82	99,82	0	11-07-12	99,81	-0,01	
12-06-12	GC meeting	99,815	99,815	0	12-05-12	99,815	0	
01-10-13	GC meeting	99,785	99,81	0,025	01-09-13	99,805	-0,005	
02-07-13	GC meeting	99,745	99,735	-0,01	02-06-13	99,73	-0,005	
03-07-13	GC meeting	99,79	99,815	0,025	03-06-13	99,805	-0,01	
03-22-13	Collateral rule changes for some uncovered government guaranteed bank bonds	99,7	99,715	0,015	03-21-13	99,71	-0,005	Yes (CN & HK)
04-04-13	GC meeting	99,795	99,78	-0,015	04-03-13	99,775	-0,005	Yes (CN & HK)
05-02-13	GC meeting and FRFA extended to July 2014	99,835	99,82	-0,015	05-01-13	99,82	0	Yes (CN & HK)
06-06-13	GC meeting	99,79	99,8	0,01	06-05-13	99,8	0	
07-04-13	GC meeting	99,765	99,725	-0,04	07-03-13	99,735	0,01	
08-01-13	GC meeting	99,76	99,755	-0,005	07-31-13	99,755	0	
09-05-13	GC meeting	99,77	99,775	0,005	09-04-13	99,77	-0,005	
10-02-13	GC meeting	99,735	99,735	0	10-01-13	99,73	-0,005	Yes (CN & HK)
11-07-13	GC meeting and 3-month LTROs decision	99,79	99,765	-0,025	11-06-13	99,765	0	
12-05-13	GC meeting	99,74	99,755	0,015	12-04-13	99,755	0	
01-09-14	GC meeting	99,705	99,695	-0,01	01-08-14	99,715	0,02	
02-06-14	GC meeting	99,725	99,75	0,025	02-05-14	99,755	0,005	Yes (CN)
03-06-14	GC meeting	99,7	99,73	0,03	03-05-14	99,74	0,01	
03-25-14	QE announcement Draghi	99,7	99,68	-0,02	03-24-14	99,665	-0,015	
04-03-14	GC meeting	99,69	99,705	0,015	04-02-14	99,7	-0,005	
04-24-14	QE announcement Draghi	99,685	99,69	0,005	04-23-14	99,7	0,01	
05-08-14	GC meeting	99,73	99,71	-0,02	05-07-14	99,71	0	
06-05-14	GC meeting and announcement of TLTROs	99,775	99,755	-0,02	06-04-14	99,75	-0,005	
07-03-14	GC meeting and details of TLTROs	99,825	99,82	-0,005	07-02-14	99,83	0,01	
08-07-14	GC meeting	99,8	99,795	-0,005	08-06-14	99,79	-0,005	
08-22-14	APP - Draghi's speech at Jackson Hole	99,82	99,82	0	08-21-14	99,825	0,005	Yes (CN & HK)
09-04-14	GC meeting and announcement of CBPP3 & ABSPP	99,905	99,865	-0,04	09-03-14	99,86	-0,005	
10-02-14	GC meeting and details of ABSPP & CBPP3	99,925	99,93	0,005	10-01-14	99,92	-0,01	Yes (CN & HK)
11-06-14	GC meeting	99,915	99,915	0	11-05-14	99,91	-0,005	
11-21-14	APP - Draghi's speech at the Frankfurt European Banking Congress	99,91	99,905	-0,005	11-20-14	99,905	0	Yes (CN & HK)
12-04-14	GC meeting and introduction of the QE-PSPP	99,915	99,92	0,005	12-03-14	99,92	0	
01-22-15	GC meeting and announcement of PSPP	99,965	99,965	0	01-21-15	99,97	0,005	
03-05-15	GC meeting	99,97	99,965	-0,005	03-04-15	99,965	0	
03-09-15	Start of the PSPP purchases	99,97	99,97	0	03-08-15	99,97	0	Yes (CN & HK)
04-15-15	GC meeting	100,01	100,005	-0,005	04-14-15	100	-0,005	
06-03-15	GC meeting	100,01	100,005	-0,005	06-02-15	100,005	0	
07-16-15	GC meeting	100,02	100,015	-0,005	07-15-15	100,02	0,005	
09-03-15	GC meeting and Draghi speech about the possibility of extension concerning QE program	100,035	100,035	0	09-02-15	100,035	0	Yes (CN & HK)
10-22-15	GC meeting	100,105	100,07	-0,035	10-21-15	100,065	-0,005	Yes(HK)

Dates of announcements - ECB	Events	Last price of 3 month Euribor futures on date T	Last price of 3 month Euribor futures on date T-1	Variation on day T - ECB	One day before the announcements - ECB	Last price of 3 month Euribor on date T-2	Variation on day T-1 - ECB	Holiday/Weekend (Before-On-After)
12-03-15	<i>GC meeting and new period of PSPP</i>	100,11	100,185	0,075	12-02-15	100,19	0,005	
01-21-16	<i>GC meeting and decisions of extension of asset purchases</i>	100,225	100,2	-0,025	01-20-16	100,18	-0,02	
03-10-16	<i>GC meeting and expansion of CSPP and APP, also announcement of 4-year TLTRO II</i>	100,225	100,24	0,015	03-09-16	100,245	0,005	
04-21-16	<i>GC meeting and extension of asset purchases</i>	100,25	100,25	0	04-20-16	100,255	0,005	
06-02-16	<i>GC meeting</i>	100,265	100,26	-0,005	06-01-16	100,26	0	
07-21-16	<i>GC meeting</i>	100,315	100,31	-0,005	07-20-16	100,315	0,005	
09-08-16	<i>GC meeting</i>	100,305	100,315	0,01	09-07-16	100,31	-0,005	
10-20-16	<i>GC meeting</i>	100,32	100,315	-0,005	10-19-16	100,31	-0,005	Yes(HK)
12-08-16	<i>GC meeting</i>	100,32	100,315	-0,005	12-07-16	100,315	0	
01-19-17	<i>GC meeting</i>	100,335	100,33	-0,005	01-18-17	100,335	0,005	
03-09-17	<i>GC meeting</i>	100,325	100,325	0	03-08-17	100,33	0,005	
04-27-17	<i>GC meeting</i>	100,33	100,325	-0,005	04-26-17	100,325	0	

Appendix IX: Program to estimate the impact of monetary policy on asset prices by IV

```

=====
#      Program to estimate the impact of monetary policy on asset prices by IV
#
#      Qian GAO
#
#      2018-05-24 -v0.1
=====

library(AER)          # install the package AER first, which can be done from RGui
rm (list = ls(all=TRUE)) # clear all the objects for a new run
graphics.off()

#-----The reaction of equity price to monetary policy surprise based on the heteroskedasticity -----
#
xdata <- read.csv(file = file.choose(),header = FALSE, sep = ",") # Manually choose the csv file to read
summary(xdata) # Summarize the data
View(xdata) # View the data in table form

Iacem <- xdata[,2] # Change of interest rates on the announcement dates t
Inacem <- xdata[,4] # Change of interest rates on the non-announcement dates t-1
Eacem <- xdata[,1] # Change of equity prices on the announcement dates t
Enacem <- xdata[,3] # change of equity prices on the non-announcement dates t-1

Interest <- t(cbind(t(Iacem),t(Inacem)))
Stockprice <- t(cbind(t(Eacem),t(Enacem)))

w1 <- t(cbind(t(Iacem), t(-Inacem))) # First instrument composed of change of interest rates
w2 <- t(cbind(t(Eacem), t(-Enacem))) # Second instrument composed of change of equity prices

Alpha1 <- ivreg (Stockprice ~ Interest | w1, data = xdata)
Alpha2 <- ivreg (Stockprice ~ Interest | w2, data = xdata)

print(summary(Alpha1))
print(summary(Alpha2))

```

Appendix X: Program to estimate the impact of monetary policy on asset prices by GMM

```

=====
#
#   Program to estimate the impact of monetary policy on asset prices by GMM
#
#   Qian GAO
#
#   2018-05-24 -v0.1
=====
rm (list = ls(all=TRUE))
graphics.off()
#----- Helper Functions-----
# Matrix inverse function
#-----

library(corpcor)
inv <- function (A) {
  return(solve(A))
}
#-----
# Returns a matrix (or vector) stripped of the specified rows
#
#   Inputs:
#       x = input matrix (or vector) (n x k)
#       rb = first n1 rows to strip
#       re = last  n2 rows to strip
#-----

trimr <- function(x,rb,re) {
  x <- cbind(x)
  n <- nrow(x)
  if ((rb+re) >= n) {
    stop('Attempting to trim too much')
  }
  z <- x[(rb+1):(n-re),]
  return(z)
}
#-----
# Mimic GAUSS vech( ) function by stacking columns of x
# on and below the diagonal
#-----

vech <- function(x) {
  rows <- nrow(x)
  cols <- ncol(x)
  y <- c()
  for (i in seq(rows)) {
    y <- c(y, x[i,1:i])
  }
  y <- cbind(y)
}
#-----
# Numeric gradient function
# Computes numerical gradient matrix at each observation
#-----
numgrad <- function( fun,x, ... ) {
  f0 <- fun(x, ... )          # n by 1
  n <- length( f0 )
  k <- length( x )
  fdf <- array(0, dim=c(n,k) )

  # Compute step size
  eps <- .Machine$double.eps
  dx <- sqrt( eps )*( abs( x ) + eps )
  xh <- x + dx
  dx <- xh - x
  ind <- dx < sqrt(eps)
  dx[ind] <- sqrt(eps)
}

```

```

# Compute gradient
xdx <- diag(dx) + x
for (i in seq(k)) {
  fdf[,i] <- fun(xdx[,i], ...)
}
G0 <- kronecker(matrix(1, 1, k), f0 )           # n by k
G1 <- kronecker(matrix(1, n, 1), t(dx) )
G <- ( fdf-G0 ) / G1
return(G)
}

#-----
# Define the moment equations
#
# Inputs:
#       Iacem = Change of Interest rate on the dates of announcements
#       Inacem = Change of interest rate on the dates of non-announcements
#       Eacem = change of equity price on the dates of announcements
#       Enacem = change of equity price on the dates of non-announcements
#-----

meqn <- function(b,Iacem,Inacem,Eacem,Enacem) {

  alpha <- b[1]
  # Parameter measuring the reaction of equity price to the change of interest rate

  lambda <- b[2]      # Parameter measuring the degree of heteroskedasticity

  c1 <- Iacem * Iacem - Inacem * Inacem - lambda
  c2 <- Iacem * Eacem - Inacem * Enacem - alpha * lambda
  c3 <- Eacem * Eacem - Enacem * Enacem - alpha * alpha * lambda

  zt <- cbind(c1,c2,c3)
  cols <- ncol(zt)
  rows <- nrow(zt)

  k <-1
  mt<-array(0,c(rows, cols))
  for (j in seq(cols)){
    mt[,k] <- zt[,j]
    k <- k+1
  }
  return(mt)
}

#-----
# Defines the mean of the moment conditions
#-----

meaneqn <- function(b,Iacem,Inacem,Eacem,Enacem) {
  ret <- colMeans(meqn(b,Iacem,Inacem,Eacem,Enacem))
  return(ret)
}

```

```

#-----
# GMM objective function which also computes the optimal w
#-----
q <- function(b,Iacem,Inacem,Eacem,Enacem,lmax){

  d <- meqn(b,Iacem,Inacem,Eacem,Enacem)
  g <- cbind(colMeans(d))

  w <- t(d) %%% d
  tau <- 1
  while (tau <= lmax) {
    wtau <- t( d[(tau+1):nrow(d),] ) %%% d[1:(nrow(d)-tau),]
    w <- w + (1.0-tau/(lmax+1))*(wtau + t(wtau))
    tau <- tau + 1
  }
  t <- length(Iacem)
  w <- w/t
  ret <- t(g) %%% inv(w) %%% g

  return(ret)
}

#
#----- The reaction of equity price to monetary policy surprise based on the heteroskedasticity -----
#

xdata <- read.csv(file = file.choose(),header = FALSE, sep = ",") # Manually choose the csv file to read
summary(xdata) # Summarize the data
view(xdata) # View the data in table form

gmm_alpha <- function()
{
  Iacem <- xdata[,2] # Change of Interest rate on the announcement dates t
  Inacem <- xdata[,4] # Change of Interest rate on the non-announcement dates t-1
  Eacem <- xdata[,1] # Change of Equity price on the announcement dates t
  Enacem <- xdata[,3] # Change of Equity price on the non-announcement dates t-1

  t <- length(Iacem)-1
  b0 <- c(0.5, 0.5)
  estResults <- optim(b0, q, Iacem=trimr(Iacem,0,1), Inacem=trimr(Inacem,0,1), Eacem=trimr(Eacem,0,1), Enacem=trimr(Enacem,0,1), lmax=0, method="BFGS")
  bgmm <- estResults$par
  qmin <- estResults$value

  # Numerical gradient at optimum
  dg <- numgrad(meaneqn,bgmm,trimr(Iacem,0,1),trimr(Inacem,0,1),trimr(Eacem,0,1),trimr(Enacem,0,1))

  # Compute optimal w
  d <- meqn(bgmm,trimr(Iacem,0,1),trimr(Inacem,0,1),trimr(Eacem,0,1),trimr(Enacem,0,1))
  g <- cbind(colMeans(d))
  w <- t(d) %%% d
  tau <- 1
  lmax <- 0
  while (tau <= lmax) {
    wtau <- t( d[(tau+1):nrow(d),] ) %%% d[1:(nrow(d)-tau),]
    w <- w + (1.0-tau/(lmax+1))*(wtau + t(wtau))
    tau <- tau + 1
  }
  w <- w/t
  v <- t(dg) %%% inv(w) %%% dg

  # Hansen Sargan J Test
  j_stat <- t*q(bgmm,trimr(Iacem,0,1),trimr(Inacem,0,1),trimr(Eacem,0,1),trimr(Enacem,0,1), 0)

  cat('\nThe value of the objective function (q) = ', qmin )
  cat('\nJ-test is = ', j_stat, '\n' )

  se <- sqrt(diag(inv(v)/t))
  print(cbind(Estimates=bgmm, se=se, t=bgmm/se))
}
summary(gmm_alpha())

```

Appendix XI: Data on international trades (in millions US dollars).

Mainland China	GDP	Export	Import	Global	Ratio 1	Ratio 2	Export	Import	Global	Ratio 1	Ratio 2
2005	2.285.965,89	163.348,33	48.994,47	212.342,80	0,09	0,07	112.739,48	62.427,99	175.167,47	0,08	0,05
2006	2.752.131,77	203.897,94	59.326,08	263.224,02	0,10	0,07	141.327,92	77.208,06	218.535,98	0,08	0,05
2007	3.552.182,31	233.180,64	69.997,60	303.178,24	0,09	0,07	186.012,87	93.702,02	279.714,89	0,08	0,05
2008	4.598.206,09	252.786,39	81.722,63	334.509,02	0,07	0,05	221.804,80	111.343,81	333.148,61	0,07	0,05
2009	5.109.953,61	221.384,35	77.772,47	299.156,82	0,06	0,04	175.913,50	107.630,65	283.544,15	0,06	0,03
2010	6.100.620,49	283.678,83	101.959,20	385.638,03	0,06	0,05	235.049,34	141.908,17	376.957,51	0,06	0,04
2011	7.572.553,84	324.856,47	119.163,74	444.020,21	0,06	0,04	269.215,16	178.477,67	447.692,83	0,06	0,04
2012	8.560.547,31	352.539,59	128.637,61	481.177,20	0,06	0,04	246.794,52	177.307,16	424.101,68	0,05	0,03
2013	9.607.224,48	369.006,71	146.979,15	515.985,86	0,05	0,04	245.376,60	180.544,29	425.920,89	0,04	0,03
2014	10.482.372,10	397.099,31	154.136,22	551.235,53	0,05	0,04	266.887,70	197.659,68	464.547,38	0,04	0,03
2015	11.064.666,30	410.782,82	144.867,08	555.649,90	0,05	0,04	250.678,98	169.029,34	419.708,32	0,04	0,02
2016	11.199.145,20	389.714,45	135.662,28	525.376,73	0,05	0,03	240.802,51	168.328,73	409.131,24	0,04	0,02
In Millions of US Dollars											
The U.S.											
The EA											
Hong Kong	GDP	Export	Import	Global	Ratio 1	Ratio 2	Export	Import	Global	Ratio 1	Ratio 2
2005	181.570,08	46.504,72	15.444,05	61.948,77	0,34	0,26	29.492,83	17.446,83	46.939,66	0,26	0,16
2006	193.536,27	47.873,95	16.046,65	63.920,60	0,33	0,25	30.848,00	18.855,05	49.703,05	0,26	0,16
2007	211.597,41	47.316,00	17.952,53	65.268,53	0,31	0,22	32.644,61	20.849,70	53.494,31	0,25	0,15
2008	219.279,68	46.289,88	19.541,14	65.831,02	0,30	0,21	35.073,71	22.762,73	57.836,44	0,26	0,16
2009	214.046,42	36.897,32	18.550,26	55.447,58	0,26	0,17	28.295,21	20.705,53	49.000,74	0,23	0,13
2010	228.637,70	42.821,45	23.322,56	66.144,01	0,29	0,19	31.073,92	24.696,31	55.770,23	0,24	0,14
2011	248.513,62	42.646,48	27.404,87	70.051,35	0,28	0,17	33.829,31	30.119,69	63.949,00	0,26	0,14
2012	262.629,44	43.799,01	26.695,98	70.494,99	0,27	0,17	31.177,57	29.661,06	60.838,63	0,23	0,12
2013	275.696,88	42.785,56	28.547,21	71.332,77	0,26	0,16	31.226,33	30.703,66	61.929,99	0,22	0,11
2014	291.459,36	44.149,88	28.413,61	72.563,49	0,25	0,15	31.925,72	30.859,72	62.785,44	0,22	0,11
2015	309.403,88	42.140,74	30.961,15	73.101,89	0,24	0,14	30.613,32	27.418,90	58.032,22	0,19	0,10
2016	320.910,17	41.800,16	28.249,95	70.050,11	0,22	0,13	30.470,82	26.839,79	57.310,61	0,18	0,09

Sources: IMF and World Bank Group

Appendix XII: Computation of percentages of the equity market capitalization (U.S. & EA).

	Equity market capitalizations (US Dollars, Millions)	
	2015	2016
Mainland China	8.188.019,32	7.320.738,38
Hong Kong	3.184.874,22	3.193.235,54

	Equity holding of foreign investors (US Dollars, Millions)							
	U.S.				EA			
	Jun-15	Dec-15	Jun-16	Dec-16	Jun-15	Dec-15	Jun-16	Dec-16
Mainland China	116.724	111.144	116.555	125.687	29.856	28.552	31.134	35.681
Hong Kong	106.697	118.527	130.586	134.415	91.878	94.659	102.334	108.669

	Equity holding of foreign investors in the members of the euro area (US Dollars, Millions)							
	Mainland China				Hong Kong			
	Jun-15	Dec-15	Jun-16	Dec-16	Jun-15	Dec-15	Jun-16	Dec-16
Austria	6.492	5.977	5.803	7.362	168	214	102	152
Belgium	2.152	1.267	1.191	691	680	548	302	655
Cyprus	2	3	1.211	1.160	39	30	22	23
Estonia	0	0	0	0	0	0	0	0
Finland	363	418	400	384	752	801	1.129	1.071
France	5.039	4.906	5.032	5.431	8.215	8.408	9.621	10.227
Germany	4.844	4.999	5.140	6.558	13.547	15.956	16.484	17.683
Greece	37	27	22	27	0	5	0	5
Ireland	2.215	2.248	2.855	3.098	10.955	9.689	9.972	11.872
Italy	1.158	1.164	939	1.079	0	0	0	0
Latvia	0	0	0	0	0	0	0	0
Lithuania	0	0	0	5	0	0	0	6
Luxembourg	3.876	3.700	4.558	5.527	49.764	50.669	56.546	58.875
Malta	8	7	4	0	0	0	0	0
Netherlands	2.409	2.647	2.814	3.100	7.186	7.670	7.562	7.503
Portugal	83	85	80	89	12	17	8	10
Slovakia	0	2	2	2	0	0	6	0
Slovenia	16	14	12	28	10	14	10	11
Spain	1.162	1.088	1.071	1.140	550	638	570	576

*: Data for the investments of Italy and Malta on Hong Kong were suppressed in order to preserve confidentiality

Sources: IMF and World Bank Group

Appendix XIII: Computation of percentages of stocks of bank lending from a foreign economy.

Stocks of bank lending from the U.S. and the euro area (US Dollars, Millions)												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Main CN (U.S.)	14.576	20.913	27.109	21.481	63.556	69.556	65.838	70.605	81.204	97.817	86.309	73.890
HK (U.S.)	23.520	22.100	21.367	22.693	33.507	44.959	55.566	62.504	64.339	66.028	61.874	70.215
Main CN (Euro area)	20.426	31.805	55.604	37.071	45.822	55.871	41.414	64.361	97.653	109.422	74.900	78.175
HK (Euro area)	51.702	66.509	64.377	62.095	53.805	62.843	54.987	52.216	65.970	70.190	61.952	56.590

GDP (US Dollars, Millions)												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Main CN	2.285.966	2.752.132	3.552.182	4.598.206	5.109.954	6.100.620	7.572.554	8.560.547	9.607.224	10.482.372	11.064.666	11.199.145
HK	181.570	193.536	211.597	219.280	214.046	228.638	248.514	262.629	275.697	291.459	309.404	320.910

Stocks of bank lending from the members of the EA (US Dollars, Millions)												
Main CN*	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Austria	730	1.066	1.794	570	2.048				2.728	2.359	1.261	753
Belgium	1.768	2.980	7.099	4.447	1.508	1.065	1.314	977	2.074	2.276	1.215	1.106
Finland						23	9					
France	8.153	11.358	21.636	15.020	15.359	24.178	2.731	31.483	45.645	56.779	37.845	40.767
Germany	8.708	15.237	21.369	12.831	20.830	18.775	25.367	21.225	32.315	41.577	26.464	25.806
Greece		1			14	4	3	2	82	23	20	30
Ireland									58	29	12	4
Italy	833	896	2.174	1.079	2.378	4.100	3.316	2.445	7.644	6.379	2.924	5.386
Spain	234	267	1.532	3.124	3.685	7.726	8.674	8.229	7.107		5.159	4.323

*: Data for Austria, Cyprus, Estonia, Finland, Greece, Ireland, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia and Spain are completely or partially not available

Stocks of bank lending from the members of the EA (US Dollars, Millions)												
HK*	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Austria	961	222	1.068	1.699	743	381	732	215	215	645	348	282
Belgium	5.432	5.190	7.773	3.697	1.166	1.345	807	644	822	749	661	510
Finland										10	5	3
France	20.007	25.726	24.423	28.331	25.779	29.927	21.926	21.945	26.098	25.679	24.848	24.590
Germany	12.199	13.911	12.919	14.229	11.729	13.551	12.137	13.082	15.376	15.055	14.361	9.571
Greece	4	37	35	147	226	234	294	349	294	373	56	51
Ireland									20	70	65	61
Italy	2.441	2.001	3.105	1.060	1.810	1.438	1.097	990	1.369	1.802	1.220	1.097
Netherlands	10.295	11.325	12.056	10.213	8.871	9.565	12.384	10.514	14.334	16.209	11.515	14.171
Spain	363	8.097	2.998	2.719	3.481	6.402	5.610	4.477	7.442	9.598	8.873	6.254

*: Data for Cyprus, Estonia, Finland, Ireland, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Slovakia, and Slovenia are completely or partially not available

Ratio 5: Stocks of bank lending from a foreign economy as a percentage of GDP												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Main CN (U.S.)	0,64%	0,76%	0,76%	0,47%	1,24%	1,14%	0,87%	0,82%	0,85%	0,93%	0,78%	0,66%
HK (U.S.)	12,95%	11,42%	10,10%	10,35%	15,65%	19,66%	22,36%	23,80%	23,34%	22,65%	20,00%	21,88%
Main CN (EA)	0,89%	1,16%	1,57%	0,81%	0,90%	0,92%	0,55%	0,75%	1,02%	1,04%	0,68%	0,70%
HK (EA)	28,47%	34,37%	30,42%	28,32%	25,14%	27,49%	22,13%	19,88%	23,93%	24,08%	20,02%	17,63%

Sources: IMF and BIS

Appendix XIV: Data about the Chinese industry.

Shenzhen stock exchange			
Industry	Amounts	Market Value (100 M in RMB)	Percentage
Agriculture	31	3.596,04	1,67%
Mining	28	2.679,42	1,24%
Manufacturing	1393	139.142,57	64,47%
Utilities	41	3.950,13	1,83%
Construction	51	4.931,21	2,28%
Wholesale & Retail	71	7.101,11	3,29%
Transportation	30	2.161,51	1,00%
Hotels & Catering	9	381,90	0,18%
IT	170	18.327,15	8,49%
Finance	18	9.059,92	4,20%
Real Estate	64	10.702,68	4,96%
Business Support	28	4.451,19	2,06%
Research & Development	17	899,68	0,42%
Environmental Protection	22	2.819,44	1,31%
Education	1	35,21	0,02%
Public Health	5	1.089,10	0,50%
Media	28	3.867,35	1,79%
Conglomerates	8	641,88	0,30%
Total	2015	215.837,50	100,00%

Shanghai stock exchange			
Industry	Amounts	Market Value (100 M in RMB)	Percentage
Agriculture	15	942,00	0,32%
Mining	48	30.869,34	10,37%
Manufacturing	724	94.803,28	31,84%
Utilities	61	14.423,84	4,84%
Construction	47	14.144,56	4,75%
Wholesale & Retail	96	10.010,08	3,36%
Transportation	68	15.159,57	5,09%
Hotels & Catering	4	438,29	0,15%
IT	52	7.672,77	2,58%
Finance	52	88.516,10	29,73%
Real Estate	75	11.814,01	3,97%
Business Support	16	2.014,95	0,68%
Research & Development	13	832,57	0,28%
Environmental Protection	16	1.265,62	0,43%
Education	2	210,05	0,07%
Public Health	2	148,01	0,05%
Media	22	3.209,21	1,08%
Conglomerates	15	1.301,02	0,44%
Total	1.328	297.775,27	100,00%

Sources: Shenzhen Stock Exchange and Shanghai Stock Exchange