

Table 3: Combined Specification Parameter Estimates (Controlling for Crises)

	$\alpha$	$\gamma$	$\beta$	$\lambda_0$	$\lambda_1$	$\lambda_2$	$\delta_0$	$\delta_{1,s}$	$\delta_{1,l}$	$\delta_1$	$\theta_0$	$\theta_{1,s}$	$\theta_{1,l}$	$\theta_1$	LLF	BIC
<b>Panel A: Short-term component</b>																
Proportional	0.007 (0.014)	0.158*** (0.019)	0.841*** (0.018)	0.012 (0.020)	0.086 (0.150)	0.900*** (0.173)	-	0.027** (0.011)	-	-	-	-0.013 (0.020)	-	-	-18567.209	37211.574
Non-Proportional	0.005* (0.003)	0.166*** (0.015)	0.845*** (0.012)	0.011*** (0.002)	0.081*** (0.018)	0.907*** (0.018)	0.033*** (0.007)	-0.003*** (0.001)	-	-	0.009 (0.008)	-0.009 (0.009)	-	-	-18562.245	37220.934
LRT	9.928***															
<b>Panel B: Long-term component</b>																
Proportional	0.006** (0.003)	0.160*** (0.015)	0.842*** (0.013)	0.011*** (0.003)	0.085*** (0.018)	0.902*** (0.020)	-	-	0.049*** (0.009)	-	-	-	-0.002 (0.001)	-	-18558.337	<b>37193.830</b>
Non-Proportional	0.006* (0.004)	0.161*** (0.015)	0.843*** (0.014)	0.011* (0.006)	0.080*** (0.030)	0.907*** (0.036)	0.003 (0.003)	-	0.045*** (0.017)	-	-0.054 (0.060)	-	0.049 (0.049)	-	-18557.658	37211.761
LRT	1.358															
<b>Panel C: Both components (additive)</b>																
Proportional	0.006 (0.013)	0.161*** (0.015)	0.844*** (0.016)	0.012* (0.006)	0.085** (0.035)	0.901*** (0.042)	-	-0.005 (0.021)	0.054** (0.023)	-	-	-0.012** (0.006)	0.009 (0.012)	-	-18557.874	37212.192
Non-Proportional	0.006 (0.003)	0.162*** (0.016)	0.844*** (0.014)	0.011 (0.007)	0.081** (0.036)	0.906*** (0.043)	0.008 (0.006)	-0.008 (0.007)	0.046*** (0.012)	-	-0.050 (0.067)	-0.002 (0.002)	0.048 (0.041)	-	-18557.379	37230.491
LRT	0.990															
<b>Panel D: Overall conditional variance (multiplicative)</b>																
Proportional	0.007 (0.009)	0.158*** (0.016)	0.839*** (0.014)	0.011** (0.005)	0.080*** (0.031)	0.907*** (0.035)	-	-	-	0.042*** (0.010)	-	-	-	-0.014* (0.008)	-18562.833	37202.821
Non-Proportional	0.006 (0.012)	0.162*** (0.025)	0.841*** (0.018)	0.011 (0.016)	0.080 (0.084)	0.908*** (0.101)	0.020 (0.059)	-	-	0.023 (0.083)	-0.005 (0.016)	-	-	-0.004 (0.022)	-18560.408	37217.261
LRT	4.850*															

**Notes:** This table shows the results of the QMLE parameter estimates for the combined MF2-GARCH-in-mean model. The numbers in parentheses are Bollerslev–Wooldridge robust standard errors. \*\*\*, \*\* and \* indicate significance at the 1%, 5% and 10% level. Panel A and B show the results for the specifications where only the short- or long-term component is included. Panel C shows one where both are included additively, such that each has its own coefficient. Panel D shows one where the regressor is overall conditional variance. Each panel shows the proportional (no intercept) and non-proportional variant. The likelihood ratio test (LRT) statistic for the proportional variant against the non-proportional variant is also shown at the bottom of each panel. All specifications are estimated using daily U.S. market premium data for the period January 1964 to April 2025 inclusive. The moving average window size (m) which minimizes the Bayesian Information Criterion for all specifications is m=63