

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

**Notes:** This table shows the results of the QMLE parameter estimates for the 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. Each panel shows the results for a different specification, depending on which components of volatility are included. 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