

Traveling the Digital Frontier: Exploring the Connectedness of Tourism, Fintech, and Cryptocurrency Markets

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Online Appendix

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Figure A1: Net pairwise spillover (Part 1)

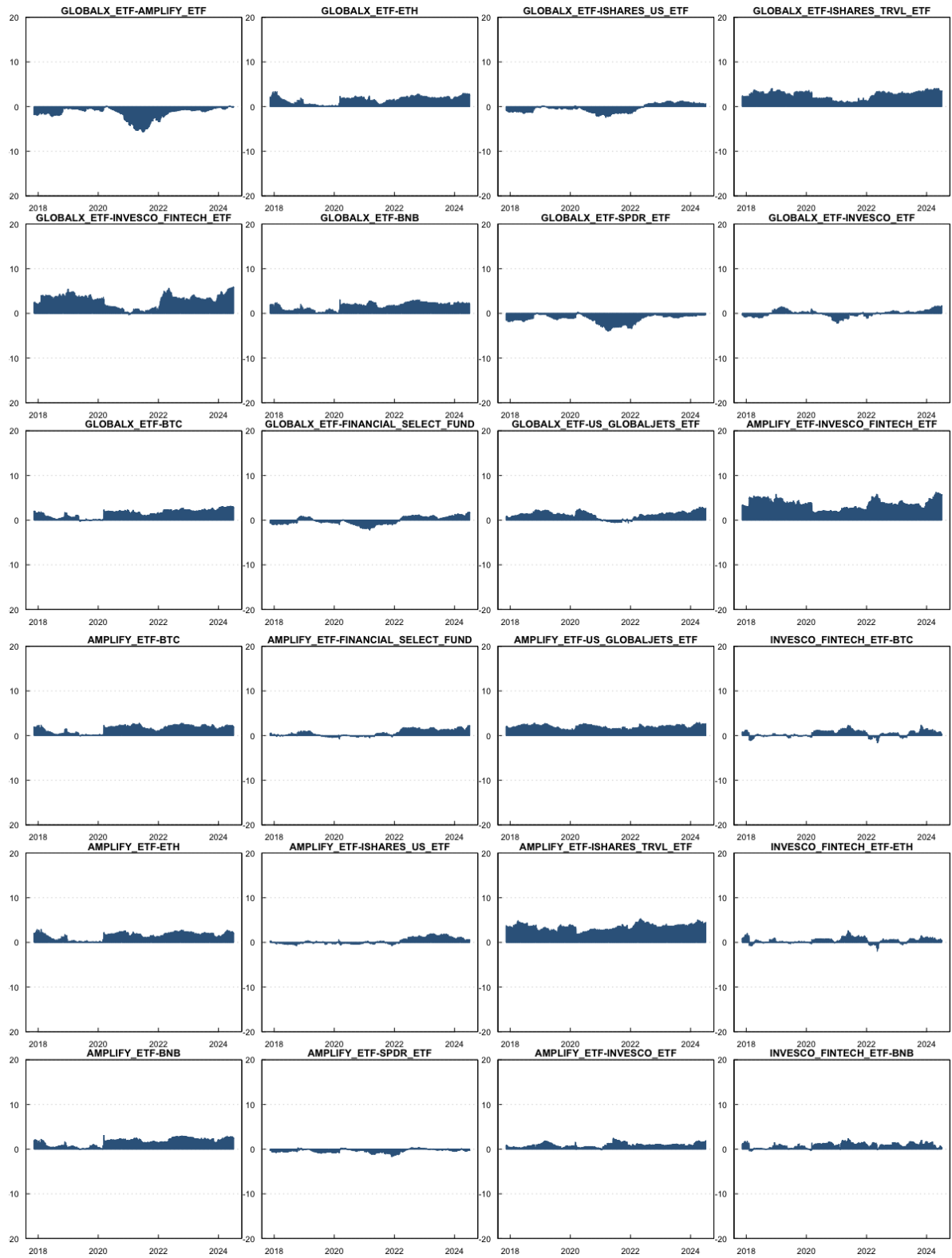


Figure A2: Net pairwise spillover (Part 2)

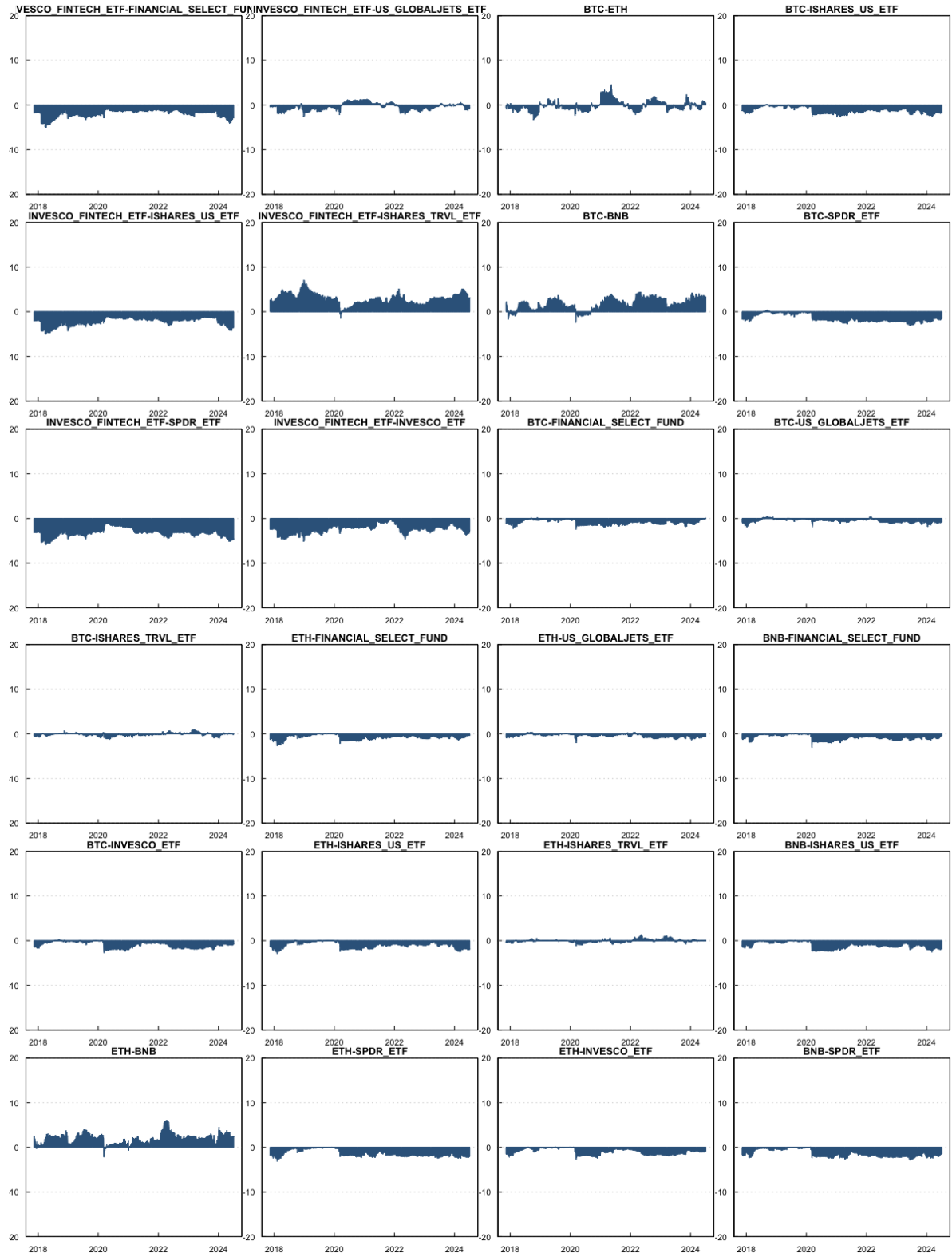


Figure A3: Dynamic pairwise spillover (Part 3)

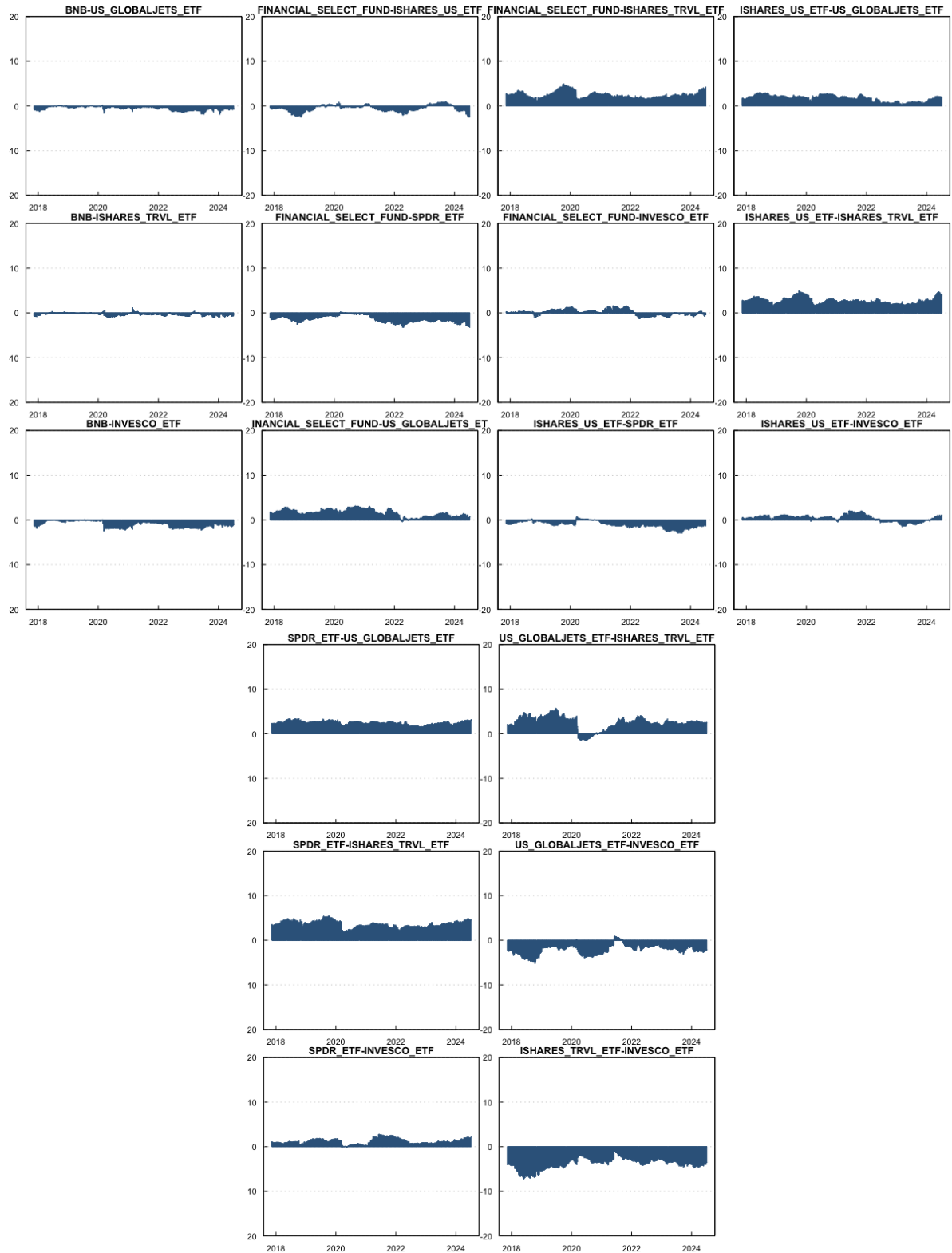


Table A1: Bilateral hedge ratios

Pair	Mean	Std. Dev.	5%	95%	HE	p-value
GLOBALX.ETF – AMPLIFY.ETF	1.061	0.141	0.841	1.265	-0.048	0.516
GLOBALX.ETF – INVESCO.FINTECH.ETF	0.828	0.196	0.495	1.123	0.074*	0.077
GLOBALX.ETF – BTC	0.155	0.149	-0.029	0.442	-3.028***	0.000
GLOBALX.ETF – ETH	0.124	0.126	-0.014	0.360	-5.918***	0.000
GLOBALX.ETF – BNB	0.120	0.114	-0.019	0.326	-6.821***	0.000
GLOBALX.ETF – FINANCIAL.SELECT.FUND	0.849	0.399	0.235	1.461	-0.092	0.821
GLOBALX.ETF – ISHARES.US.ETF	0.881	0.330	0.362	1.394	-0.082	0.894
GLOBALX.ETF – SPDR.ETF	0.946	0.282	0.544	1.380	-0.087	0.630
GLOBALX.ETF – US.GLOBALJETS.ETF	0.543	0.248	0.140	0.943	-0.093	0.906
GLOBALX.ETF – ISHARES.TRVL.ETF	0.542	0.249	0.198	0.966	0.193***	0.000
GLOBALX.ETF – INVESCO.ETF	0.904	0.319	0.344	1.376	-0.085	0.582
AMPLIFY.ETF – GLOBALX.ETF	0.809	0.092	0.677	1.032	-0.050	0.436
AMPLIFY.ETF – INVESCO.FINTECH.ETF	0.754	0.167	0.456	1.009	0.080*	0.076
AMPLIFY.ETF – BTC	0.118	0.122	-0.033	0.336	-4.162***	0.000
AMPLIFY.ETF – ETH	0.095	0.103	-0.012	0.289	-7.861***	0.000
AMPLIFY.ETF – BNB	0.096	0.093	-0.018	0.270	-8.965***	0.000
AMPLIFY.ETF – FINANCIAL.SELECT.FUND	0.849	0.267	0.441	1.278	0.001	0.654
AMPLIFY.ETF – ISHARES.US.ETF	0.840	0.212	0.523	1.197	0.016	0.510
AMPLIFY.ETF – SPDR.ETF	0.870	0.178	0.583	1.164	0.008	0.576
AMPLIFY.ETF – US.GLOBALJETS.ETF	0.512	0.176	0.251	0.820	-0.186	0.146
AMPLIFY.ETF – ISHARES.TRVL.ETF	0.504	0.192	0.225	0.846	0.154***	0.002
AMPLIFY.ETF – INVESCO.ETF	0.835	0.221	0.439	1.155	-0.008	0.831
INVESCO.FINTECH.ETF – GLOBALX.ETF	0.482	0.117	0.296	0.679	-0.209***	0.004
INVESCO.FINTECH.ETF – AMPLIFY.ETF	0.572	0.127	0.373	0.805	-0.050	0.921
INVESCO.FINTECH.ETF – BTC	0.072	0.076	-0.021	0.217	-6.620***	0.000
INVESCO.FINTECH.ETF – ETH	0.060	0.064	-0.013	0.179	-12.072***	0.000
INVESCO.FINTECH.ETF – BNB	0.064	0.063	-0.014	0.183	-13.593***	0.000
INVESCO.FINTECH.ETF – FINANCIAL.SELECT.FUND	0.537	0.201	0.233	0.918	0.048*	0.094
INVESCO.FINTECH.ETF – ISHARES.US.ETF	0.559	0.161	0.308	0.842	0.085*	0.055
INVESCO.FINTECH.ETF – SPDR.ETF	0.588	0.160	0.327	0.860	0.089	0.141
INVESCO.FINTECH.ETF – US.GLOBALJETS.ETF	0.324	0.137	0.155	0.573	-0.684***	0.000
INVESCO.FINTECH.ETF – ISHARES.TRVL.ETF	0.555	0.185	0.264	0.876	-0.047	0.681
INVESCO.FINTECH.ETF – INVESCO.ETF	0.509	0.168	0.218	0.805	-0.076	0.530
BTC – GLOBALX.ETF	0.562	0.613	-0.530	1.275	-0.187**	0.035
BTC – AMPLIFY.ETF	0.586	0.680	-0.499	1.510	-0.307	0.126
BTC – INVESCO.FINTECH.ETF	0.526	0.642	-0.460	1.712	-0.325***	0.001
BTC – ETH	0.662	0.145	0.431	0.911	-0.173**	0.025
BTC – BNB	0.564	0.215	0.217	0.936	-0.322***	0.001
BTC – FINANCIAL.SELECT.FUND	0.463	0.776	-0.797	1.600	-0.357**	0.031
BTC – ISHARES.US.ETF	0.524	0.843	-1.008	1.747	-0.531	0.415
BTC – SPDR.ETF	0.584	0.781	-0.813	1.669	-0.478	0.579
BTC – US.GLOBALJETS.ETF	0.296	0.522	-0.636	1.046	0.210***	0.000
BTC – ISHARES.TRVL.ETF	0.262	0.673	-0.836	1.297	-0.222***	0.000
BTC – INVESCO.ETF	0.379	0.787	-1.225	1.362	-0.326***	0.004
ETH – GLOBALX.ETF	0.768	0.631	-0.277	1.694	-0.368	0.106
ETH – AMPLIFY.ETF	0.781	0.712	-0.308	1.790	-0.438	0.453
ETH – INVESCO.FINTECH.ETF	0.742	0.840	-0.301	2.251	-1.303	0.765
ETH – BTC	1.074	0.236	0.769	1.434	-0.107	0.252
ETH – BNB	0.745	0.258	0.296	1.149	-0.069	0.523
ETH – FINANCIAL.SELECT.FUND	0.662	0.868	-0.662	2.039	-0.463	0.432
ETH – ISHARES.US.ETF	0.725	0.942	-0.774	2.198	-0.682	0.532
ETH – SPDR.ETF	0.790	0.872	-0.674	2.192	-0.703	0.253
ETH – US.GLOBALJETS.ETF	0.349	0.537	-0.564	1.276	0.324***	0.000
ETH – ISHARES.TRVL.ETF	0.426	0.730	-0.705	1.677	-0.173***	0.000
ETH – INVESCO.ETF	0.596	0.847	-0.961	1.838	-0.355*	0.079
BNB – GLOBALX.ETF	0.784	0.906	-0.515	2.086	-2.391*	0.051
BNB – AMPLIFY.ETF	0.824	0.915	-0.560	2.201	-2.226**	0.012
BNB – INVESCO.FINTECH.ETF	0.773	0.859	-0.418	2.570	-3.044*	0.081
BNB – BTC	0.880	0.260	0.428	1.289	0.038	0.612
BNB – ETH	0.705	0.165	0.436	0.967	0.159	0.155
BNB – FINANCIAL.SELECT.FUND	0.636	0.854	-0.978	1.815	-0.817	0.749

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Table A1: Summary of dynamic optimal bilateral hedge ratios (continued)

Pair	Mean	Std. Dev.	5%	95%	HE	p-value
BNB – ISHARES_US.ETF	0.693	0.913	-1.212	1.929	-1.138	0.225
BNB – SPDR.ETF	0.799	0.955	-0.849	2.380	-1.918***	0.006
BNB – US.GLOBALJETS.ETF	0.328	0.637	-0.875	1.276	-0.018***	0.000
BNB – ISHARES_TRVL.ETF	0.469	0.706	-0.688	1.517	-0.791***	0.000
BNB – INVESCO.ETF	0.554	0.986	-1.102	1.609	-1.981	0.892
FINANCIAL_SELECT.FUND – GLOBALX.ETF	0.453	0.223	0.176	0.964	-0.254***	0.000
FINANCIAL_SELECT.FUND – AMPLIFY.ETF	0.603	0.192	0.357	0.985	-0.057	0.382
FINANCIAL_SELECT.FUND – INVESCO.FINTECH.ETF	0.506	0.198	0.213	0.900	0.043	0.262
FINANCIAL_SELECT.FUND – BTC	0.067	0.092	-0.046	0.243	-5.801***	0.000
FINANCIAL_SELECT.FUND – ETH	0.056	0.075	-0.029	0.212	-10.539***	0.000
FINANCIAL_SELECT.FUND – BNB	0.056	0.074	-0.034	0.224	-11.898***	0.000
FINANCIAL_SELECT.FUND – ISHARES_US.ETF	0.881	0.129	0.644	1.106	-0.013	0.900
FINANCIAL_SELECT.FUND – SPDR.ETF	0.834	0.152	0.589	1.142	-0.043	0.647
FINANCIAL_SELECT.FUND – US.GLOBALJETS.ETF	0.461	0.142	0.251	0.693	-0.393***	0.000
FINANCIAL_SELECT.FUND – ISHARES_TRVL.ETF	0.377	0.167	0.113	0.653	0.043	0.624
FINANCIAL_SELECT.FUND – INVESCO.ETF	0.685	0.241	0.283	1.117	-0.035	0.839
ISHARES_US.ETF – GLOBALX.ETF	0.506	0.180	0.264	0.915	-0.194***	0.004
ISHARES_US.ETF – AMPLIFY.ETF	0.639	0.146	0.447	0.925	-0.023	0.785
ISHARES_US.ETF – INVESCO.FINTECH.ETF	0.563	0.160	0.359	0.875	0.088*	0.066
ISHARES_US.ETF – BTC	0.077	0.092	-0.042	0.246	-5.924***	0.000
ISHARES_US.ETF – ETH	0.064	0.076	-0.031	0.225	-10.837***	0.000
ISHARES_US.ETF – BNB	0.062	0.073	-0.034	0.202	-12.274***	0.000
ISHARES_US.ETF – FINANCIAL_SELECT.FUND	0.941	0.099	0.791	1.135	-0.011	0.927
ISHARES_US.ETF – SPDR.ETF	0.891	0.090	0.780	1.051	-0.012	0.941
ISHARES_US.ETF – US.GLOBALJETS.ETF	0.451	0.122	0.269	0.651	-0.421***	0.000
ISHARES_US.ETF – ISHARES_TRVL.ETF	0.386	0.125	0.211	0.617	0.064	0.268
ISHARES_US.ETF – INVESCO.ETF	0.699	0.195	0.351	1.061	-0.018	0.862
SPDR.ETF – GLOBALX.ETF	0.580	0.148	0.337	0.866	-0.151**	0.043
SPDR.ETF – AMPLIFY.ETF	0.705	0.136	0.482	0.926	-0.022	0.957
SPDR.ETF – INVESCO.FINTECH.ETF	0.621	0.144	0.406	0.897	0.123**	0.015
SPDR.ETF – BTC	0.094	0.103	-0.043	0.288	-5.848***	0.000
SPDR.ETF – ETH	0.077	0.082	-0.025	0.242	-10.718***	0.000
SPDR.ETF – BNB	0.075	0.077	-0.029	0.220	-12.182***	0.000
SPDR.ETF – FINANCIAL_SELECT.FUND	0.946	0.151	0.707	1.175	-0.038	0.767
SPDR.ETF – ISHARES_US.ETF	0.945	0.103	0.763	1.093	-0.014	0.949
SPDR.ETF – US.GLOBALJETS.ETF	0.499	0.149	0.297	0.759	-0.433***	0.000
SPDR.ETF – ISHARES_TRVL.ETF	0.438	0.148	0.243	0.694	0.066*	0.095
SPDR.ETF – INVESCO.ETF	0.777	0.226	0.373	1.160	-0.062	0.781
US.GLOBALJETS.ETF – GLOBALX.ETF	0.612	0.234	0.261	1.116	0.016	0.333
US.GLOBALJETS.ETF – AMPLIFY.ETF	0.795	0.262	0.468	1.363	-0.042	0.680
US.GLOBALJETS.ETF – INVESCO.FINTECH.ETF	0.674	0.303	0.318	1.361	-0.065*	0.083
US.GLOBALJETS.ETF – BTC	0.105	0.121	-0.053	0.339	-1.961***	0.000
US.GLOBALJETS.ETF – ETH	0.083	0.107	-0.037	0.288	-4.072***	0.000
US.GLOBALJETS.ETF – BNB	0.078	0.097	-0.042	0.263	-4.740***	0.000
US.GLOBALJETS.ETF – FINANCIAL_SELECT.FUND	1.003	0.268	0.540	1.490	-0.153	0.289
US.GLOBALJETS.ETF – ISHARES_US.ETF	0.934	0.284	0.557	1.532	-0.138	0.631
US.GLOBALJETS.ETF – SPDR.ETF	0.961	0.283	0.606	1.654	-0.217	0.320
US.GLOBALJETS.ETF – ISHARES_TRVL.ETF	0.683	0.216	0.343	1.104	0.098**	0.010
US.GLOBALJETS.ETF – INVESCO.ETF	1.095	0.222	0.719	1.487	-0.159	0.135
ISHARES_TRVL.ETF – GLOBALX.ETF	0.367	0.175	0.142	0.686	0.022	0.496
ISHARES_TRVL.ETF – AMPLIFY.ETF	0.468	0.210	0.149	0.808	0.132*	0.094
ISHARES_TRVL.ETF – INVESCO.FINTECH.ETF	0.672	0.274	0.293	1.111	0.007	0.686
ISHARES_TRVL.ETF – BTC	0.061	0.097	-0.047	0.260	-4.633***	0.000
ISHARES_TRVL.ETF – ETH	0.054	0.083	-0.042	0.228	-8.603***	0.000
ISHARES_TRVL.ETF – BNB	0.064	0.079	-0.021	0.219	-9.743***	0.000
ISHARES_TRVL.ETF – FINANCIAL_SELECT.FUND	0.479	0.215	0.109	0.796	0.207***	0.000
ISHARES_TRVL.ETF – ISHARES_US.ETF	0.472	0.199	0.171	0.783	0.230***	0.000
ISHARES_TRVL.ETF – SPDR.ETF	0.499	0.200	0.195	0.815	0.213***	0.002
ISHARES_TRVL.ETF – US.GLOBALJETS.ETF	0.399	0.146	0.132	0.617	-0.196*	0.074
ISHARES_TRVL.ETF – INVESCO.ETF	0.519	0.176	0.210	0.752	0.146***	0.004

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Table A1: Summary of dynamic optimal bilateral hedge ratios (continued)

Pair	Mean	Std. Dev.	5%	95%	HE	p-value
INVESCO.ETF – GLOBALX.ETF	0.546	0.173	0.328	0.987	-0.112**	0.047
INVESCO.ETF – AMPLIFY.ETF	0.677	0.176	0.397	1.042	-0.011	0.806
INVESCO.ETF – INVESCO.FINTECH.ETF	0.551	0.216	0.275	1.014	0.081*	0.090
INVESCO.ETF – BTC	0.088	0.111	-0.041	0.298	-4.362***	0.000
INVESCO.ETF – ETH	0.073	0.094	-0.025	0.284	-8.142***	0.000
INVESCO.ETF – BNB	0.070	0.086	-0.033	0.238	-9.363***	0.000
INVESCO.ETF – FINANCIAL.SELECT.FUND	0.762	0.214	0.352	1.122	0.050	0.407
INVESCO.ETF – ISHARES.US.ETF	0.740	0.194	0.421	1.039	0.035	0.460
INVESCO.ETF – SPDR.ETF	0.767	0.190	0.479	1.128	-0.030	0.988
INVESCO.ETF – US.GLOBALJETS.ETF	0.566	0.116	0.394	0.779	-0.182**	0.022
INVESCO.ETF – ISHARES.TRVLE.ETF	0.472	0.166	0.222	0.767	0.089	0.116

Table A2: Summary of dynamic optimal bilateral portfolio weights

Pair	Mean	Std. Dev.	5%	95%	HE	p-value
GLOBALX.ETF – AMPLIFY.ETF	0.835	0.298	0.000	1.000	-0.020	0.984
GLOBALX.ETF – INVESCO.FINTECH.ETF	0.824	0.158	0.548	1.000	0.091*	0.058
GLOBALX.ETF – BTC	0.093	0.080	0.000	0.230	-3.363***	0.000
GLOBALX.ETF – ETH	0.043	0.056	0.000	0.162	-6.774***	0.000
GLOBALX.ETF – BNB	0.070	0.087	0.000	0.268	-7.506***	0.000
GLOBALX.ETF – FINANCIAL.SELECT.FUND	0.735	0.300	0.063	1.000	0.009	0.274
GLOBALX.ETF – ISHARES.US.ETF	0.757	0.252	0.249	1.000	0.052	0.124
GLOBALX.ETF – SPDR.ETF	0.806	0.235	0.298	1.000	0.039	0.281
GLOBALX.ETF – US.GLOBALJETS.ETF	0.464	0.260	0.000	0.891	-0.361	0.112
GLOBALX.ETF – ISHARES.TRVL.ETF	0.655	0.226	0.207	0.971	0.157***	0.005
GLOBALX.ETF – INVESCO.ETF	0.777	0.303	0.011	1.000	-0.091	0.953
AMPLIFY.ETF – GLOBALX.ETF	0.165	0.298	0.000	1.000	-0.274***	0.000
AMPLIFY.ETF – INVESCO.FINTECH.ETF	0.688	0.207	0.360	1.000	0.089*	0.055
AMPLIFY.ETF – BTC	0.066	0.061	0.000	0.173	-4.551***	0.000
AMPLIFY.ETF – ETH	0.032	0.042	0.000	0.128	-8.767***	0.000
AMPLIFY.ETF – BNB	0.045	0.060	0.000	0.175	-9.765***	0.000
AMPLIFY.ETF – FINANCIAL.SELECT.FUND	0.685	0.313	0.042	1.000	0.012	0.439
AMPLIFY.ETF – ISHARES.US.ETF	0.698	0.273	0.207	1.000	0.050	0.240
AMPLIFY.ETF – SPDR.ETF	0.719	0.274	0.255	1.000	0.036	0.358
AMPLIFY.ETF – US.GLOBALJETS.ETF	0.257	0.195	0.000	0.627	-0.663***	0.000
AMPLIFY.ETF – ISHARES.TRVL.ETF	0.541	0.225	0.161	0.859	0.106**	0.037
AMPLIFY.ETF – INVESCO.ETF	0.679	0.322	0.000	1.000	-0.116	0.717
INVESCO.FINTECH.ETF – GLOBALX.ETF	0.176	0.158	0.000	0.452	-0.614***	0.000
INVESCO.FINTECH.ETF – AMPLIFY.ETF	0.312	0.207	0.000	0.640	-0.297**	0.019
INVESCO.FINTECH.ETF – BTC	0.069	0.071	0.000	0.197	-6.926***	0.000
INVESCO.FINTECH.ETF – ETH	0.040	0.053	0.000	0.161	-12.836***	0.000
INVESCO.FINTECH.ETF – BNB	0.048	0.073	0.000	0.221	-14.366***	0.000
INVESCO.FINTECH.ETF – FINANCIAL.SELECT.FUND	0.520	0.257	0.095	0.947	-0.142	0.825
INVESCO.FINTECH.ETF – ISHARES.US.ETF	0.490	0.217	0.120	0.856	-0.043	0.314
INVESCO.FINTECH.ETF – SPDR.ETF	0.464	0.197	0.145	0.816	0.006	0.521
INVESCO.FINTECH.ETF – US.GLOBALJETS.ETF	0.230	0.158	0.000	0.565	-1.260***	0.000
INVESCO.FINTECH.ETF – ISHARES.TRVL.ETF	0.402	0.306	0.000	0.899	-0.354***	0.001
INVESCO.FINTECH.ETF – INVESCO.ETF	0.469	0.236	0.000	0.877	-0.304	0.459
BTC – GLOBALX.ETF	0.907	0.080	0.770	1.000	0.099	0.141
BTC – AMPLIFY.ETF	0.934	0.061	0.827	1.000	0.083	0.210
BTC – INVESCO.FINTECH.ETF	0.931	0.071	0.803	1.000	0.079	0.183
BTC – ETH	0.132	0.217	0.000	0.604	-0.645***	0.000
BTC – BNB	0.234	0.278	0.000	0.886	-0.700***	0.000
BTC – FINANCIAL.SELECT.FUND	0.937	0.072	0.786	1.000	0.088	0.186
BTC – ISHARES.US.ETF	0.942	0.059	0.833	1.000	0.079	0.230
BTC – SPDR.ETF	0.947	0.056	0.843	1.000	0.071	0.281
BTC – US.GLOBALJETS.ETF	0.838	0.151	0.542	1.000	0.164**	0.013
BTC – ISHARES.TRVL.ETF	0.900	0.094	0.686	1.000	0.123**	0.041
BTC – INVESCO.ETF	0.931	0.076	0.802	1.000	0.094	0.152
ETH – GLOBALX.ETF	0.957	0.056	0.838	1.000	0.046	0.450
ETH – AMPLIFY.ETF	0.968	0.042	0.872	1.000	0.040	0.522
ETH – INVESCO.FINTECH.ETF	0.960	0.053	0.839	1.000	0.044	0.441
ETH – BTC	0.868	0.217	0.396	1.000	0.022	0.756
ETH – BNB	0.555	0.301	0.042	1.000	-0.060	0.626
ETH – FINANCIAL.SELECT.FUND	0.965	0.047	0.862	1.000	0.050	0.433
ETH – ISHARES.US.ETF	0.966	0.042	0.878	1.000	0.044	0.475
ETH – SPDR.ETF	0.970	0.038	0.890	1.000	0.039	0.526
ETH – US.GLOBALJETS.ETF	0.898	0.119	0.745	1.000	0.117*	0.062
ETH – ISHARES.TRVL.ETF	0.939	0.066	0.828	1.000	0.076	0.188
ETH – INVESCO.ETF	0.963	0.054	0.841	1.000	0.051	0.426
BNB – GLOBALX.ETF	0.930	0.087	0.732	1.000	0.050	0.356
BNB – AMPLIFY.ETF	0.955	0.060	0.825	1.000	0.038	0.484
BNB – INVESCO.FINTECH.ETF	0.952	0.073	0.779	1.000	0.035	0.487
BNB – BTC	0.766	0.278	0.114	1.000	0.081	0.341
BNB – ETH	0.445	0.301	0.000	0.958	0.037	0.988
BNB – FINANCIAL.SELECT.FUND	0.956	0.072	0.780	1.000	0.042	0.442

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Table A2: Summary of dynamic optimal bilateral portfolio weights (continued)

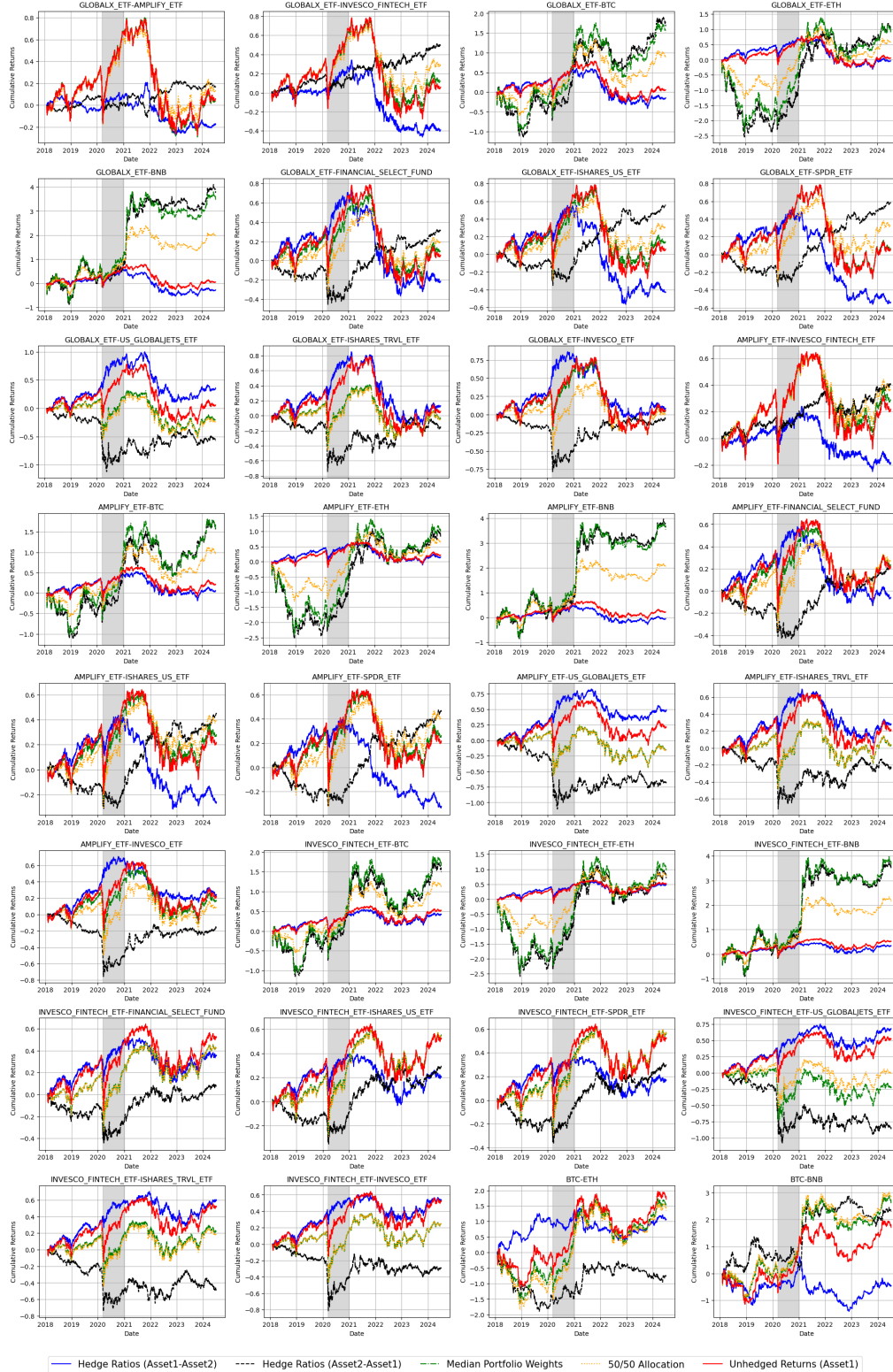
Pair	Mean	Std. Dev.	5%	95%	HE	p-value
BNB – ISHARES.US.ETF	0.956	0.065	0.790	1.000	0.041	0.469
BNB – SPDR.ETF	0.959	0.059	0.826	1.000	0.037	0.499
BNB – US.GLOBALJETS.ETF	0.876	0.147	0.652	1.000	0.103*	0.076
BNB – ISHARES.TRVL.ETF	0.931	0.091	0.736	1.000	0.067	0.223
BNB – INVESCO.ETF	0.951	0.076	0.834	1.000	0.047	0.401
FINANCIAL.SELECT.FUND – GLOBALX.ETF	0.265	0.300	0.000	0.937	-0.539***	0.000
FINANCIAL.SELECT.FUND – AMPLIFY.ETF	0.315	0.313	0.000	0.958	-0.228***	0.001
FINANCIAL.SELECT.FUND – INVESCO.FINTECH.ETF	0.480	0.257	0.053	0.905	0.002	0.881
FINANCIAL.SELECT.FUND – BTC	0.063	0.072	0.000	0.214	-5.862***	0.000
FINANCIAL.SELECT.FUND – ETH	0.035	0.047	0.000	0.138	-11.020***	0.000
FINANCIAL.SELECT.FUND – BNB	0.044	0.072	0.000	0.220	-12.327***	0.000
FINANCIAL.SELECT.FUND – ISHARES.US.ETF	0.424	0.380	0.000	1.000	-0.050	0.361
FINANCIAL.SELECT.FUND – SPDR.ETF	0.360	0.369	0.000	1.000	-0.108**	0.042
FINANCIAL.SELECT.FUND – US.GLOBALJETS.ETF	0.104	0.149	0.000	0.409	-1.164***	0.000
FINANCIAL.SELECT.FUND – ISHARES.TRVL.ETF	0.406	0.217	0.138	0.796	-0.044	0.592
FINANCIAL.SELECT.FUND – INVESCO.ETF	0.426	0.334	0.000	1.000	-0.191	0.122
ISHARES.US.ETF – GLOBALX.ETF	0.243	0.252	0.000	0.751	-0.526***	0.000
ISHARES.US.ETF – AMPLIFY.ETF	0.302	0.273	0.000	0.793	-0.225***	0.004
ISHARES.US.ETF – INVESCO.FINTECH.ETF	0.510	0.217	0.144	0.880	0.056	0.277
ISHARES.US.ETF – BTC	0.058	0.059	0.000	0.167	-6.183***	0.000
ISHARES.US.ETF – ETH	0.034	0.042	0.000	0.122	-11.531***	0.000
ISHARES.US.ETF – BNB	0.044	0.065	0.000	0.210	-12.828***	0.000
ISHARES.US.ETF – FINANCIAL.SELECT.FUND	0.576	0.380	0.000	1.000	-0.088	0.452
ISHARES.US.ETF – SPDR.ETF	0.385	0.368	0.000	1.000	-0.065	0.225
ISHARES.US.ETF – US.GLOBALJETS.ETF	0.137	0.163	0.000	0.481	-1.203***	0.000
ISHARES.US.ETF – ISHARES.TRVL.ETF	0.424	0.207	0.139	0.806	-0.029	0.917
ISHARES.US.ETF – INVESCO.ETF	0.433	0.331	0.000	1.000	-0.246	0.119
SPDR.ETF – GLOBALX.ETF	0.194	0.235	0.000	0.702	-0.555***	0.000
SPDR.ETF – AMPLIFY.ETF	0.281	0.274	0.000	0.745	-0.249**	0.040
SPDR.ETF – INVESCO.FINTECH.ETF	0.536	0.197	0.184	0.855	0.094**	0.043
SPDR.ETF – BTC	0.053	0.056	0.000	0.157	-6.284***	0.000
SPDR.ETF – ETH	0.030	0.038	0.000	0.110	-11.669***	0.000
SPDR.ETF – BNB	0.041	0.059	0.000	0.174	-12.959***	0.000
SPDR.ETF – FINANCIAL.SELECT.FUND	0.640	0.369	0.000	1.000	-0.154	0.452
SPDR.ETF – ISHARES.US.ETF	0.615	0.368	0.000	1.000	-0.071	0.977
SPDR.ETF – US.GLOBALJETS.ETF	0.152	0.181	0.000	0.542	-1.226***	0.000
SPDR.ETF – ISHARES.TRVL.ETF	0.446	0.227	0.132	0.821	-0.041	0.879
SPDR.ETF – INVESCO.ETF	0.495	0.363	0.000	1.000	-0.317	0.111
US.GLOBALJETS.ETF – GLOBALX.ETF	0.536	0.260	0.109	1.000	0.045	0.617
US.GLOBALJETS.ETF – AMPLIFY.ETF	0.743	0.195	0.373	1.000	0.065	0.215
US.GLOBALJETS.ETF – INVESCO.FINTECH.ETF	0.770	0.158	0.435	1.000	0.107**	0.037
US.GLOBALJETS.ETF – BTC	0.162	0.151	0.000	0.458	-1.844***	0.000
US.GLOBALJETS.ETF – ETH	0.102	0.119	0.000	0.255	-4.046***	0.000
US.GLOBALJETS.ETF – BNB	0.124	0.147	0.000	0.348	-4.638***	0.000
US.GLOBALJETS.ETF – FINANCIAL.SELECT.FUND	0.896	0.149	0.591	1.000	0.022	0.512
US.GLOBALJETS.ETF – ISHARES.US.ETF	0.863	0.163	0.519	1.000	0.039	0.315
US.GLOBALJETS.ETF – SPDR.ETF	0.848	0.181	0.458	1.000	0.035	0.397
US.GLOBALJETS.ETF – ISHARES.TRVL.ETF	0.759	0.155	0.488	1.000	0.116**	0.030
US.GLOBALJETS.ETF – INVESCO.ETF	0.946	0.155	0.630	1.000	0.008	0.790
ISHARES.TRVL.ETF – GLOBALX.ETF	0.345	0.226	0.029	0.793	-0.086**	0.049
ISHARES.TRVL.ETF – AMPLIFY.ETF	0.459	0.225	0.141	0.839	0.078	0.207
ISHARES.TRVL.ETF – INVESCO.FINTECH.ETF	0.598	0.306	0.101	1.000	0.018	0.799
ISHARES.TRVL.ETF – BTC	0.100	0.094	0.000	0.314	-4.474***	0.000
ISHARES.TRVL.ETF – ETH	0.061	0.066	0.000	0.172	-8.704***	0.000
ISHARES.TRVL.ETF – BNB	0.069	0.091	0.000	0.264	-9.767***	0.000
ISHARES.TRVL.ETF – FINANCIAL.SELECT.FUND	0.594	0.217	0.204	0.862	0.133***	0.005
ISHARES.TRVL.ETF – ISHARES.US.ETF	0.576	0.207	0.194	0.861	0.176***	0.002
ISHARES.TRVL.ETF – SPDR.ETF	0.554	0.227	0.179	0.868	0.171**	0.024
ISHARES.TRVL.ETF – US.GLOBALJETS.ETF	0.241	0.155	0.000	0.512	-0.624***	0.000
ISHARES.TRVL.ETF – INVESCO.ETF	0.537	0.197	0.200	0.828	0.038**	0.021

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Table A2: Summary of dynamic optimal bilateral portfolio weights (continued)

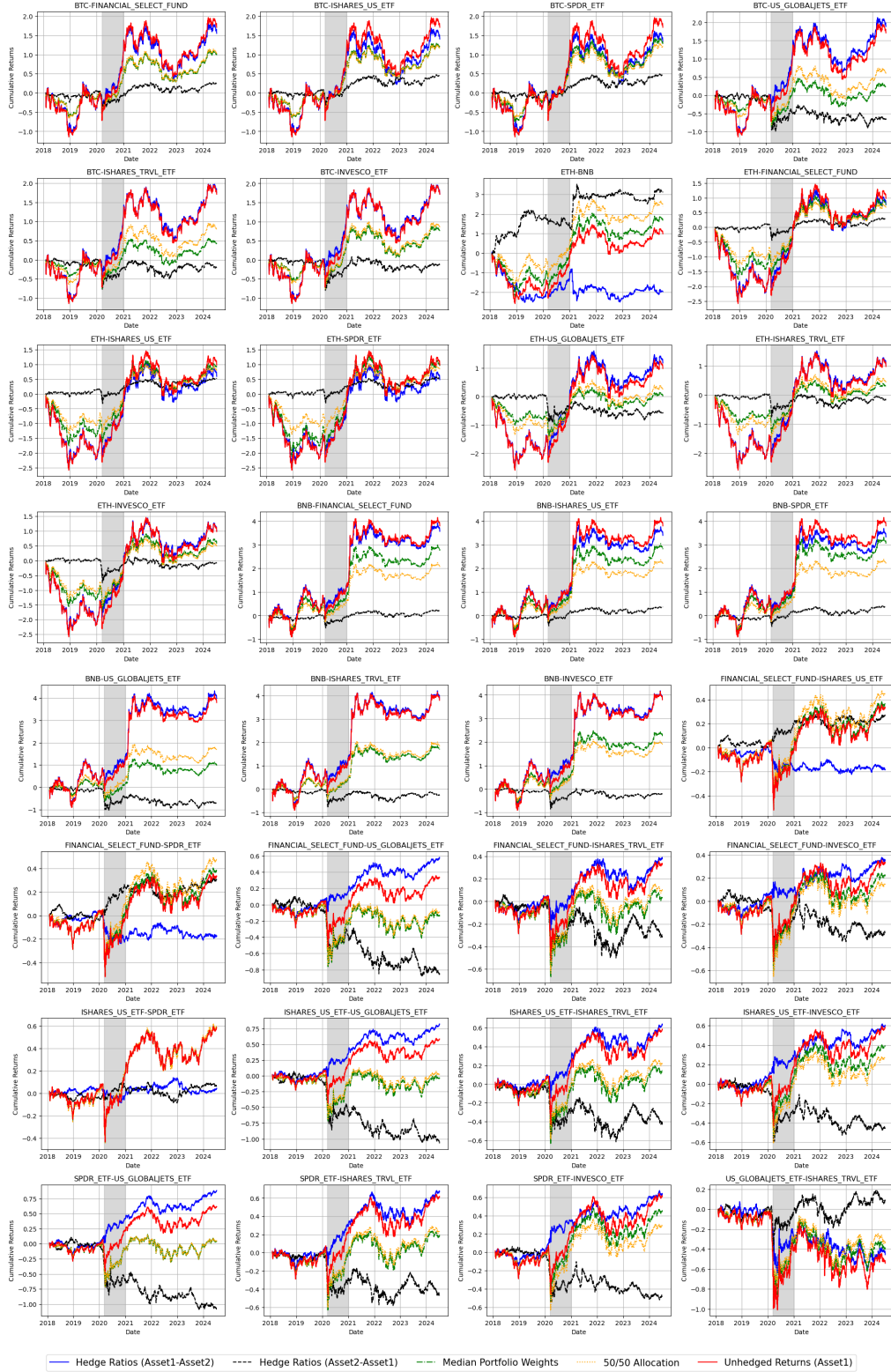
Pair	Mean	Std. Dev.	5%	95%	HE	p-value
INVESCO.ETF – GLOBALX.ETF	0.223	0.303	0.000	0.989	-0.372***	0.000
INVESCO.ETF – AMPLIFY.ETF	0.321	0.322	0.000	1.000	-0.124**	0.026
INVESCO.ETF – INVESCO.FINTECH.ETF	0.531	0.236	0.123	1.000	0.077	0.206
INVESCO.ETF – BTC	0.069	0.076	0.000	0.198	-4.522***	0.000
INVESCO.ETF – ETH	0.037	0.054	0.000	0.159	-8.720***	0.000
INVESCO.ETF – BNB	0.049	0.076	0.000	0.166	-9.740***	0.000
INVESCO.ETF – FINANCIAL.SELECT.FUND	0.574	0.334	0.000	1.000	0.035	0.614
INVESCO.ETF – ISHARES.US.ETF	0.567	0.331	0.000	1.000	0.026	0.721
INVESCO.ETF – SPDR.ETF	0.505	0.363	0.000	1.000	-0.024	0.494
INVESCO.ETF – US.GLOBALJETS.ETF	0.054	0.155	0.000	0.370	-0.778***	0.000
INVESCO.ETF – ISHARES.TRVLETF	0.463	0.197	0.172	0.800	0.061	0.277

Figure A4: Cumulative profits of diversification strategies with median hedge ratios and portfolio weights to construct portfolio (Part 1)



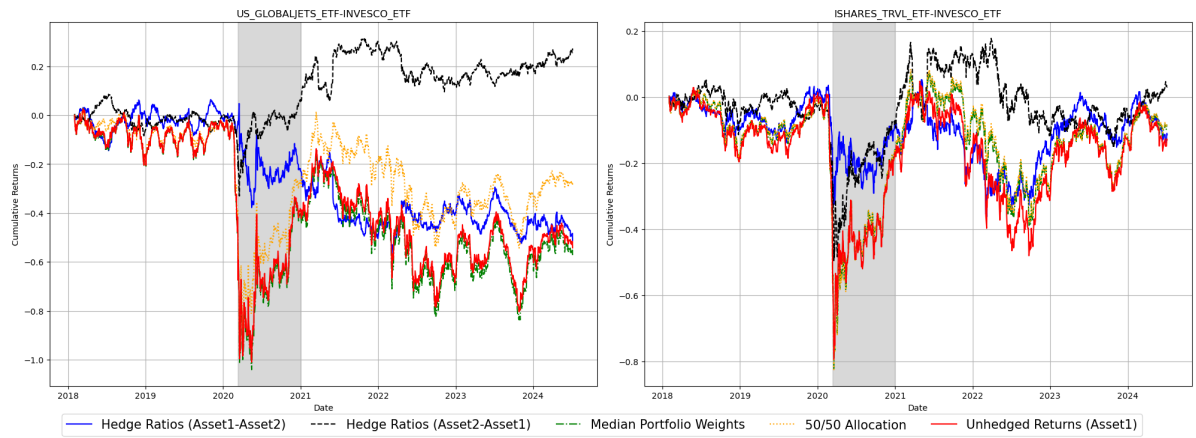
Note: The grey-shaded area is the first year when COVID-19 was declared a pandemic (2020-03-11 to 2020-12-31).

Figure A5: Cumulative profits of diversification strategies with median hedge ratios and portfolio weights to construct portfolio (Part 2)



Note: The grey-shaded area is the first year when COVID-19 was declared a pandemic (2020-03-11 to 2020-12-31).

Figure A6: Cumulative profits of diversification strategies with median hedge ratios and portfolio weights to construct portfolio (Part 3)



Note: The grey-shaded area is the first year when COVID-19 was declared a pandemic (2020-03-11 to 2020-12-31).