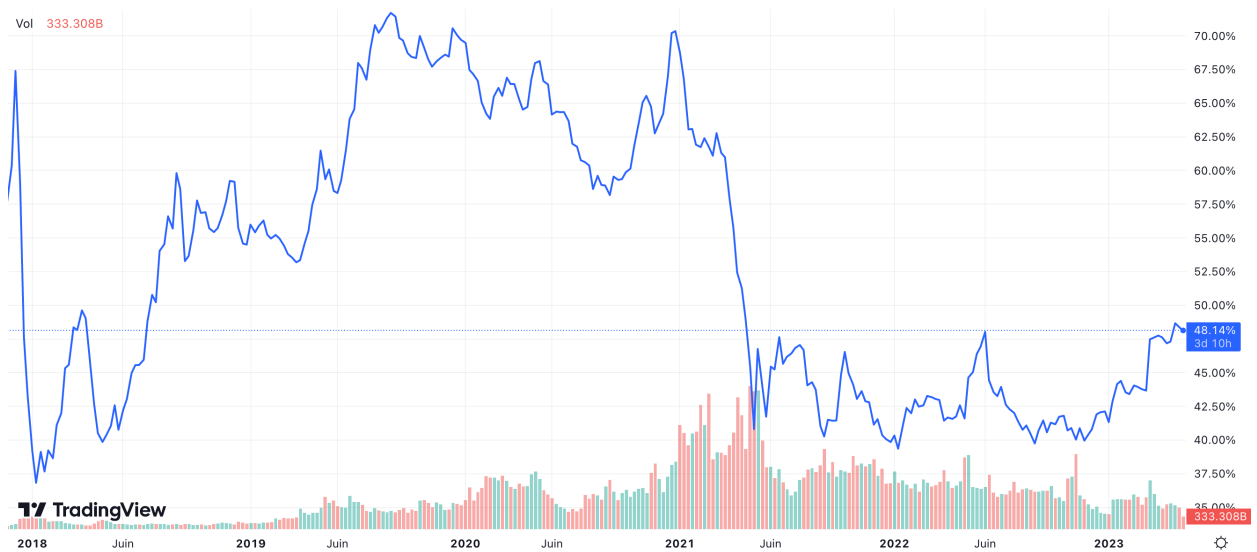


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1. Bitcoin's share of the cryptocurrency market



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2. descending tables of the most inflationary countries

Country	Inflation rate %
Venezuela	1198
Sudan	340
Lebanon	201
Syria	139
Suriname	63
Zimbabwe	61
Argentina	51
Turkey	36
Iran	35
Ethiopia	33

This table represents an initial shortlist of countries with a view to choosing the two most relevant for the study.

3. Gross domestic product of inflationary countries

Country	GDP Billion \$
Venezuela	20
Sudan	33
Lebanon	13
Syria	1
Suriname	4
Zimbabwe	21
Argentina	376
Turkey	850
Iran	299
Ethiopia	102

The table shows the GDPs for each of the shortlisted countries, which was a decisive factor in the final selection of Argentina and Turkey.

4. Correlation between Belgian portfolio assets and bitcoin

	AB Inbev	Ackermans	Aedifica	Ageas	Aperam	Argen-x	Cofinimmo	Colruyt	D'ieteren	Elia	Galapagos	GBL	KBC	Proximus	Sofina	Solvay	UCB	Umicore	VGP	WDP	BTC	
AB Inbev	1																					
Ackermans	0,4526	1,0000																				
Aedifica	0,4493	0,4469	1,0000																			
Ageas	0,2798	0,2073	0,2628	1,0000																		
Aperam	0,4433	0,4701	0,3481	0,2093	1,0000																	
Argen-x	0,0543	0,0456	0,1049	0,0610	0,0505	1,0000																
Cofinimmo	0,4018	0,4779	0,6974	0,2502	0,3456	0,1082	1,0000															
Colruyt	0,0845	0,2739	0,1424	0,0495	0,0801	-0,0007	0,1845	1,0000														
D'ieteren	0,0643	0,1233	0,1061	0,1693	0,1156	0,1063	0,1246	0,0581	1,0000													
Elia	0,3139	0,2958	0,4489	0,1552	0,1666	0,0660	0,3575	0,1188	-0,0003	1,0000												
Galapagos	0,2831	0,2505	0,2626	0,1696	0,2300	0,0416	0,2022	0,0738	0,0767	0,2199	1,0000											
GBL	0,6092	0,6522	0,5137	0,2580	0,5795	0,0651	0,5105	0,2206	0,1194	0,3686	0,3551	1,0000										
KBC	0,5674	0,5567	0,3884	0,2237	0,5510	0,0021	0,3511	0,1335	0,0602	0,1878	0,2004	0,6244	1,0000									
Proximus	0,2493	0,3660	0,2025	0,1436	0,2012	0,0218	0,2776	0,3235	0,0664	0,2519	0,1250	0,3433	0,2592	1,0000								
Sofina	0,4071	0,4856	0,5204	0,2201	0,4460	0,0781	0,4538	0,1904	0,1719	0,3461	0,2982	0,5833	0,3946	0,1856	1,0000							
Solvay	0,5179	0,5982	0,3709	0,2214	0,5662	-0,0175	0,3935	0,1842	0,0513	0,2605	0,2155	0,6561	0,6193	0,2912	0,4171	1,0000						
UCB	0,2605	0,2656	0,3023	0,1899	0,2254	0,0884	0,2578	0,1259	0,0535	0,3000	0,3135	0,3892	0,2161	0,1091	0,3310	0,2285	1,0000					
Umicore	0,3211	0,4476	0,2730	0,1555	0,4228	0,0211	0,2840	0,1601	0,0710	0,2136	0,2107	0,5127	0,3941	0,2296	0,3346	0,5299	0,1935	1,0000				
VGP	0,2640	0,3217	0,4711	0,0987	0,2821	0,0270	0,4320	0,1412	0,0862	0,2902	0,1943	0,3578	0,2634	0,1036	0,4162	0,2788	0,2350	0,1867	1,0000			
WDP	0,3773	0,3887	0,6814	0,2132	0,3202	0,0882	0,5905	0,1059	0,1324	0,3757	0,2883	0,4985	0,2957	0,1610	0,5004	0,2823	0,2712	0,2532	0,4905	1,0000		
BTC	-0,0120	0,0146	-0,0092	-0,0300	0,0447	0,0405	0,0039	0,0044	0,0214	-0,0489	-0,0030	0,0192	0,0163	-0,0502	0,0141	-0,0022	0,0237	0,0516	0,0123	0,0272	1	

5. Correlation between Belgian portfolio assets and gold

	AB Inbev	Ackermans	Aedifica	Ageas	Aperam	Argen-x	Cofinimmo	Colruyt	D'ieteren	Elia	Galapagos	GBL	KBC	Proximus	Sofina	Solvay	UCB	Umicore	VGP	WDP	Gold	
AB Inbev	1,0000																					
Ackermans	0,4526	1,0000																				
Aedifica	0,4493	0,4469	1,0000																			
Ageas	0,2798	0,2073	0,2628	1,0000																		
Aperam	0,4433	0,4701	0,3481	0,2093	1,0000																	
Argen-x	0,0543	0,0456	0,1049	0,0610	0,0505	1,0000																
Cofinimmo	0,4018	0,4779	0,6974	0,2502	0,3456	0,1082	1,0000															
Colruyt	0,0845	0,2739	0,1424	0,0495	0,0801	-0,0007	0,1845	1,0000														
D'ieteren	0,0643	0,1233	0,1061	0,1693	0,1156	0,1063	0,1246	0,0581	1,0000													
Elia	0,3139	0,2958	0,4489	0,1552	0,1666	0,0660	0,3575	0,1188	-0,0003	1,0000												
Galapagos	0,2831	0,2505	0,2626	0,1696	0,2300	0,0416	0,2022	0,0738	0,0767	0,2199	1,0000											
GBL	0,6092	0,6522	0,5137	0,2580	0,5795	0,0651	0,5105	0,2206	0,1194	0,3686	0,3551	1,0000										
KBC	0,5674	0,5567	0,3884	0,2237	0,5510	0,0021	0,3511	0,1335	0,0602	0,1878	0,2004	0,6244	1,0000									
Proximus	0,2493	0,3660	0,2025	0,1436	0,2012	0,0218	0,2776	0,3235	0,0664	0,2519	0,1250	0,3433	0,2592	1,0000								
Sofina	0,4071	0,4856	0,5204	0,2201	0,4460	0,0781	0,4538	0,1904	0,1719	0,3461	0,2982	0,5833	0,3946	0,1856	1,0000							
Solvay	0,5179	0,5982	0,3709	0,2214	0,5662	-0,0175	0,3935	0,1842	0,0513	0,2605	0,2155	0,6561	0,6193	0,2912	0,4171	1,0000						
UCB	0,2605	0,2656	0,3023	0,1899	0,2254	0,0884	0,2578	0,1259	0,0535	0,3000	0,3135	0,3892	0,2161	0,1091	0,3310	0,2285	1,0000					
Umicore	0,3211	0,4476	0,2730	0,1555	0,4228	0,0211	0,2840	0,1601	0,0710	0,2136	0,2107	0,5127	0,3941	0,2296	0,3346	0,5299	0,1935	1,0000				
VGP	0,2640	0,3217	0,4711	0,0987	0,2821	0,0270	0,4320	0,1412	0,0862	0,2902	0,1943	0,3578	0,2634	0,1036	0,4162	0,2788	0,2350	0,1867	1,0000			
WDP	0,3773	0,3887	0,6814	0,2132	0,3202	0,0882	0,5905	0,1059	0,1324	0,3757	0,2883	0,4985	0,2957	0,1610	0,5004	0,2823	0,2712	0,2532	0,4905	1,0000		
Gold	0,0823	0,0065	0,0430	0,0429	0,0127	-0,0121	0,0057	-0,0309	-0,0696	0,0540	0,0389	0,0131	-0,0023	-0,0258	0,0249	-0,0193	-0,0050	-0,0065	0,0201	0,0673	1,0000	

6. Correlation between Swiss portfolio assets and bitcoin

	Nestle	NOVN	Roche	ZURN	UBS	ABB	Richemont	Lonza	Givaudan	SIKA	Swiss RE	Crédit Suisse	Holcim	Geberit	SGSN	SCMN	SLHN	UHR	ADEN	SIKA2	BTC	
Nestle	1,0000																					
NOVN	0,6432	1,0000																				
Roche	0,5942	0,6665	1,0000																			
ZURN	0,5096	0,5837	0,4536	1,0000																		
UBS	0,3973	0,4725	0,3570	0,7329	1,0000																	
ABB	0,4787	0,5203	0,4204	0,6755	0,7359	1,0000																
Richemont	0,3824	0,3871	0,2724	0,5260	0,6179	0,6044	1,0000															
Lonza	0,5137	0,5312	0,5426	0,3990	0,3811	0,5073	0,3968	1,0000														
Givaudan	0,5868	0,4827	0,5135	0,4091	0,3834	0,4945	0,3984	0,5755	1,0000													
SIKA	0,4863	0,4679	0,4219	0,5116	0,5305	0,6514	0,5390	0,5865	0,6400	1,0000												
Swiss RE	0,3903	0,4841	0,3513	0,7920	0,6952	0,6383	0,5180	0,3281	0,3282	0,4349	1,0000											
Crédit Suisse	0,3256	0,4229	0,3059	0,6565	0,8066	0,6657	0,5525	0,3601	0,3283	0,4711	0,6214	1,0000										
Holcim	0,4371	0,5177	0,3615	0,7209	0,7394	0,7257	0,5881	0,4194	0,3917	0,5769	0,6883	0,6752	1,0000									
Geberit	0,4964	0,4724	0,4376	0,5341	0,5448	0,6510	0,5221	0,5815	0,6358	0,7201	0,4666	0,4893	0,5821	1,0000								
SGSN	0,5978	0,5579	0,4895	0,5899	0,5680	0,6407	0,5231	0,5762	0,6219	0,6267	0,5219	0,5153	0,6078	0,6639	1,0000							
SCMN	0,5442	0,5465	0,4580	0,5281	0,4094	0,3879	0,2585	0,3511	0,4095	0,3610	0,4074	0,3193	0,4061	0,3828	0,4927	1,0000						
SLHN	0,4368	0,5365	0,3864	0,8197	0,7792	0,7047	0,5645	0,4076	0,3956	0,5231	0,8280	0,7069	0,7427	0,5463	0,5982	0,4370	1,0000					
UHR	0,3635	0,3671	0,2420	0,5462	0,6319	0,5951	0,7862	0,3379	0,3710	0,5036	0,5290	0,5650	0,5986	0,4761	0,5206	0,2905	0,5736	1,0000				
ADEN	0,3734	0,4266	0,3040	0,6304	0,6814	0,6667	0,6055	0,3905	0,3515	0,5284	0,6237	0,6252	0,6906	0,5465	0,5609	0,3402	0,6757	0,6338	1,0000			
SIKA2	0,4863	0,4679	0,4219	0,5117	0,5305	0,6514	0,5390	0,5865	0,6399	1,0000	0,4349	0,4711	0,5769	0,7201	0,6267	0,3610	0,5232	0,5036	0,5284	1,0000		
BTC	-0,0110	0,0255	0,0129	0,0442	0,0430	0,0350	0,0655	-0,0020	0,0108	0,0248	0,0161	0,0472	0,0468	0,0070	0,0360	0,0185	0,0425	0,0676	0,0217	0,0248	1,0000	

7. Correlation between Swiss portfolio assets and gold

	Nestle	NOVN	Roche	ZURN	UBS	ABB	Richemont	Lonza	Givaudan	SIKA	Swiss RE	Crédit Suisse	Holcim	Geberit	SGSN	SCMN	SLHN	UHR	ADEN	SIKA2	BTC	
Nestle	1,0000																					
NOVN	0,6432	1,0000																				
Roche	0,5942	0,6665	1,0000																			
ZURN	0,5096	0,5837	0,4536	1,0000																		
UBS	0,3973	0,4725	0,3570	0,7329	1,0000																	
ABB	0,4787	0,5203	0,4204	0,6755	0,7359	1,0000																
Richemont	0,3824	0,3871	0,2724	0,5260	0,6179	0,6044	1,0000															
Lonza	0,5137	0,5312	0,5426	0,3990	0,3811	0,5073	0,3968	1,0000														
Givaudan	0,5868	0,4827	0,5135	0,4091	0,3834	0,4945	0,3984	0,5755	1,0000													
SIKA	0,4863	0,4679	0,4219	0,5116	0,5305	0,6514	0,5390	0,5865	0,6400	1,0000												
Swiss RE	0,3903	0,4841	0,3513	0,7920	0,6952	0,6383	0,5180	0,3281	0,3282	0,4349	1,0000											
Crédit Suisse	0,3256	0,4229	0,3059	0,6565	0,8066	0,6657	0,5525	0,3601	0,3283	0,4711	0,6214	1,0000										
Holcim	0,4371	0,5177	0,3615	0,7209	0,7394	0,7257	0,5881	0,4194	0,3917	0,5769	0,6883	0,6752	1,0000									
Geberit	0,4964	0,4724	0,4376	0,5341	0,5448	0,6510	0,5221	0,5815	0,6358	0,7201	0,4666	0,4893	0,5821	1,0000								
SGSN	0,5978	0,5579	0,4895	0,5899	0,5680	0,6407	0,5231	0,5762	0,6219	0,6267	0,5219	0,5153	0,6078	0,6639	1,0000							
SCMN	0,5442	0,5465	0,4580	0,5281	0,4094	0,3879	0,2585	0,3511	0,4095	0,3610	0,4074	0,3193	0,4061	0,3828	0,4927	1,0000						
SLHN	0,4368	0,5365	0,3864	0,8197	0,7792	0,7047	0,5645	0,4076	0,3956	0,5231	0,8280	0,7069	0,7427	0,5463	0,5982	0,4370	1,0000					
UHR	0,3635	0,3671	0,2420	0,5462	0,6319	0,5951	0,7862	0,3379	0,3710	0,5036	0,5290	0,5650	0,5986	0,4761	0,5206	0,2905	0,5736	1,0000				
ADEN	0,3734	0,4266	0,3040	0,6304	0,6814	0,6667	0,6055	0,3905	0,3515	0,5284	0,6237	0,6252	0,6906	0,5465	0,5609	0,3402	0,6757	0,6338	1,0000			
SIKA2	0,4863	0,4679	0,4219	0,5117	0,5305	0,6514	0,5390	0,5865	0,6399	1,0000	0,4349	0,4711	0,5769	0,7201	0,6267	0,3610	0,5232	0,5036	0,5284	1,0000		
BTC	-0,0227	0,0041	-0,0156	-0,0740	-0,0675	-0,0797	-0,0192	0,0013	-0,0037	0,0009	-0,0595	-0,0398	-0,0519	-0,0473	-0,0193	0,0060	-0,0362	-0,0352	-0,0347	0,0009	1,0000	

8. Correlation between Argentinian portfolio assets and bitcoin

	Aluar	Banco Macro	BBVA	BYMA	Cablevision	Central P	Plata	Cresud	Edenor	Galicia	Supervielle	Holcim	Loma Negra	Mirgor	Energia	Telecom	Ternium	Gas norte	Transener	YPF	Btc	
Aluar	1,0000																					
Banco Macro	0,5022	1,0000																				
BBVA Banco	0,1929	0,2298	1,0000																			
BYMA	0,0234	0,0137	0,0234	1,0000																		
Cablevision	0,2499	0,2167	0,6100	0,0300	1,0000																	
Central Puer	0,5255	0,7004	0,2186	0,0258	0,2682	1,0000																
Comercial de	0,2904	0,2020	0,6085	0,0313	0,5777	0,2692	1,0000															
Cresud	0,2797	0,2506	0,6029	0,0062	0,4372	0,2898	0,4790	1,0000														
Edenor	0,1914	0,1818	0,6598	-0,0105	0,5281	0,2414	0,5450	0,5415	1,0000													
Grupo Finan	0,0996	0,1091	0,1188	0,0195	0,1040	0,1028	0,1328	0,1272	0,1110	1,0000												
Grupo Super	0,4972	0,8053	0,1939	0,0197	0,2189	0,6905	0,2043	0,2245	0,1918	0,1084	1,0000											
Holcim	0,4479	0,5587	0,1638	0,0440	0,2279	0,5445	0,2171	0,2180	0,1777	0,1386	0,5403	1,0000										
Loma Negra	0,5029	0,6584	0,1341	0,0121	0,1820	0,6397	0,1843	0,2350	0,1479	0,0720	0,6354	0,5829	1,0000									
Mirgor	0,2651	0,1505	0,5913	0,0264	0,5983	0,1956	0,5661	0,4676	0,5601	0,1389	0,1694	0,2112	0,1235	1,0000								
Pampa Ener	0,5001	0,7430	0,1938	0,0011	0,2345	0,7223	0,2316	0,3068	0,2179	0,1144	0,7022	0,5518	0,6347	0,1630	1,0000							
Telecom Arg	0,1330	0,1558	0,1244	-0,0046	0,1471	0,1464	0,1746	0,1686	0,1397	0,6602	0,1434	0,1730	0,1082	0,1925	0,1377	1,0000						
Ternium Arg	0,3466	0,1636	0,5652	0,0077	0,5251	0,2371	0,5413	0,4526	0,4841	0,1469	0,1808	0,1909	0,1626	0,5454	0,1993	0,1537	1,0000					
Gas norte	0,4670	0,6169	0,2019	0,0173	0,2358	0,6364	0,2778	0,2482	0,2417	0,1060	0,6118	0,5396	0,5117	0,1800	0,6106	0,1694	0,1892	1,0000				
Transener	0,2515	0,2224	0,6791	0,0107	0,6228	0,3287	0,6054	0,5386	0,7013	0,1079	0,2458	0,2164	0,1896	0,5918	0,2575	0,1591	0,5461	0,3590	1,0000			
YPF	0,5118	0,6962	0,2571	0,0066	0,2409	0,6184	0,2626	0,3307	0,2282	0,1040	0,6271	0,4811	0,5701	0,2184	0,6490	0,1347	0,2164	0,5597	0,2666	1,0000		
Btc	-0,0149	-0,0697	0,0073	-0,0054	0,0271	-0,0114	0,0497	-0,0008	0,0092	0,0138	-0,0462	-0,0512	-0,0416	0,0109	-0,0199	-0,0037	0,0125	-0,0077	0,0230	-0,0416	1,0000	

9. Correlation between Argentinian portfolio assets and gold

	Aluar	Banco Macro	BVBA	BYMA	Cablevision	Central P	Plata	Cresud	Edenor	Galicia	Supervielle	Holcim	Loma Negra	Mirgor	Energia	Telecom	Terminum	Gas norte	Transener	YPF	gold	
Aluar	1,0000																					
Banco Macro	0,5022	1,0000																				
BVBA Banco	0,1929	0,2298	1,0000																			
BYMA	0,0234	0,0137	0,0234	1,0000																		
Cablevision	0,2499	0,2167	0,6100	0,0300	1,0000																	
Central Puert	0,5255	0,7004	0,2186	0,0258	0,2692	1,0000																
Comercial de	0,2904	0,2020	0,6085	0,0313	0,5777	0,2692	1,0000															
Cresud	0,2797	0,2506	0,6029	0,0062	0,4372	0,2898	0,4790	1,0000														
Edenor	0,1914	0,1818	0,6598	-0,0105	0,5281	0,2414	0,5450	0,5415	1,0000													
Grupo Finan	0,0996	0,1091	0,1188	0,0195	0,1040	0,1028	0,1328	0,1272	0,1110	1,0000												
Grupo Super	0,4972	0,8053	0,1939	0,0197	0,2189	0,6905	0,2043	0,2245	0,1918	0,1084	1,0000											
Holcim	0,4479	0,5587	0,1638	0,0440	0,2279	0,5445	0,2171	0,2180	0,1777	0,1386	0,5403	1,0000										
Loma Negra	0,5029	0,6584	0,1341	0,0121	0,1820	0,6397	0,1843	0,2350	0,1479	0,0720	0,6354	0,5829	1,0000									
Mirgor	0,2651	0,1505	0,5913	0,0264	0,5983	0,1956	0,5661	0,4676	0,5601	0,1389	0,1694	0,2112	0,1235	1,0000								
Pampa Ener	0,5001	0,7430	0,1938	0,0011	0,2345	0,7223	0,2316	0,3068	0,2179	0,1144	0,7022	0,5518	0,6347	0,1630	1,0000							
Telecom Arg	0,1330	0,1558	0,1244	-0,0046	0,1471	0,1464	0,1746	0,1686	0,1397	0,6602	0,1434	0,1730	0,1082	0,1925	0,1377	1,0000						
Terminum Arg	0,3466	0,1636	0,5652	0,0077	0,5251	0,2371	0,5413	0,4526	0,4841	0,1469	0,1808	0,1909	0,1626	0,5454	0,1993	0,1537	1,0000					
Gas norte	0,4670	0,6169	0,2019	0,0173	0,2358	0,6364	0,2778	0,2482	0,2417	0,1060	0,6118	0,5396	0,5117	0,1800	0,6106	0,1694	0,1892	1,0000				
Transener	0,2515	0,2224	0,6791	0,0107	0,6228	0,3287	0,6054	0,5386	0,7013	0,1079	0,2458	0,2164	0,1896	0,5918	0,2575	0,1591	0,5461	0,3590	1,0000			
YPF	0,5118	0,6962	0,2571	0,0066	0,2409	0,6184	0,2626	0,3307	0,2282	0,1040	0,6271	0,4811	0,5701	0,2184	0,6490	0,1347	0,2164	0,5597	0,2666	1,0000		
gold	0,0242	0,0227	0,0302	0,0529	0,0335	0,0270	0,0134	0,0357	0,0375	-0,0136	0,0266	-0,0081	0,0201	-0,0240	0,0111	0,0041	0,0060	0,0279	0,0600	-0,0024	1,0000	

10. Correlation between Turkish portfolio assets and bitcoin

	Akbank TAS	Aksen	Alark	Arcelik AS	Asels	Bimas	Emlak Konut	ENKA	Erdemir	Ford Otosan	Garanti Bank	Gubretas	Hekts	Kardemir	Koc Holding	KOZAL	KOZAA	ODAS	PGSUS	Petkim	BTC	
Akbank TAS	1,0000																					
Aksen	0,4882	1,0000																				
Alark	0,4975	0,5035	1,0000																			
Arcelik AS	0,5697	0,4925	0,5196	1,0000																		
Asels	0,5888	0,5055	0,5289	0,5860	1,0000																	
Bimas	0,4857	0,4161	0,4188	0,5126	0,4710	1,0000																
Emlak Konut	0,6526	0,5171	0,4998	0,5743	0,6085	0,5083	1,0000															
ENKA	0,4409	0,4190	0,4258	0,4871	0,4683	0,4422	0,4733	1,0000														
Erdemir	0,5333	0,4332	0,4673	0,5622	0,5762	0,5160	0,5354	0,4612	1,0000													
Ford Otosan	0,4725	0,4249	0,4640	0,5801	0,5297	0,4924	0,4903	0,4534	0,5361	1,0000												
Garanti Bank	0,8940	0,4528	0,4800	0,5445	0,5655	0,4420	0,5985	0,4208	0,4918	0,4222	1,0000											
Gubretas	0,4731	0,4146	0,4529	0,4408	0,5246	0,4128	0,4809	0,3983	0,4021	0,3890	0,4376	1,0000										
Hekts	0,4735	0,4579	0,4471	0,4735	0,4855	0,4311	0,4724	0,4112	0,4281	0,4199	0,4376	0,4623	1,0000									
Kardemir	0,5863	0,4923	0,5148	0,5619	0,6094	0,4700	0,5674	0,4542	0,7230	0,4990	0,5589	0,4375	0,4365	1,0000								
Koc Holding	0,6927	0,5006	0,5586	0,6829	0,6232	0,5642	0,6214	0,5270	0,6265	0,6259	0,6531	0,4846	0,4834	0,6127	1,0000							
KOZAL	0,4482	0,4363	0,4469	0,4686	0,5621	0,4390	0,5014	0,4254	0,4609	0,4242	0,4295	0,4324	0,4374	0,4796	0,5095	1,0000						
KOZAA	0,4892	0,4433	0,4657	0,4835	0,5520	0,4028	0,5112	0,4316	0,4590	0,4194	0,4689	0,4551	0,4415	0,5012	0,5198	0,8258	1,0000					
ODAS	0,4512	0,4987	0,4758	0,4064	0,4688	0,3294	0,4680	0,3307	0,3664	0,3640	0,4609	0,3767	0,4072	0,4437	0,4280	0,3838	0,3877	1,0000				
PGSUS	0,5079	0,4300	0,4672	0,4907	0,5321	0,3775	0,4954	0,4063	0,4376	0,4168	0,4984	0,3994	0,3982	0,4936	0,5618	0,4480	0,4402	0,4214	1,0000			
Petkim	0,5385	0,5280	0,5122	0,5648	0,5693	0,4834	0,5611	0,4937	0,5778	0,4973	0,4944	0,4612	0,4368	0,6088	0,5983	0,4934	0,4923	0,4484	0,4851	1,0000		
BTC	0,0461	0,0479	0,0383	0,0120	0,0237	0,0637	0,0647	-0,0149	0,0537	0,0346	0,0194	0,0579	0,0281	0,0205	0,0271	0,0476	0,0227	0,0237	0,0005	0,0272	1,0000	

11. Correlation between Turkish portfolio assets and gold

	Akbank TAS	Aksen	Alark	Arcelik AS	Asels	Bimas	Emlak Konut	ENKA	Erdemir	Ford Otosan	Garanti Bank	Gubretas	Hekts	Kardemir	Koc Holding	KOZAL	KOZAA	ODAS	PGSUS	Petkim	BTC	
Akbank TAS	1,0000																					
Aksen	0,4882	1,0000																				
Alark	0,4975	0,5035	1,0000																			
Arcelik AS	0,5697	0,4925	0,5196	1,0000																		
Asels	0,5888	0,5055	0,5289	0,5860	1,0000																	
Bimas	0,4857	0,4161	0,4188	0,5126	0,4710	1,0000																
Emlak Konut	0,6526	0,5171	0,4998	0,5743	0,6085	0,5083	1,0000															
ENKA	0,4409	0,4190	0,4258	0,4871	0,4683	0,4422	0,4733	1,0000														
Erdemir	0,5333	0,4332	0,4673	0,5622	0,5762	0,5160	0,5354	0,4612	1,0000													
Ford Otosan	0,4725	0,4249	0,4640	0,5801	0,5297	0,4924	0,4903	0,4534	0,5361	1,0000												
Garanti Bank	0,8940	0,4528	0,4800	0,5445	0,5655	0,4420	0,5985	0,4208	0,4918	0,4222	1,0000											
Gubretas	0,4731	0,4146	0,4529	0,4408	0,5246	0,4128	0,4809	0,3983	0,4021	0,3890	0,4376	1,0000										
Hekts	0,4735	0,4579	0,4471	0,4735	0,4855	0,4311	0,4724	0,4112	0,4281	0,4199	0,4376	0,4623	1,0000									
Kardemir	0,5863	0,4923	0,5148	0,5619	0,6094	0,4700	0,5674	0,4542	0,7230	0,4990	0,5589	0,4375	0,4365	1,0000								
Koc Holding	0,6927	0,5006	0,5586	0,6829	0,6232	0,5642	0,6214	0,5270	0,6265	0,6259	0,6531	0,4846	0,4834	0,6127	1,0000							
KOZAL	0,4482	0,4363	0,4469	0,4686	0,5621	0,4390	0,5014	0,4254	0,4609	0,4242	0,4295	0,4324	0,4374	0,4796	0,5095	1,0000						
KOZAA	0,4892	0,4433	0,4657	0,4835	0,5520	0,4028	0,5112	0,4316	0,4590	0,4194	0,4689	0,4551	0,4415	0,5012	0,5198	0,8258	1,0000					
ODAS	0,4512	0,4987	0,4758	0,4064	0,4688	0,3294	0,4680	0,3307	0,3664	0,3640	0,4609	0,3767	0,4072	0,4437	0,4280	0,3838	0,3877	1,0000				
PGSUS	0,5079	0,4300	0,4672	0,4907	0,5321	0,3775	0,4954	0,4063	0,4376	0,4168	0,4984	0,3994	0,3982	0,4936	0,5618	0,4480	0,4402	0,4214	1,0000			
Petkim	0,5385	0,5280	0,5122	0,5648	0,5693	0,4834	0,5611	0,4937	0,5778	0,4973	0,4944	0,4612	0,4368	0,6088	0,5983	0,4934	0,4923	0,4484	0,4851	1,0000		
BTC	-0,0080	0,0047	-0,0352	0,0321	0,0356	-0,0018	0,0145	-0,0462	0,0029	-0,0010	-0,0124	0,0127	0,0234	-0,0113	-0,0099	0,0146	-0,0113	0,0343	0,0064	-0,0206	1,0000	

12. Initial VaR when trading in local currency

Belgium	confidence interval	Z-stat	VCV Var (%)	HS Var (%)	VCV (Var) €	HS VaR €
	90%	-1,281551566	1,36%	1,12%	13.598,68 €	11.183,87 €
	95%	-1,644853627	1,75%	1,72%	17.505,29 €	17.205,24 €
	97,50%	-1,959963985	2,09%	2,25%	20.893,69 €	22.454,10 €
	99%	-2,326347874	2,48%	3,06%	24.833,43 €	30.565,55 €

Switzerland	confidence interval	Z-stat	VCV Var (%)	HS Var (%)	VCV (Var) CHF	HS VaR CHF
	90%	-1,281551566	1,49%	1,21%	14.867,08 CHF	12.090,54 CHF
	95%	-1,644853627	1,91%	1,81%	19.117,50 CHF	18.102,13 CHF
	97,50%	-1,959963985	2,28%	2,43%	22.804,10 CHF	24.344,65 CHF
	99%	-2,326347874	2,71%	3,45%	27.090,56 CHF	34.488,05 CHF

Argentina	confidence interval	Z-stat	VCV Var (%)	HS Var (%)	VCV (Var) \$	HS VaR \$
	90%	-1,281551566	2,63%	1,89%	26.298,13 \$	18.922,47 \$
	95%	-1,644853627	3,43%	2,74%	34.328,38 \$	27.351,62 \$
	97,50%	-1,959963985	4,13%	3,69%	41.293,42 \$	36.897,93 \$
	99%	-2,326347874	4,94%	4,86%	49.391,79 \$	48.569,39 \$

Turkey	confidence interval	Z-stat	VCV Var (%)	HS Var (%)	VCV (Var)	HS VaR
	90%	-1,281551566	1,90%	1,65%	₺19.009,71	₺16.465,43
	95%	-1,644853627	2,50%	2,41%	₺24.999,04	₺24.134,09
	97,50%	-1,959963985	3,02%	3,53%	₺30.193,88	₺35.293,20
	99%	-2,326347874	3,62%	5,27%	₺36.234,02	₺52.662,10

The table describes all the values per country in the absence of a diversifying asset. This serves as a point of comparison throughout the section.

13. Expected shortfall according to the 3 methodologies for Belgium

Belgique	confidence interval	Z-stat	ES VCV (%)	ES HS (%)	CvAR Mills (%)	ES VCV \$	ES HS \$	CvAR Mills \$
	90%	-1,28155157	1,86%	1,97%	1,87%	18.565,05 \$	19.666,85 \$	18.689,52 \$
	95%	-1,64485363	2,18%	2,61%	2,20%	21.788,61 \$	26.052,19 \$	21.998,55 \$
	97,50%	-1,95996399	2,46%	3,29%	2,50%	24.604,22 \$	32.874,76 \$	24.956,61 \$
	99%	-2,32634787	2,78%	4,47%	2,85%	27.791,48 \$	44.727,25 \$	28.477,28 \$

1% BTC	confidence interval	Z-stat	ES VCV (%)	ES HS (%)	CvAR Mills (%)	ES VCV \$	ES HS \$	CvAR Mills \$
	90%	-1,28155157	1,84%	1,95%	1,85%	18.397,52 \$	19.511,60 \$	18.520,94 \$
	95%	-1,64485363	2,16%	2,58%	2,18%	21.593,95 \$	25.819,61 \$	21.802,13 \$
	97,50%	-1,95996399	2,44%	3,25%	2,47%	24.385,87 \$	32.485,93 \$	24.735,29 \$
	99%	-2,32634787	2,75%	4,42%	2,82%	27.546,30 \$	44.248,80 \$	28.226,34 \$

1% Gold	confidence interval	Z-stat	ES VCV (%)	ES HS (%)	CvAR Mills (%)	ES VCV \$	ES HS \$	CvAR Mills \$
	90%	-1,28155157	1,84%	1,95%	1,85%	18.380,42 \$	19.473,63 \$	18.503,67 \$
	95%	-1,64485363	2,16%	2,58%	2,18%	21.572,39 \$	25.789,76 \$	21.780,28 \$
	97,50%	-1,95996399	2,44%	3,25%	2,47%	24.360,42 \$	32.547,68 \$	24.709,36 \$
	99%	-2,32634787	2,75%	4,43%	2,82%	27.516,45 \$	44.306,53 \$	28.195,54 \$

5% BTC	confidence interval	Z-stat	ES VCV (%)	ES HS (%)	CvAR Mills (%)	ES VCV \$	ES HS \$	CvAR Mills \$
	90%	-1,28155157	1,81%	1,92%	1,82%	18.079,10 \$	19.191,01 \$	18.200,67 \$
	95%	-1,64485363	2,12%	2,51%	2,14%	21.227,50 \$	25.115,46 \$	21.432,55 \$
	97,50%	-1,95996399	2,40%	3,14%	2,43%	23.977,47 \$	31.417,20 \$	24.321,64 \$
	99%	-2,32634787	2,71%	4,26%	2,78%	27.090,42 \$	42.551,66 \$	27.760,23 \$

5% Gold	confidence interval	Z-stat	ES VCV (%)	ES HS (%)	CvAR Mills (%)	ES VCV \$	ES HS \$	CvAR Mills \$
	90%	-1,28155157	1,77%	1,87%	1,78%	17.655,69 \$	18.721,54 \$	17.774,15 \$
	95%	-1,64485363	2,07%	2,47%	2,09%	20.723,70 \$	24.729,55 \$	20.923,52 \$
	97,50%	-1,95996399	2,34%	3,12%	2,37%	23.403,46 \$	31.234,36 \$	23.738,84 \$
	99%	-2,32634787	2,64%	4,26%	2,71%	26.436,92 \$	42.623,64 \$	27.089,64 \$

14. Expected shortfall according to the 3 methodologies for Switzerland

Switzerland	confidence interval	Z-stat	ES VCV (%)	ES HS (%)	CvAR Mills (%)	ES VCV \$	ES HS \$	CvAR Mills \$
	90%	-1,28155157	2,19%	2,34%	2,21%	21.934,28 \$	23.372,17 \$	22.081,11 \$
	95%	-1,64485363	2,57%	3,06%	2,60%	25.736,92 \$	30.587,34 \$	25.984,58 \$
	97,50%	-1,95996399	2,91%	3,83%	2,95%	29.058,33 \$	38.252,11 \$	29.474,02 \$
	99%	-2,32634787	3,28%	4,96%	3,41%	32.818,14 \$	49.602,76 \$	34.077,50 \$

1% BTC	confidence interval	Z-stat	ES VCV (%)	ES HS (%)	CvAR Mills (%)	ES VCV \$	ES HS \$	CvAR Mills \$
	90%	-1,28155157	2,18%	2,32%	2,19%	21.751,14 \$	23.223,03 \$	21.896,82 \$
	95%	-1,64485363	2,55%	3,04%	2,58%	25.523,97 \$	30.361,90 \$	25.769,68 \$
	97,50%	-1,95996399	2,88%	3,80%	2,92%	28.819,34 \$	37.996,99 \$	29.231,77 \$
	99%	-2,32634787	3,25%	4,93%	3,38%	32.549,68 \$	49.267,56 \$	33.799,17 \$

1% Gold	confidence interval	Z-stat	ES VCV (%)	ES HS (%)	CvAR Mills (%)	ES VCV \$	ES HS \$	CvAR Mills \$
	90%	-1,28155157	2,17%	2,31%	2,19%	21.706,60 \$	23.141,71 \$	21.851,92 \$
	95%	-1,64485363	2,55%	3,03%	2,57%	25.470,19 \$	30.279,74 \$	25.715,31 \$
	97,50%	-1,95996399	2,88%	3,79%	2,92%	28.757,51 \$	37.855,51 \$	29.168,93 \$
	99%	-2,32634787	3,25%	4,90%	3,33%	32.478,72 \$	49.047,28 \$	33.279,42 \$

5% BTC	confidence interval	Z-stat	ES VCV (%)	ES HS (%)	CvAR Mills (%)	ES VCV \$	ES HS \$	CvAR Mills \$
	90%	-1,28155157	2,13%	2,28%	2,15%	21.320,75 \$	22.808,96 \$	21.463,83 \$
	95%	-1,64485363	2,50%	2,97%	2,53%	25.026,30 \$	29.737,98 \$	25.267,64 \$
	97,50%	-1,95996399	2,83%	3,72%	2,87%	28.262,91 \$	37.229,66 \$	28.667,99 \$
	99%	-2,32634787	3,19%	4,88%	3,32%	31.926,73 \$	48.805,80 \$	33.153,94 \$

5% Gold	confidence interval	Z-stat	ES VCV (%)	ES HS (%)	CvAR Mills (%)	ES VCV \$	ES HS \$	CvAR Mills \$
	90%	-1,28155157	2,08%	2,22%	2,09%	20.807,56 \$	22.221,81 \$	20.946,93 \$
	95%	-1,64485363	2,44%	2,91%	2,47%	24.417,01 \$	29.063,94 \$	24.652,08 \$
	97,50%	-1,95996399	2,76%	3,63%	2,80%	27.569,68 \$	36.284,25 \$	27.964,25 \$
	99%	-2,32634787	3,11%	4,70%	3,19%	31.138,48 \$	46.974,10 \$	31.906,38 \$

15. Expected shortfall according to the 3 methodologies for Argentina

Argentina	confidence interval	Z-stat	ES VCV (%)	ES HS (%)	CvAR Mills (%)	ES VCV \$	ES HS \$	CvAR Mills \$
	90%	-1,28155157	4,48%	4,23%	4,51%	44.802,81 \$	42.282,84 \$	45.102,12 \$
	95%	-1,64485363	5,26%	5,66%	5,31%	52.554,56 \$	56.626,15 \$	53.059,41 \$
	97,50%	-1,95996399	5,93%	7,44%	6,02%	59.325,32 \$	74.386,37 \$	60.172,71 \$
	99%	-2,32634787	6,70%	11,12%	6,86%	66.989,77 \$	111.199,06 \$	68.638,94 \$

1% BTC	confidence interval	Z-stat	ES VCV (%)	ES HS (%)	CvAR Mills (%)	ES VCV \$	ES HS \$	CvAR Mills \$
	90%	-1,28155157	4,43%	4,19%	4,46%	44.336,62 \$	41.887,08 \$	44.632,91 \$
	95%	-1,64485363	5,20%	5,60%	5,25%	52.010,01 \$	56.031,03 \$	52.509,76 \$
	97,50%	-1,95996399	5,87%	7,35%	5,96%	58.712,33 \$	73.521,82 \$	59.551,15 \$
	99%	-2,32634787	6,63%	11,00%	6,79%	66.299,29 \$	109.965,81 \$	67.931,80 \$

1% Gold	confidence interval	Z-stat	ES VCV (%)	ES HS (%)	CvAR Mills (%)	ES VCV \$	ES HS \$	CvAR Mills \$
	90%	-1,28155157	4,44%	4,19%	4,47%	44.360,66 \$	41.869,11 \$	44.657,04 \$
	95%	-1,64485363	5,20%	5,61%	5,25%	52.036,29 \$	56.068,83 \$	52.536,19 \$
	97,50%	-1,95996399	5,87%	7,37%	5,96%	58.740,56 \$	73.650,23 \$	59.579,63 \$
	99%	-2,32634787	6,63%	11,01%	6,59%	66.329,74 \$	110.090,58 \$	67.933,64 \$

5% BTC	confidence interval	Z-stat	ES VCV (%)	ES HS (%)	CvAR Mills (%)	ES VCV \$	ES HS \$	CvAR Mills \$
	90%	-1,28155157	4,26%	4,05%	4,29%	42.625,09 \$	40.509,11 \$	42.910,29 \$
	95%	-1,64485363	5,00%	5,38%	5,05%	50.011,36 \$	53.844,02 \$	50.492,41 \$
	97,50%	-1,95996399	5,65%	7,04%	5,73%	56.462,90 \$	70.356,74 \$	57.270,33 \$
	99%	-2,32634787	6,38%	10,51%	6,53%	63.765,98 \$	105.054,77 \$	65.337,40 \$

5% Gold	confidence interval	Z-stat	ES VCV (%)	ES HS (%)	CvAR Mills (%)	ES VCV \$	ES HS \$	CvAR Mills \$
	90%	-1,28155157	4,26%	4,02%	4,29%	42.597,67 \$	40.217,57 \$	42.882,33 \$
	95%	-1,64485363	5,00%	5,38%	5,04%	49.969,74 \$	53.845,21 \$	50.449,87 \$
	97,50%	-1,95996399	5,64%	7,07%	5,72%	56.408,88 \$	70.704,98 \$	57.214,76 \$
	99%	-2,32634787	6,37%	10,57%	6,25%	63.697,92 \$	105.722,73 \$	65.526,53 \$

16. Expected shortfall according to the 3 methodologies for Turkey

Turkey	confidence interval	Z-stat	ES VCV (%)	ES HS (%)	CvAR Mills (%)	ES VCV \$	ES HS \$	CvAR Mills \$
	90%	-1,28155157	3,82%	3,97%	3,85%	38.224,97 \$	39.746,55 \$	38.485,09 \$
	95%	-1,64485363	4,50%	5,39%	4,54%	44.961,59 \$	53.900,06 \$	45.400,33 \$
	97,50%	-1,95996399	5,08%	7,01%	5,16%	50.845,68 \$	70.069,48 \$	51.582,10 \$
	99%	-2,32634787	5,75%	9,77%	5,89%	57.506,43 \$	97.705,04 \$	58.939,64 \$

1% BTC	confidence interval	Z-stat	ES VCV (%)	ES HS (%)	CvAR Mills (%)	ES VCV \$	ES HS \$	CvAR Mills \$
	90%	-1,28155157	3,79%	3,94%	3,81%	37.876,85 \$	39.436,97 \$	38.134,65 \$
	95%	-1,64485363	4,46%	5,35%	4,50%	44.553,63 \$	53.468,92 \$	44.988,47 \$
	97,50%	-1,95996399	5,04%	6,95%	5,11%	50.385,46 \$	69.471,29 \$	51.115,34 \$
	99%	-2,32634787	5,70%	9,68%	5,84%	56.987,04 \$	96.788,23 \$	58.407,52 \$

1% Gold	confidence interval	Z-stat	ES VCV (%)	ES HS (%)	CvAR Mills (%)	ES VCV \$	ES HS \$	CvAR Mills \$
	90%	-1,28155157	3,78%	3,93%	3,81%	37.841,26 \$	39.343,69 \$	38.098,78 \$
	95%	-1,64485363	4,45%	5,34%	4,49%	44.510,64 \$	53.365,81 \$	44.945,00 \$
	97,50%	-1,95996399	5,03%	6,94%	5,11%	50.336,00 \$	69.382,07 \$	51.065,07 \$
	99%	-2,32634787	5,69%	9,68%	5,83%	56.930,26 \$	96.755,95 \$	58.349,16 \$

5% BTC	confidence interval	Z-stat	ES VCV (%)	ES HS (%)	CvAR Mills (%)	ES VCV \$	ES HS \$	CvAR Mills \$
	90%	-1,28155157	3,67%	3,83%	3,69%	36.655,85 \$	38.315,13 \$	36.905,56 \$
	95%	-1,64485363	4,31%	5,18%	4,35%	43.122,77 \$	51.775,38 \$	43.543,95 \$
	97,50%	-1,95996399	4,88%	6,73%	4,95%	48.771,30 \$	67.306,40 \$	49.478,23 \$
	99%	-2,32634787	5,52%	9,32%	5,65%	55.165,38 \$	93.161,28 \$	56.541,21 \$

5% Gold	confidence interval	Z-stat	ES VCV (%)	ES HS (%)	CvAR Mills (%)	ES VCV \$	ES HS \$	CvAR Mills \$
	90%	-1,28155157	3,63%	3,77%	3,66%	36.312,69 \$	37.736,29 \$	36.559,86 \$
	95%	-1,64485363	4,27%	5,12%	4,31%	42.714,15 \$	51.230,98 \$	43.131,07 \$
	97,50%	-1,95996399	4,83%	6,66%	4,90%	48.305,51 \$	66.633,88 \$	49.005,30 \$
	99%	-2,32634787	5,46%	9,30%	5,60%	54.634,89 \$	92.961,19 \$	55.996,79 \$

17. Student's t test table

VaR \$	Student test (w = 1%)	Bitcoin vs Gold	
	Belgium		0,4316
	Switzerland		0,7733
	Argentina		0,2448
	Turkey		0,4209
VaR \$	Student test (w = 5%)	Bitcoin vs Gold	
	Belgium		0,0011
	Switzerland		0,2613
	Argentina		0,4136
	Turkey		0,1591
VaR local currency	Student test (w = 1%)	Bitcoin vs Gold	
	Belgium		0,4856
	Switzerland		0,5137
	Argentina		0,1929
	Turkey		0,0595
VaR local currency	Student test (w = 5%)	Bitcoin vs Gold	
	Belgium		0,0003
	Switzerland		0,9633
	Argentina		0,0768
	Turkey		0,0031
ES \$	Student test (w = 1%)	Bitcoin vs Gold	
	Belgium		0,9815
	Switzerland		0,0022
	Argentina		0,1875
	Turkey		0,0442
ES \$	Student test (w = 5%)	Bitcoin vs Gold	
	Belgium		0,1500
	Switzerland		0,0038
	Argentina		0,7650
	Turkey		0,0395

The table above shows all the t-obs observed when comparing bitcoin and gold to see if there was a significant difference in the reduction of the estimators.