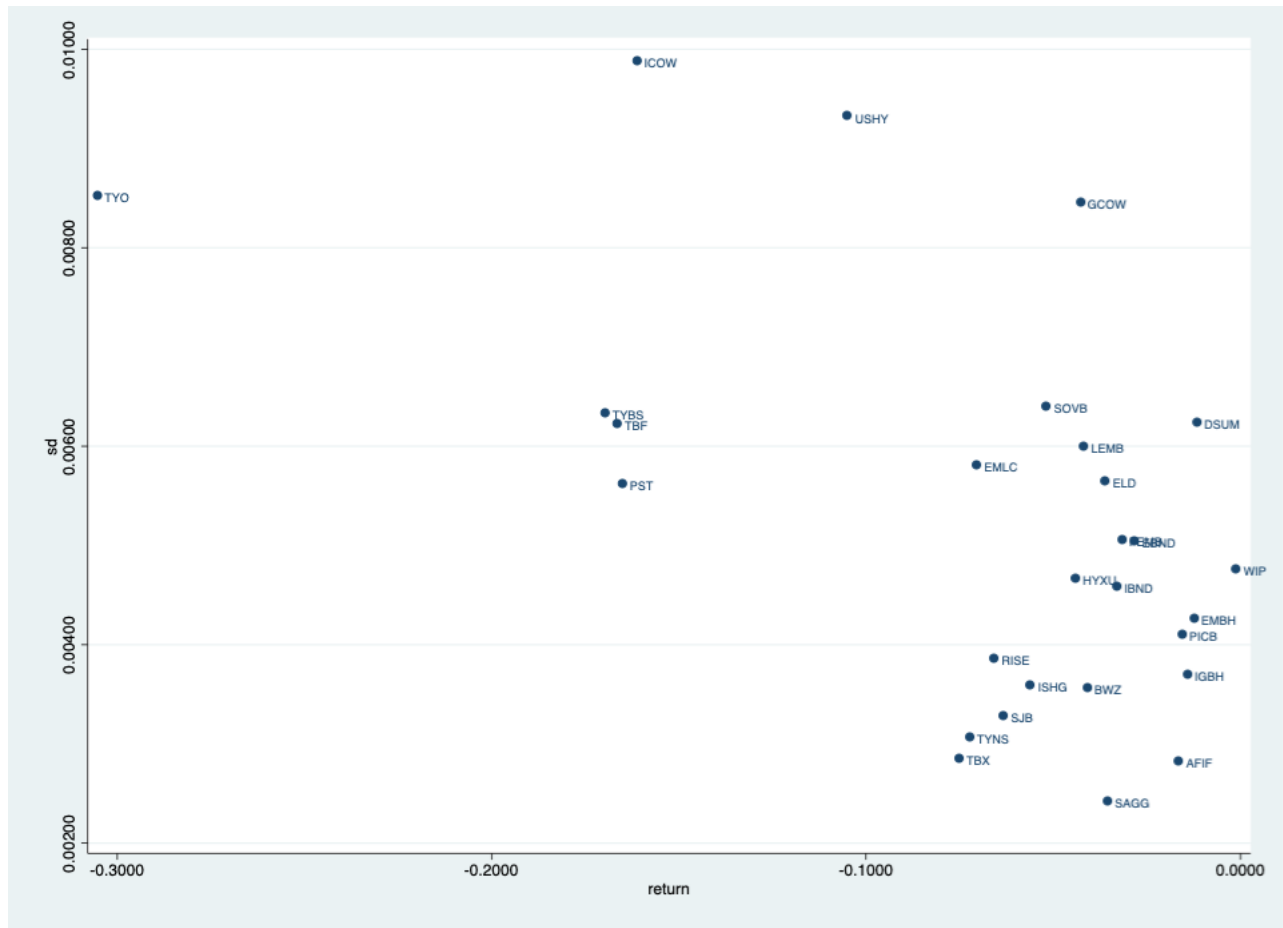


Educational purposes only.

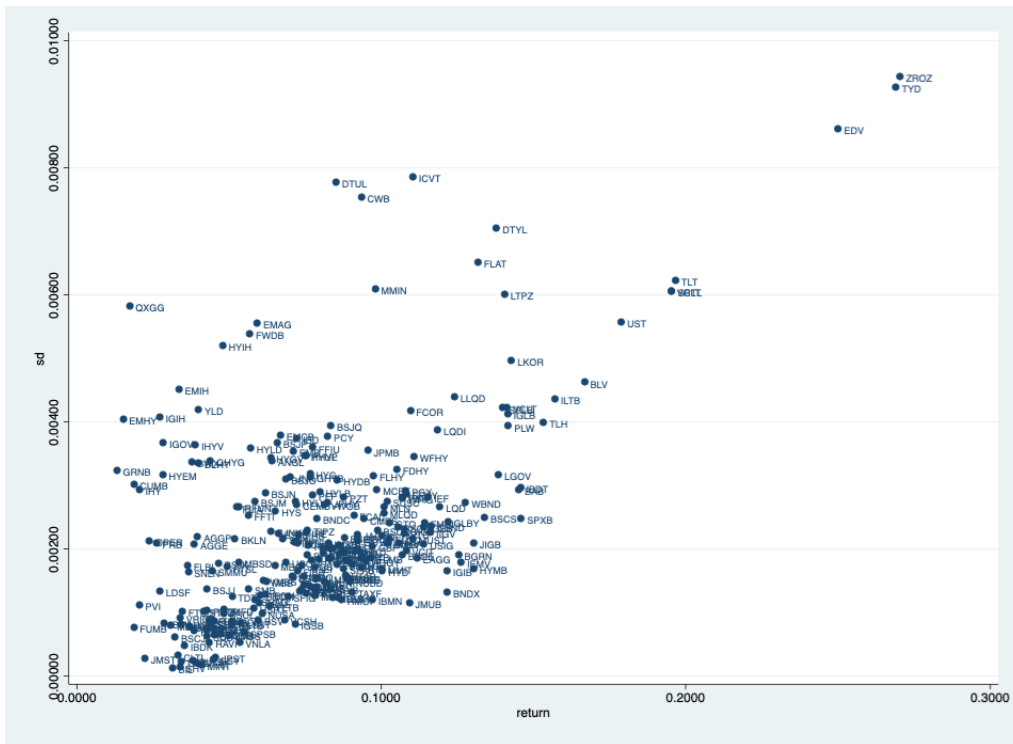
Risk and return

Symbol	σ	ΣR	$\Sigma R/\sigma$	Symbol	σ	ΣR	$\Sigma R/\sigma$	Symbol	σ	ΣR	$\Sigma R/\sigma$	Symbol	σ	ΣR	$\Sigma R/\sigma$
BIL	0.00012	0.0316	263.7314	FLMI	0.00154	0.0791	51.4940	PGX	0.00290	0.1083	37.3105	AGGE	0.00207	0.0388	18.7074
SHV	0.00014	0.0340	242.7502	MUST	0.00216	0.1105	51.2359	SUSC	0.00275	0.1021	37.1759	HYGV	0.00343	0.0638	18.5926
MINT	0.00017	0.0411	235.2198	FLDR	0.00088	0.0447	50.7859	RFCI	0.00206	0.0763	37.0880	DLBR	0.01557	0.2872	18.4416
FTSM	0.00020	0.0393	192.9148	BIV	0.00209	0.1059	50.6563	BLV	0.00461	0.1669	36.1889	AGGP	0.00219	0.0399	18.2425
GSY	0.00026	0.0451	174.0180	GLBY	0.00241	0.1221	50.5648	PLW	0.00392	0.1420	36.1821	BSJP	0.00367	0.0661	18.0107
PULS	0.00023	0.0385	163.8355	ITE	0.00185	0.0937	50.5519	ILTB	0.00435	0.1572	36.1640	EMCB	0.00377	0.0671	17.7831
JPST	0.00029	0.0458	159.6403	VTIP	0.00087	0.0437	50.2977	FCAL	0.00252	0.0912	36.1085	MMIN	0.00609	0.0983	16.1380
GBIL	0.00022	0.0347	159.1938	BSDL	0.00097	0.0485	50.0562	IBMI	0.00082	0.0288	35.1850	HYLD	0.00358	0.0573	16.0149
CLTL	0.00031	0.0333	106.7979	UITB	0.00188	0.0938	49.9794	SCHP	0.00208	0.0728	35.0716	ICVT	0.00785	0.1106	14.0888
VNLA	0.00053	0.0536	101.6445	BAB	0.00292	0.1454	49.8291	FTSD	0.00101	0.0348	34.4546	GHYG	0.00338	0.0441	13.0656
JMUB	0.00114	0.1094	95.8082	BND	0.00179	0.0892	49.7910	IGLB	0.00412	0.1417	34.3599	PRB	0.00209	0.0264	12.6087
BNDX	0.00131	0.1219	92.9313	SHAG	0.00119	0.0588	49.6186	TIP	0.00212	0.0724	34.1359	CWB	0.00752	0.0937	12.4521
IGSB	0.00081	0.0718	88.6687	CBND	0.00235	0.1167	49.5995	TDTF	0.00210	0.0716	34.1218	BLHY	0.00334	0.0403	12.0650
JMST	0.00027	0.0226	85.1968	CORP	0.00208	0.1026	49.2913	MCEF	0.00292	0.0988	33.8138	DFVL	0.01154	0.1365	11.8335
RAVI	0.00053	0.0438	83.1322	IBDT	0.00296	0.1459	49.2444	VCLT	0.00422	0.1415	33.5533	OPER	0.00212	0.0241	11.3689
IBMN	0.00119	0.0973	81.4915	IGEB	0.00233	0.1142	48.9684	IPE	0.00225	0.0754	33.5015	BWX	0.00336	0.0378	11.2540
SPSB	0.00068	0.0552	81.0644	FBND	0.00175	0.0857	48.9634	SPLB	0.00421	0.1401	33.2843	DTUL	0.00777	0.0853	10.9888
LMBS	0.00064	0.0501	78.4626	IBDN	0.00128	0.0623	48.8629	PHB	0.00229	0.0760	33.2690	IHYV	0.00362	0.0392	10.8145
VCSH	0.00087	0.0683	78.2917	DIAL	0.00209	0.1022	48.8545	TIPZ	0.00222	0.0731	32.9604	EMAG	0.00555	0.0595	10.7159
HYMB	0.00168	0.1305	77.6951	PZA	0.00182	0.0884	48.6087	FDHY	0.00325	0.1053	32.4134	FWDB	0.00537	0.0570	10.6114
IBDK	0.00047	0.0355	74.8673	BSCK	0.00077	0.0373	48.1663	SPTL	0.00605	0.1956	32.3240	YLD	0.00419	0.0402	9.6015
IGIB	0.00165	0.1218	73.6731	VTC	0.00224	0.1077	48.0853	VGLT	0.00605	0.1954	32.2903	HYIH	0.00520	0.0481	9.2594
HMOP	0.00119	0.0871	73.0295	BSCM	0.00126	0.0604	47.9928	UST	0.00555	0.1791	32.2376	HYEM	0.00316	0.0285	9.0075
VGSH	0.00065	0.0473	72.3385	IBDO	0.00156	0.0748	47.8854	WFHY	0.00345	0.1110	32.2064	IGOV	0.00366	0.0287	7.8280
IEMV	0.00177	0.1265	71.2595	FLCO	0.00215	0.1029	47.7683	BNDX	0.00247	0.0792	32.0755	EMIH	0.00450	0.0337	7.4941
SCHO	0.00066	0.0469	70.6581	GBF	0.00204	0.0974	47.7435	BSJJ	0.00136	0.0429	31.6704	IHY	0.00293	0.0207	7.0817
SHY	0.00064	0.0453	70.3975	FMXI	0.00240	0.1145	47.7368	TLT	0.00622	0.1968	31.6467	IGIH	0.00407	0.0274	6.7397
IBMM	0.00123	0.0859	69.9623	FIXD	0.00197	0.0927	47.1562	SHYL	0.00216	0.0680	31.5086	CUMB	0.00301	0.0189	6.2812
TAXF	0.00131	0.0906	69.3233	GIGB	0.00229	0.1078	46.9817	PZT	0.00281	0.0879	31.2721	GRNB	0.00322	0.0134	4.1519
VTEB	0.00122	0.0842	68.9513	IMFD	0.00103	0.0485	46.8946	LQD	0.00315	0.0977	31.0499	EMHY	0.00403	0.0154	3.8348
BSV	0.00087	0.0598	68.7903	WBND	0.00273	0.1280	46.8702	FLDI	0.00387	0.1188	30.7193	QXGG	0.00582	0.0176	3.0175
SUB	0.00063	0.0430	68.7174	IEI	0.00170	0.0783	46.1284	JPHY	0.00272	0.0826	30.4021	REML	0.01474	0.0022	0.1478
BGRN	0.00189	0.1255	66.3475	BSCN	0.00155	0.0712	46.0370	WVOB	0.00269	0.0817	30.3492	ALD	0.56322	-0.0152	-0.0271
LSST	0.00082	0.0540	65.5092	PBND	0.00193	0.0883	45.7443	MBSD	0.00178	0.0533	29.8854	WIP	0.00476	-0.0009	-0.1848
SHM	0.00074	0.0479	64.5763	QLTA	0.00220	0.1004	45.6944	BSJL	0.00224	0.0664	29.6613	DSUM	0.00624	-0.0114	-1.8341
USTB	0.00080	0.0511	63.8613	IBDP	0.00184	0.0836	45.4188	FTSL	0.00171	0.0497	29.1106	EMBH	0.00426	-0.0122	-2.8706
JIGB	0.00208	0.1306	62.8629	SUSB	0.00157	0.0708	45.1285	TYD	0.00926	0.2693	29.0905	COWZ	0.01096	-0.0377	-3.4357
NUSA	0.00097	0.0611	62.7829	LQD	0.00265	0.1196	45.1097	EDV	0.00861	0.2503	29.0659	PICB	0.00409	-0.0154	-3.7660
IMFI	0.00126	0.0784	62.3244	VGIT	0.00193	0.0872	45.1048	LKOR	0.00495	0.1430	28.8787	IGBH	0.00370	-0.0141	-3.8036
SPIB	0.00137	0.0836	61.0703	BSCR	0.00234	0.1056	45.0938	ZKOR	0.00943	0.2702	28.7139	GCOW	0.00845	-0.0426	-8.9836
NUBD	0.00147	0.0899	61.0088	IMPC	0.00184	0.0830	45.0009	LLQD	0.00439	0.1242	28.2959	EBND	0.00504	-0.0280	-5.5462
HYD	0.00165	0.1006	60.9125	SCHR	0.00192	0.0864	44.9816	SJNK	0.00228	0.0640	28.1414	AFIF	0.00283	-0.0162	-5.7485
TUZ	0.00074	0.0452	60.7562	HTRB	0.00196	0.0876	44.7711	HYDB	0.00308	0.0858	27.8812	FEMB	0.00505	-0.0315	-6.2436
EAGG	0.00184	0.1119	60.7106	FIBR	0.00165	0.0726	43.9901	HYLB	0.00289	0.0800	27.6990	ELD	0.00564	-0.0358	-6.3470
KORP	0.00131	0.0789	60.1475	LGOV	0.00316	0.1387	43.8814	PPF	0.00285	0.0776	27.2884	LEMB	0.00599	-0.0417	-6.9573
MMIT	0.00167	0.1005	59.9763	GOVT	0.00212	0.0925	43.5619	SMMU	0.00164	0.0447	27.1640	IBND	0.00458	-0.0328	-7.1554
IBDM	0.00086	0.0513	59.5627	NUAG	0.00183	0.0796	43.4570	JPMB	0.00354	0.0957	27.0647	SOVB	0.00640	-0.0516	-8.0579
SPXB	0.00247	0.1462	59.2308	BSCQ	0.00228	0.0989	43.3613	CEMB	0.00269	0.0725	26.9814	DTUS	0.01616	-0.1306	-8.0803
FLTR	0.00073	0.0429	58.9494	JPGB	0.00173	0.0742	42.8918	BSJK	0.00176	0.0468	26.5902	HYXU	0.00466	-0.0438	-9.4042
NYF	0.00129	0.0756	58.7198	ARCM	0.00080	0.0344	42.7831	UBT	0.01249	0.3317	26.5578	CALF	0.01209	-0.1240	-10.2520
BSCE	0.00153	0.0895	58.3848	GTO	0.00241	0.1029	42.7370	FCOR	0.00417	0.1097	26.2984	AMJL	0.02685	-0.2943	-10.9597
SPTS	0.00074	0.0430	58.1785	IHYD	0.00182	0.0773	42.5712	HYLV	0.00275	0.0722	26.2789	USHY	0.00932	-0.1047	-11.2378
FLTB	0.00110	0.0638	57.9586	IBDQ	0.00218	0.0922	42.4031	TMF	0.01845	0.4663	25.2805	BWZ	0.00356	-0.0407	-11.4577
BOND	0.00153	0.0888	57.8853	PWZ	0.00204	0.0864	42.2918	HYS	0.00260	0.0655	25.2383	EMLC	0.00581	-0.0702	-12.0824
FMB	0.00155	0.0888	57.2010	SKOR	0.00200	0.0844	42.1676	FUMB	0.00075	0.0189	25.2104	OKDCC	0.11836	-1.6078	-13.5840
TFI	0.00145	0.0826	57.1017	MBB	0.00148	0.0624	42.1442	GHYB	0.00313	0.0770	24.6156	SAGG	0.00242	-0.0353	-14.5685
BSBE	0.00138	0.0781	56.7227	PBTP	0.00102	0.0430	42.1193	BKLN	0.00215	0.0522	24.3121	STPP	0.01292	-0.1935	-14.9761
MUB	0.00140	0.0791	56.4657	BSCO	0.00193	0.0810	41.9412	HYG	0.00318	0.0768	24.1376	ISHG	0.00359	-0.0559	-15.5742
BSDE	0.00190	0.1071	56.2611	SMB	0.00136	0.0567	41.7576	LTPZ	0.00601	0.1407	23.4242	ICOW	0.00988	-0.1611	-16.2964
HTAB	0.00157	0.0884	56.1940	VBND	0.00200	0.0832	41.6414	SNLN	0.00163	0.0368	22.6041	RISE	0.00385	-0.0656	-17.0172
SPFG	0.00125	0.0694	55.7066	JAGG	0.00222	0.0923	41.5425	JNK	0.00312	0.0704	22.5745	CRUC	0.12192	-2.2977	-18.8458
ITM	0.00169	0.0937	55.4109	STPZ	0.00101	0.0418	41.4765	FFTI	0.00252	0.0565	22.4604	SJB	0.00327	-0.0630	-19.2653
USIG	0.00206	0.1142	55.4092	IEF	0.00280	0.1156	41.2424	BSJO	0.00310	0.0687	22.1897	EVFTC	0.11679	-2.3146	-19.8177
AGZ	0.00133	0.0736	55.4066	TDDT	0.00125	0.0512	41.1033	PCY	0.00377	0.0827	21.9228	ULBR	0.01793	-0.4045	-22.5613
VCIT	0.00196	0.1084	55.3109	VMBS	0.00150	0.0616	40.9670	PHYL	0.00347	0.0755	21.7809	TYNS	0.00306	-0.0722	-23.6102
MUNI	0.00148	0.0816	55.1867	BSCP	0.00217	0.0881	40.6783	HYUP	0.00346	0.0752	21.7466	BAL	0.01479	-0.3676	-24.8597
HSRT	0.00106	0.0583	54.8801	HYDW	0.00200	0.0813	40.5732	FFIU	0.00359	0.0777	21.6483	TBX	0.00285	-0.0749	-26.2964
GVI	0.00135	0.0741	54.7492	PFIG	0.00190	0.0760	40.0880	BSJN	0.00287	0.0621	21.6185	TBF	0.00622	-0.1662	-26.7132
FSMB	0.00071	0.0389	54.6157	KCCB	0.00207	0.0829	40.0556	BSJM	0.00274	0.0587	21.3926	TYBS	0.00632	-0.1695	-26.8067
BSCJ	0.00060	0.0325	54.2134	IMTB	0.00209	0.0828	39.6390	BSJQ	0.00393	0.0837	21.2976	PST	0.00562	-0.1649	

Risk-return: Southwest quadrant



Risk-return: Southeast quadrant



Risk-return: Southeast quadrant (limited sample)

