



Precise Mind

量化策略 总结汇报



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年度财报股池
季度财报股池

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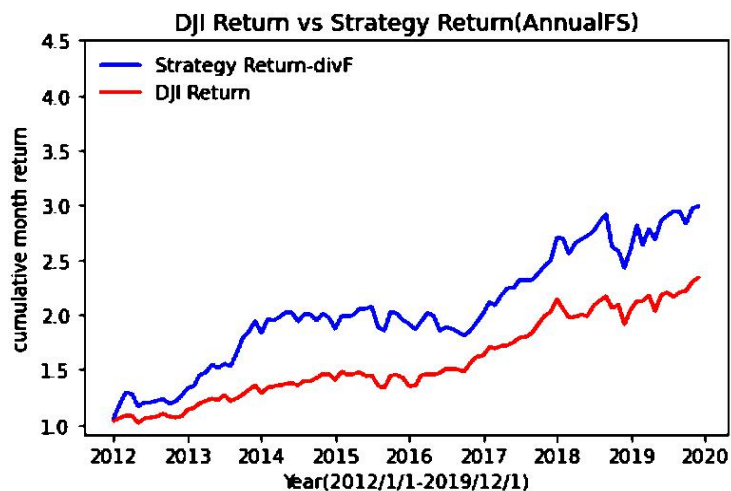
回测时间：2004-2021

调仓频率：每月调仓一次

配置策略：等比例

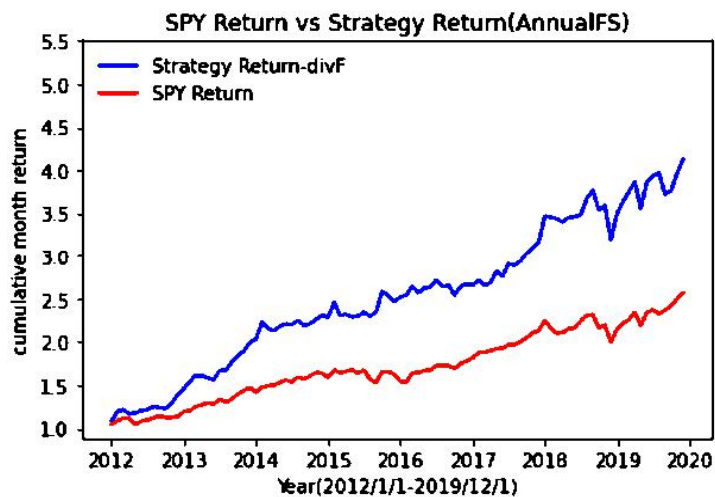


优化模型实证结果： 牛市 2012-2019 （年度财报股池）



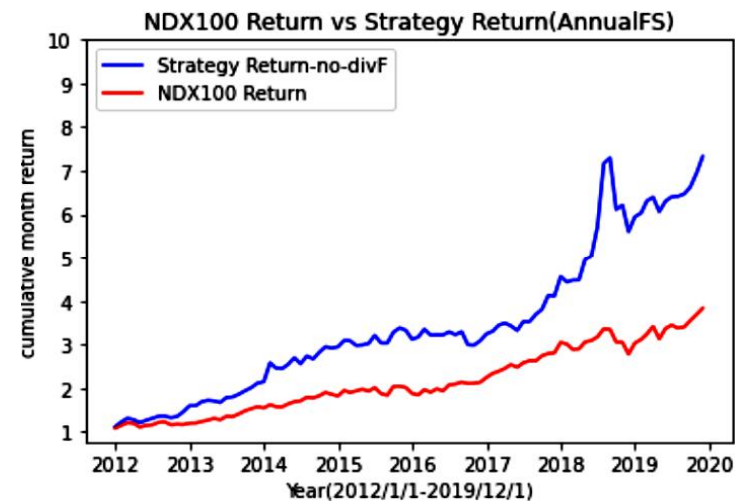
CAGR(Strategy): 0.15
 SharpRatio(Strategy): 0.82
 Max-Drawdown(Strategy): 0.17

CAGR(DJI): 0.11
 SharpRatio(DJI): 0.77
 Max-Drawdown(DJI): 0.12



CAGR(Strategy): 0.19
 SharpRatio(Strategy): 1.23
 Max-Drawdown(Strategy): 0.15

CAGR(SP500): 0.12
 SharpRatio(SP500): 0.9
 Max-Drawdown(SP500): 0.14

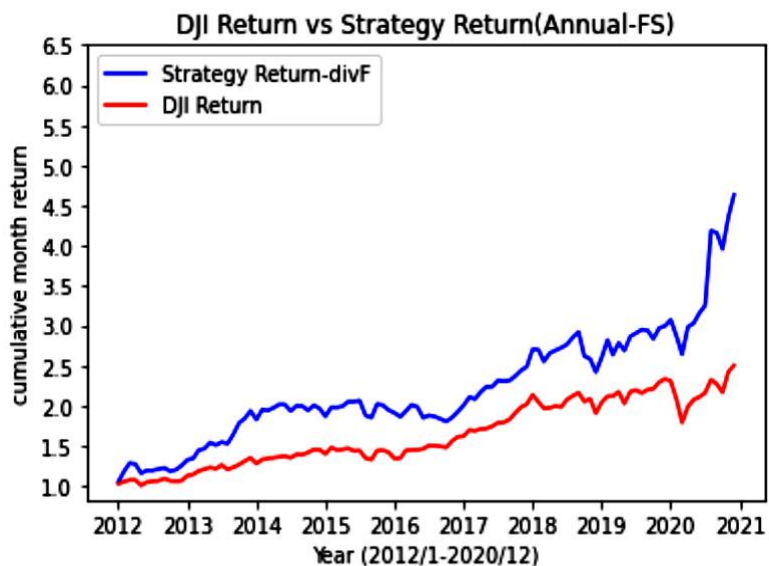


CAGR(Strategy): 0.28
 SharpRatio(Strategy): 1.31
 Max-Drawdown(Strategy): 0.23

CAGR(NDX100): 0.18
 SharpRatio(NDX100): 1.12
 Max-Drawdown(NDX100): 0.17



优化模型实证结果： 2012-2020 (年度财报股池)



CAGR(Strategy): 0.19
SharpRatio(Strategy): 0.89
Max-Drawdown(Strategy): 0.17

CAGR(DJI): 0.11
SharpRatio(DJI): 0.60
Max-Drawdown(DJI): 0.23

CAGR(Strategy): 0.20
SharpRatio(Strategy): 1.16
Max-Drawdown(Strategy): 0.15

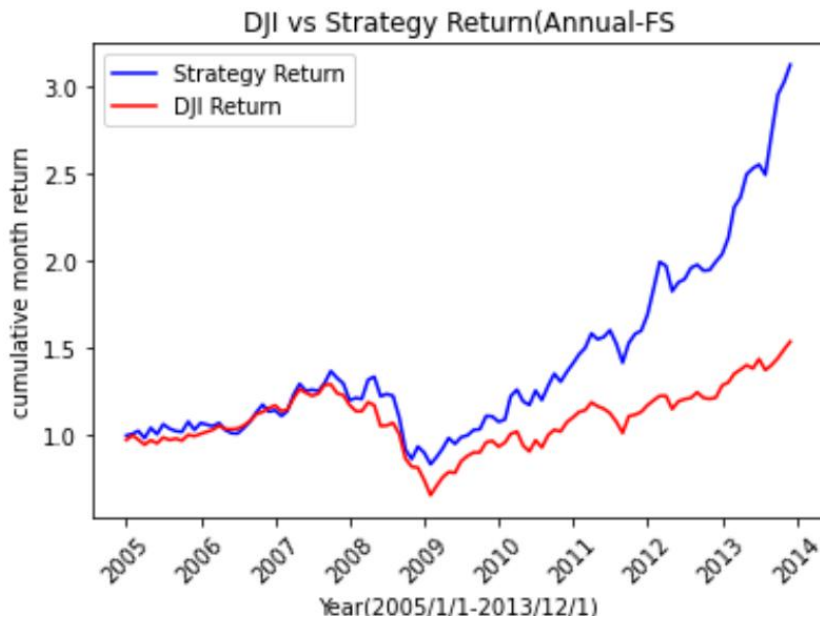
CAGR(SP500): 0.12
SharpRatio(SP500): 0.78
Max-Drawdown(SP500): 0.20

CAGR(Strategy): 0.29
SharpRatio(Strategy): 1.46
Max-Drawdown(Strategy): 0.21

CAGR(NDX100): 0.21
SharpRatio(NDX100): 1.17
Max-Drawdown(NDX100): 0.17



优化模型实证结果： 2004-2014 (年度财报股池)



CAGR(Strategy): 0.14
SharpRatio(Strategy): 0.67
Max-Drawdown(Strategy): 0.39

CAGR(DJI): 0.05
SharpRatio(DJI): 0.17
Max-Drawdown(DJI): 0.49



CAGR(Strategy): 0.26
SharpRatio(Strategy): 1.06
Max-Drawdown(Strategy): 0.17

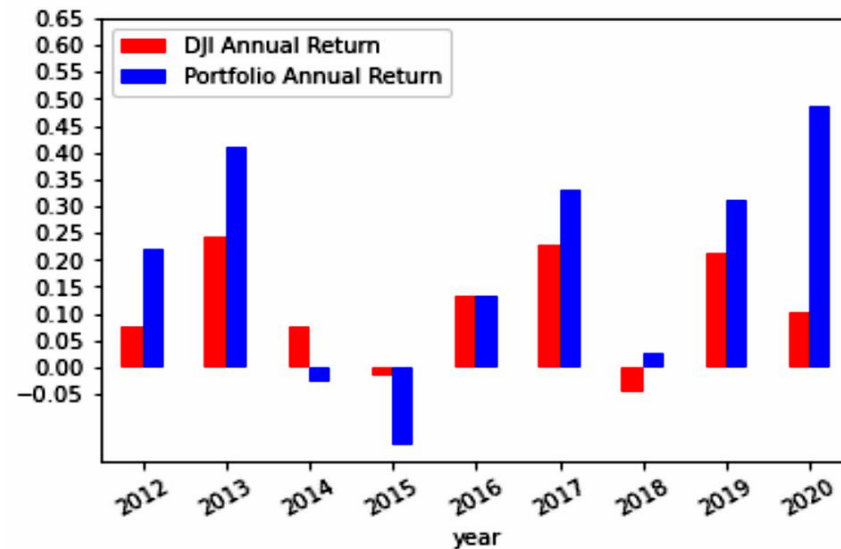
CAGR(DJI): 0.11
SharpRatio(DJI): 0.52
Max-Drawdown(DJI): 0.23



DJI & Portfolio Monthly Returns(%) 2012-2020

year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Portfolio Annual Return	DJI Annual Return
2012	0.0579	0.1231	0.08617	-0.009228	-0.07888	0.04162	0.02374	-0.03349	0.01306	-0.03333	0.01661	0.014	0.2213	0.07467
2013	-0.005623	0.01961	0.08552	0.02463	0.01796	0.02722	0.00933	0.007854	0.05913	0.08443	0.03848	0.04133	0.4099	0.2413
2014	-0.04865	0.03282	-0.002147	0.02012	-0.00108	0.008946	-0.05662	0.03078	0.002579	-0.0153	0.04122	-0.0382	-0.02553	0.07599
2015	-0.03854	0.04693	-0.03403	-0.01356	-0.0002266	-0.02619	0.01734	-0.09433	-0.03682	0.05024	0.0003998	-0.01656	-0.1454	-0.01396
2016	0.004295	-0.006884	0.1002	0.007253	0.00899	-0.0528	0.0386	-0.002707	0.0246	-0.01715	0.006064	0.02325	0.1337	0.1323
2017	0.02733	0.06132	-0.00191	0.0549	0.05085	0.002105	0.05956	0.013	-0.003004	0.01461	0.03593	0.01694	0.3316	0.2275
2018	0.07446	-0.0007491	-0.06448	0.02735	0.009822	-0.01583	0.05712	0.007062	0.02861	-0.07271	0.03641	-0.05981	0.02727	-0.04768
2019	0.05092	0.08321	-0.03926	0.0782	-0.04739	0.06778	0.01918	0.00813	-0.02181	0.000449	0.06634	0.0448	0.3106	0.2111
2020	0.02039	-0.07436	-0.06545	0.1492	0.01125	0.09293	0.1175	0.1009	-0.05372	-0.04352	0.1733	0.05638	0.4848	0.104

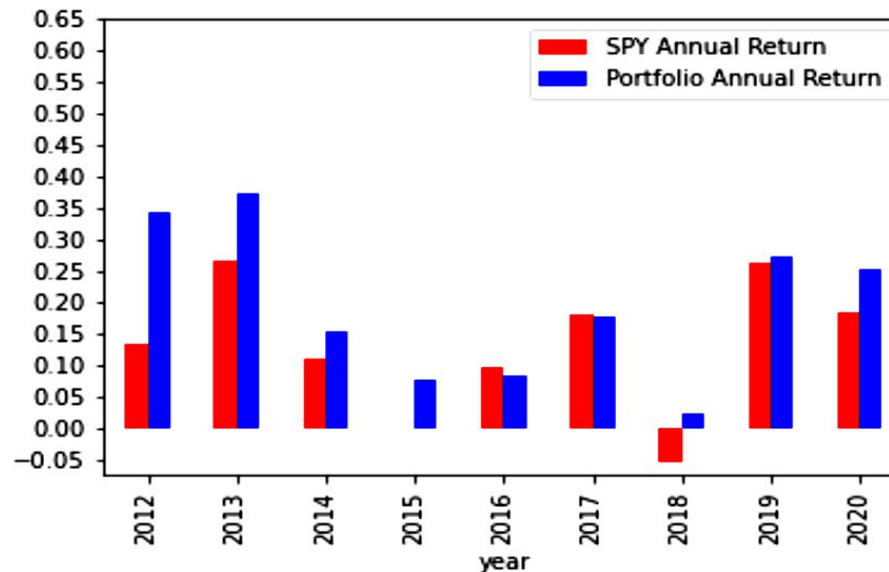
DJI & Portfolio Yearly Returns(%)



SP500 & Portfolio Monthly Returns(%) 2012-2020

year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Portfolio Annual Return	SPY Annual Return
2012	0.0818	0.1046	0.01786	-0.04029	0.007539	0.02552	0.008097	0.03206	-0.01504	-0.005567	0.04654	0.07884	0.342	0.1316
2013	0.05221	0.05538	0.04699	-0.004576	-0.01335	-0.0158	0.06923	0.002009	0.05688	0.04153	0.03008	0.05172	0.3723	0.2654
2014	0.01956	0.09844	-0.03385	-0.01232	0.02369	0.0136	-0.004448	0.02148	-0.02618	0.009082	0.02296	0.02185	0.1539	0.1114
2015	-0.01011	0.07663	-0.06227	0.005802	-0.0131	0.004176	0.01952	-0.0196	0.02275	0.09941	-0.01893	-0.0267	0.07758	0.001132
2016	0.02078	0.009521	0.04009	-0.02961	0.0221	0.005189	0.03036	-0.02767	0.005798	-0.04408	0.04057	0.01001	0.08306	0.09617
2017	-0.005268	0.0219	-0.0218	0.01064	0.05171	-0.02253	0.05444	-0.007632	0.01811	0.03361	0.0204	0.02234	0.1759	0.1795
2018	0.09415	-0.003146	-0.004876	-0.01166	0.01559	0.002708	0.006327	0.05435	0.02684	-0.06198	0.01648	-0.112	0.02274	-0.05323
2019	0.09534	0.04093	0.02852	0.03352	-0.08091	0.08553	0.01836	0.01006	-0.06318	0.0111	0.05358	0.04179	0.2747	0.2641
2020	-0.01253	-0.1051	-0.02762	0.1128	0.04209	-0.01225	-0.002929	0.0448	-0.01857	-0.007406	0.1531	0.08596	0.2523	0.1826

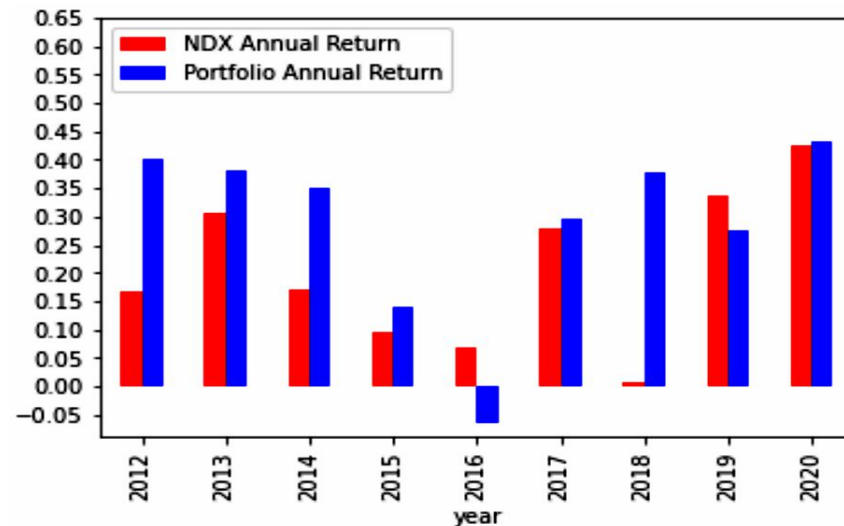
SP500 & Portfolio Yearly Returns(%)



NDX100 & Portfolio Monthly Returns(%) 2012-2020

year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Portfolio Annual Return	NDX Annual Return
2012	0.1211	0.09805	0.06672	-0.0261	-0.05192	0.04379	0.03464	0.03679	0.003212	-0.02727	0.02147	0.07979	0.4003	0.1682
2013	0.09522	-0.000493	0.05623	0.02011	-0.008967	-0.02079	0.06796	0.00706	0.03633	0.04159	0.03752	0.0505	0.3823	0.307
2014	0.01396	0.2042	-0.04678	-0.006244	0.03996	0.06056	-0.05284	0.07104	-0.02577	0.05743	0.04632	-0.01112	0.3507	0.1709
2015	0.00978	0.04928	-0.001401	-0.0356	0.003779	0.01136	0.06126	-0.0543	-0.0003979	0.08163	0.0312	-0.0171	0.1395	0.09408
2016	-0.06256	0.01806	0.05607	-0.04069	0.001803	-0.0009802	0.02288	-0.0204	0.02157	-0.09058	-0.003496	0.03382	-0.0645	0.06647
2017	0.05136	0.0186	0.04082	0.01527	-0.01816	-0.03159	0.06162	-0.0002907	0.04746	0.03085	0.08382	-0.003849	0.2959	0.2798
2018	0.1101	-0.02839	0.01038	0.0005943	0.1053	0.01642	0.1364	0.2533	0.01798	-0.1623	0.01689	-0.09839	0.3782	0.00574
2019	0.06102	0.01486	0.04547	0.01399	-0.05208	0.0397	0.01586	0.001517	0.008734	0.02407	0.04891	0.05466	0.2767	0.3377
2020	0.01597	-0.06672	-0.0465	0.1026	0.06504	-0.001678	0.06964	0.0652	-0.01571	0.04998	0.152	0.0423	0.4321	0.4261

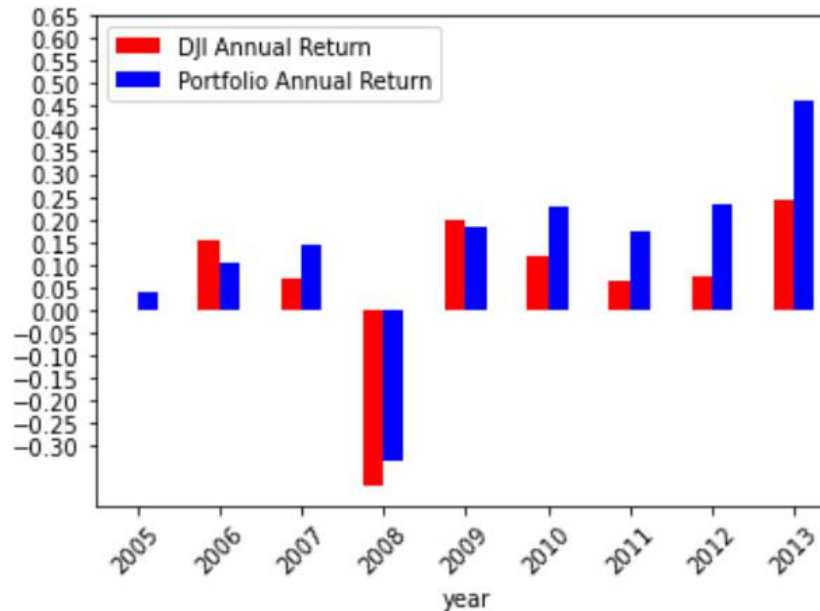
NDX100 & Portfolio Yearly Returns(%)



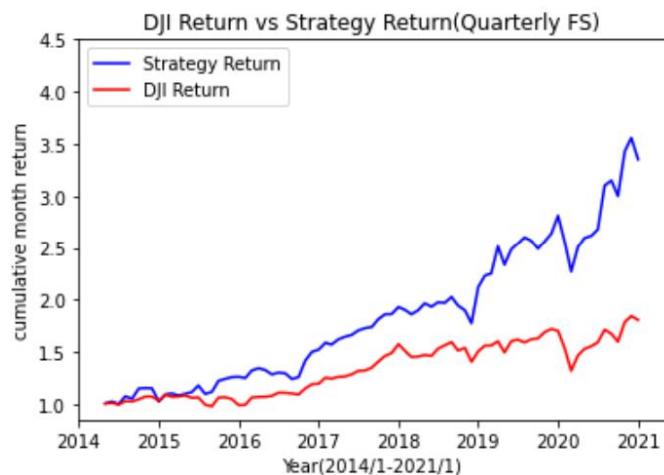
DJI & Portfolio Monthly Returns(%) 2005-2014

year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Portfolio Annual Return	DJI Annual Return
2005	-0.002317	0.009963	0.01651	-0.04032	0.06019	-0.03532	0.05702	-0.02374	-0.0137	-0.003919	0.05767	-0.0443	0.03772	-0.002623
2006	0.03831	-0.008929	-0.008347	0.01772	-0.0376	-0.0178	-0.002165	0.03235	0.03716	0.04717	0.03892	-0.03449	0.1023	0.1529
2007	0.01115	-0.04637	0.0287	0.08339	0.04323	-0.0289	0.01081	0.01605	0.03782	0.04112	-0.02931	-0.02318	0.1445	0.06728
2008	-0.1179	0.01081	-0.00482	0.09138	0.01319	-0.08401	0.0106	-0.008185	-0.1026	-0.1665	-0.0592	0.0833	-0.3338	-0.3904
2009	-0.03805	-0.07396	0.0472	0.05796	0.06605	-0.03391	0.0403	0.01053	0.0316	0.003231	0.07422	-0.002718	0.1824	0.1967
2010	-0.02764	0.01226	0.1226	0.03075	-0.05302	-0.01762	0.07086	-0.04387	0.06858	0.05385	-0.03424	0.04314	0.2257	0.1188
2011	0.03655	0.03801	0.02287	0.05596	-0.02109	0.008604	0.02501	-0.04855	-0.07149	0.07947	0.03436	0.01156	0.1713	0.06315
2012	0.0579	0.09115	0.08063	-0.0118	-0.07361	0.02816	0.009513	0.03424	0.009036	-0.01698	0.001817	0.02439	0.2344	0.07467
2013	0.02159	0.04708	0.08137	0.02463	0.05589	0.01391	0.0084	-0.02302	0.09642	0.08013	0.02472	0.03264	0.4638	0.2413

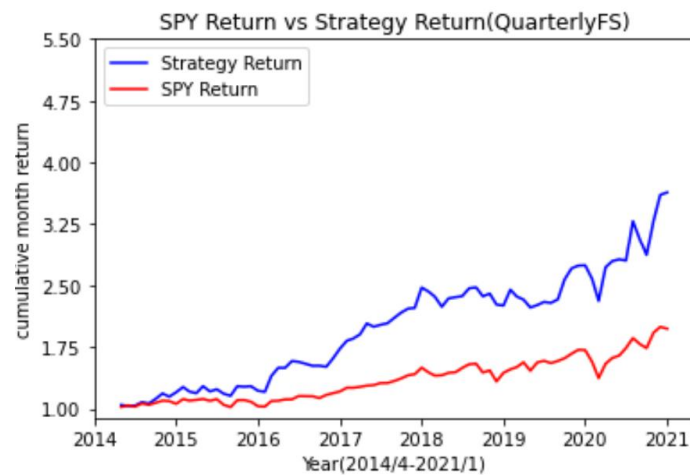
DJI & Portfolio Yearly Returns(%)



优化模型实证结果： 季度财报股池 2014-2021



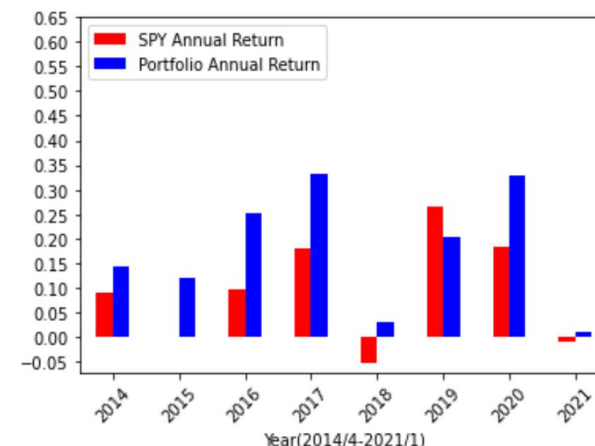
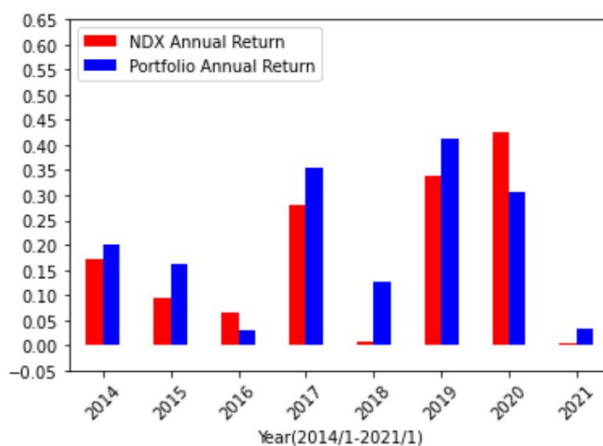
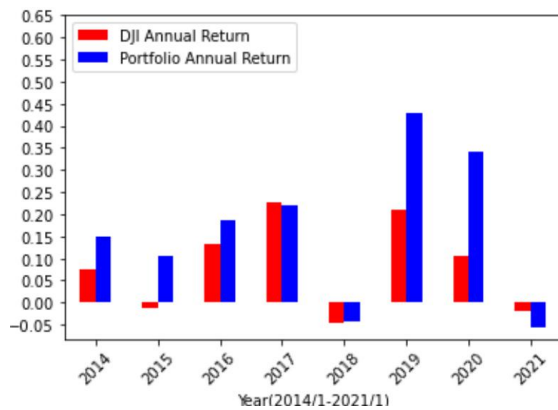
CAGR(Strategy): 0.20
SharpRatio(Strategy): 0.91
Max-Drawdown(Strategy): 0.19
CAGR(DJI): 0.09
SharpRatio(DJI): 0.49
Max-Drawdown(DJI): 0.23



CAGR(Strategy): 0.21
SharpRatio(Strategy): 0.97
Max-Drawdown(Strategy): 0.15
CAGR(SPY): 0.10
SharpRatio(SPY): 0.56
Max-Drawdown(SPY): 0.2



CAGR(Strategy): 0.24
SharpRatio(Strategy): 1.09
Max-Drawdown(Strategy): 0.16
CAGR(NDX100): 0.21
SharpRatio(NDX100): 1.09
Max-Drawdown(NDX100): 0.17



优化模型实证结果：年度 VS 季度财报股池



CAGR(Strategy-A): 0.13
SharpRatio(Strategy-A): 0.58
Max-Drawdown(A): 0.17

CAGR(Strategy): 0.23
SharpRatio(Strategy): 0.95
Max-Drawdown(Strategy): 0.19

CAGR(DJI): 0.09
SharpRatio(DJI): 0.49
Max-Drawdown(DJI): 0.23



CAGR(Strategy-A): 0.18
SharpRatio(Strategy-A): 0.86
Max-Drawdown(A): 0.18

CAGR(Strategy): 0.14
SharpRatio(Strategy): 0.77
Max-Drawdown(Strategy): 0.15

CAGR(SP500): 0.1
SharpRatio(SP500): 0.55
Max-Drawdown(SP500): 0.2



CAGR(Strategy-A): 0.26
SharpRatio(Strategy-A): 1.32
Max-Drawdown(Strategy-A): 0.15

CAGR(Strategy): 0.24
SharpRatio(Strategy): 1.19
Max-Drawdown(Strategy): 0.16

CAGR(NDX100): 0.21
SharpRatio(NDX100): 1.09
Max-Drawdown(NDX100): 0.17

DJI 稳定型股票模型构建更适合于季度财报股池 SP500&NDX100 成长性的股票更适合于年度财报股池



抽样数据验证DJI

投资组合及收益

1/1/2019	0.074792	['CAT', 'BA', 'MCD', 'AXP', 'KO', 'NKE']
2/1/2019	0.08435	['BA', 'AXP', 'NKE', 'BA', 'CRM', 'NKE']
3/1/2019	-0.06572	['BA', 'BA', 'CRM', 'BA', 'V', 'CRM']
4/1/2019	0.056899	['CRM', 'V', 'CRM', 'MSFT', 'V', 'MCD']
5/1/2019	-0.0359	['V', 'MSFT', 'V', 'MSFT', 'HON', 'AXP']
6/1/2019	0.066156	['V', 'V', 'AXP', 'MCD', 'KO', 'AXP']
7/1/2019	0.014174	['V', 'V', 'CAT', 'NKE', 'MSFT', 'V']
8/1/2019	0.01523	['V', 'V', 'V', 'KO', 'V', 'NKE']
9/1/2019	-0.00259	['KO', 'BA', 'KO', 'MCD', 'V', 'MSFT']
10/1/2019	-0.03691	['BA', 'MCD', 'MSFT', 'NKE', 'CAT', 'BA']
11/1/2019	0.048241	['MSFT', 'NKE', 'CAT', 'CAT', 'CRM', 'V']
12/1/2019	0.007758	['MSFT', 'CAT', 'CAT', 'BA', 'CAT', 'MSFT']
1/1/2020	0.040601	['NKE', 'MSFT', 'V', 'CRM', 'KO', 'HON']
2/1/2020	-0.06771	['MSFT', 'V', 'CRM', 'CRM', 'MCD', 'MSFT']
3/1/2020	-0.07816	['MSFT', 'MSFT', 'MSFT', 'HON', 'CRM', 'NKE']
4/1/2020	0.118034	['MSFT', 'MSFT', 'MSFT', 'MSFT', 'NKE', 'V']
5/1/2020	0.051093	['GS', 'MSFT', 'MCD', 'CRM', 'V', 'AXP']
6/1/2020	0.022456	['GS', 'CRM', 'V', 'NKE', 'V', 'CRM']
7/1/2020	0.021874	['GS', 'CRM', 'CRM', 'MSFT', 'CRM', 'GS']
8/1/2020	0.290772	['CRM', 'CRM', 'CRM', 'KO', 'MCD', 'CRM']
9/1/2020	-0.00671	['CRM', 'NKE', 'V', 'HON', 'MSFT', 'MCD']
10/1/2020	-0.02367	['NKE', 'HON', 'MCD', 'NKE', 'MCD', 'HON']
11/1/2020	0.143426	['HON', 'HON', 'HON', 'KO', 'MCD', 'MSFT']
12/1/2020	0.059172	['HON', 'HON', 'HON', 'AXP', 'HON', 'GS']

验证结果

	NKE	MSFT	V	CRM	KO	HON	AXP	MCD	GS	Excel 验证结果
1/1/2020	-0.0495	0.0795	0.0589	0.1209	0.0551	-0.0214	0.0432	0.0828	0.0340	0.040601153
2/1/2020	-0.0719	-0.0483	-0.0865	-0.0653	-0.0841	-0.0638	-0.1506	-0.0925	-0.1555	-0.067710594
3/1/2020	-0.0717	-0.0239	-0.1123	-0.1550	-0.1727	-0.1705	-0.2212	-0.1431	-0.2253	-0.078158728
4/1/2020	0.0537	0.1363	0.1092	0.1248	0.0462	0.0606	0.0659	0.1343	0.1865	0.118033679
5/1/2020	0.1308	0.0225	0.0924	0.0793	0.0172	0.0278	0.0477	-0.0066	0.0713	0.051093121
6/1/2020	-0.0029	0.1137	-0.0089	0.0717	-0.0428	-0.0013	0.0014	-0.0033	0.0120	0.02245627
7/1/2020	-0.0045	0.0074	-0.0143	0.0401	0.0669	0.0331	-0.0197	0.0532	0.0017	0.021873501
8/1/2020	0.1463	0.1001	0.1134	0.3993	0.0485	0.1083	0.0936	0.0990	0.0349	0.290772321
9/1/2020	0.1245	-0.0651	-0.0553	-0.0782	-0.0032	-0.0001	-0.0132	0.0340	-0.0131	-0.006708477
10/1/2020	-0.0435	-0.0374	-0.0913	-0.0758	-0.0187	0.0021	-0.0899	-0.0296	-0.0594	-0.023665072
11/1/2020	0.1218	0.0573	0.1576	0.0583	0.0737	0.2363	0.3052	0.0208	0.2197	0.143425935
12/1/2020	0.0503	0.0417	0.0414	-0.0947	0.0711	0.0479	0.0196	-0.0073	0.1437	0.05917164



抽样数据验证NDX100



	ADP	NVDA	AMGN	CPRT	GILD	MXIM	ORLY	SIRI	MCHP	ADBE	ASML	MDLZ	验证结果
1/1/2019	0.0726	0.0768	-0.0388	0.0596	0.1287	0.0673	0.0010	0.0210	0.1175	0.0954	0.1247	0.1632	0.0610
2/1/2019	0.0943	0.0731	0.0159	0.1588	-0.0713	0.0029	0.0792	0.0172	0.0809	0.0592	0.0448	0.0195	0.0149
3/1/2019	0.0438	0.1652	0.0072	0.0327	-0.0002	-0.0150	0.0439	-0.0419	-0.0412	0.0152	0.0283	0.0585	0.0455
4/1/2019	0.0345	0.0080	-0.0561	0.1111	0.0101	0.1285	-0.0251	0.0247	0.2041	0.0854	0.1104	0.0240	0.0140
5/1/2019	-0.0260	-0.2516	-0.0704	0.0618	-0.0429	-0.1235	-0.0190	-0.0861	-0.1988	-0.0634	-0.0889	0.0000	-0.0521
6/1/2019	0.0325	0.2138	0.1150	0.0456	0.0853	0.1476	-0.0055	0.0530	0.0881	0.0877	0.1057	0.0600	0.0397
7/1/2019	0.0120	0.0273	0.0125	0.0373	-0.0210	-0.0105	0.0310	0.1219	0.0890	0.0143	0.0716	-0.0028	0.0159
8/1/2019	0.0199	-0.0072	0.1181	-0.0276	-0.0302	-0.0786	0.0079	-0.0144	-0.0857	-0.0480	-0.0009	0.0323	0.0015
9/1/2019	-0.0496	0.0402	-0.0659	0.0655	-0.0025	0.0715	0.0384	0.0166	0.0806	-0.0290	0.1159	0.0018	0.0087
10/1/2019	0.0100	0.1548	0.1020	0.0288	0.0146	0.0130	0.0928	0.0735	0.0149	0.0061	0.0545	-0.0470	0.0241
11/1/2019	0.0527	0.0782	0.1007	0.0770	0.0554	-0.0339	0.0155	0.0387	0.0027	0.1137	0.0330	0.0017	0.0489
12/1/2019	-0.0016	0.0864	0.0339	0.0218	-0.0336	0.0946	-0.0091	0.0263	0.1121	0.0655	0.0983	0.0483	0.0547

验证结果

投资组合及收益

1/1/2019	0.06102	['ADP', 'NVDA', 'AMGN', 'CPRT', 'GILD', 'MXIM']	ADP	8
2/1/2019	0.01486	['ADP', 'NVDA', 'GILD', 'MDLZ', 'GILD', 'ASML']	NVDA	8
3/1/2019	0.04547	['ADP', 'NVDA', 'ASML', 'CPRT', 'ADP', 'MCHP']	AMGN	7
4/1/2019	0.01399	['ADP', 'NVDA', 'ADP', 'NVDA', 'MDLZ', 'ORLY']	CPRT	7
5/1/2019	-0.0521	['ADP', 'ADP', 'MDLZ', 'MCHP', 'MXIM', 'CPRT']	GILD	7
6/1/2019	0.0397	['MDLZ', 'CPRT', 'CPRT', 'MDLZ', 'ORLY', 'ADP']	MXIM	7
7/1/2019	0.01586	['MDLZ', 'MDLZ', 'NVDA', 'MXIM', 'AMGN', 'ASML']	ORLY	7
8/1/2019	0.00152	['NVDA', 'AMGN', 'ASML', 'SIRI', 'MCHP', 'ASML']	SIRI	7
9/1/2019	0.00873	['AMGN', 'ASML', 'ASML', 'AMGN', 'MDLZ', 'ADP']	MCHP	7
10/1/2019	0.02407	['ASML', 'ASML', 'MDLZ', 'ASML', 'MCHP', 'MXIM']	ADBE	7
11/1/2019	0.04891	['ASML', 'ASML', 'ASML', 'NVDA', 'AMGN', 'ORLY']	ASML	7
12/1/2019	0.05466	['NVDA', 'AMGN', 'ADBE', 'AMGN', 'NVDA', 'CPRT']	MDLZ	7
1/1/2020	0.01597	['ADP', 'QCOM', 'MSFT', 'ATVI', 'NXPI', 'MDLZ']		
2/1/2020	-0.0667	['ADP', 'MSFT', 'MDLZ', 'MSFT', 'CHTR', 'MDLZ']		
3/1/2020	-0.0465	['MSFT', 'MSFT', 'CHTR', 'ATVI', 'CHTR', 'MSFT']		
4/1/2020	0.10261	['ATVI', 'ILMN', 'ATVI', 'MSFT', 'MDLZ', 'CHTR']	ADP	8
5/1/2020	0.06504	['ILMN', 'MSFT', 'CHTR', 'NXPI', 'QCOM', 'ILMN']	QCOM	8
6/1/2020	-0.0017	['ILMN', 'CHTR', 'ILMN', 'ILMN', 'ATVI', 'CHTR']	MSFT	7
7/1/2020	0.06964	['ATVI', 'NXPI', 'QCOM', 'MSFT', 'ATVI', 'ILMN']	ATVI	7
8/1/2020	0.0652	['ATVI', 'QCOM', 'ATVI', 'QCOM', 'CHTR', 'MDLZ']	NXPI	7
9/1/2020	-0.0157	['QCOM', 'QCOM', 'CHTR', 'QCOM', 'MSFT', 'NXPI']	MDLZ	7
10/1/2020	0.04998	['CHTR', 'NXPI', 'CHTR', 'ADP', 'NXPI', 'QCOM']	CHTR	7
11/1/2020	0.15198	['NXPI', 'ADP', 'NXPI', 'ADP', 'NXPI', 'QCOM']	ILMN	7
12/1/2020	0.0423	['QCOM', 'QCOM', 'NXPI', 'ADP', 'ILMN', 'MDLZ']		

抽样数据验证 SP500



Date	ZBRA	MSFT	NSC	GPN	FISV	FCX	HAL	GD	ADP	验证结果
1/1/2018	0.1865	0.1107	0.0413	0.1152	0.0740	0.0285	0.1034	0.0935	0.0607	0.0941
2/1/2018	0.1216	-0.0131	-0.0782	0.0144	0.0181	-0.0462	-0.1356	0.0039	-0.0672	-0.0031
3/1/2018	0.0076	-0.0221	-0.0190	-0.0165	-0.0054	-0.0554	0.0112	-0.0070	-0.0160	-0.0049
4/1/2018	-0.0313	0.0247	0.0566	0.0138	-0.0063	-0.1343	0.1333	-0.0887	0.0463	-0.0117
5/1/2018	0.1385	0.0569	0.0570	-0.0167	0.0246	0.1142	-0.0613	0.0063	0.1011	0.0156
6/1/2018	-0.0668	0.0020	-0.0001	0.0030	0.0205	0.0213	-0.0941	-0.0759	0.0317	0.0027
7/1/2018	-0.0371	0.0758	0.1202	0.0098	0.0188	-0.0440	-0.0550	0.0716	0.0115	0.0063
8/1/2018	0.2451	0.0589	0.0286	0.1067	0.0608	-0.1460	-0.0596	-0.0271	0.0871	0.0544
9/1/2018	0.0296	0.0221	0.0432	0.0226	0.0288	-0.0093	0.0160	0.0585	0.0266	0.0268
10/1/2018	-0.0595	-0.0661	-0.0702	-0.1033	-0.0374	-0.1631	-0.1405	-0.1570	-0.0392	-0.0620
11/1/2018	0.0812	0.0382	0.0173	-0.0212	-0.0021	0.0288	-0.0937	0.0762	0.0232	0.0165
12/1/2018	-0.1144	-0.0801	-0.1200	-0.0776	-0.0713	-0.1365	-0.1543	-0.1497	-0.1106	-0.1120

验证结果

投资组合及收益

1/1/2018	0.094147	['ZBRA', 'MSFT', 'NSC', 'GPN', 'FISV', 'FCX', 'HAL', 'GD']	ZBRA	8
2/1/2018	-0.00315	['ZBRA', 'MSFT', 'GPN', 'HAL', 'ZBRA', 'GPN', 'MSFT', 'HAL']	MSFT	7
3/1/2018	-0.00488	['ZBRA', 'GPN', 'ZBRA', 'GPN', 'ZBRA', 'FISV', 'GPN', 'GD']	NSC	7
4/1/2018	-0.01166	['ZBRA', 'ZBRA', 'ZBRA', 'FISV', 'HAL', 'ZBRA', 'FISV', 'GD']	GPN	7
5/1/2018	0.015593	['FISV', 'HAL', 'FISV', 'HAL', 'NSC', 'ADP', 'MSFT', 'GPN']	FISV	7
6/1/2018	0.002708	['NSC', 'ADP', 'MSFT', 'ZBRA', 'FCX', 'ADP', 'NSC', 'MSFT']	FCX	7
7/1/2018	0.006327	['ADP', 'FCX', 'ADP', 'ADP', 'FCX', 'FISV', 'GPN', 'MSFT']	HAL	7
8/1/2018	0.054354	['FISV', 'MSFT', 'NSC', 'MSFT', 'GD', 'FISV', 'ADP', 'GPN']	GD	7
9/1/2018	0.026843	['FISV', 'FISV', 'ADP', 'GPN', 'ZBRA', 'GPN', 'ADP', 'FISV']	ADP	7
10/1/2018	-0.06198	['FISV', 'FISV', 'ZBRA', 'FISV', 'GD', 'NSC', 'ZBRA', 'FISV']		
11/1/2018	0.01648	['FISV', 'FISV', 'FISV', 'FISV', 'FISV', 'ADP', 'ZBRA', 'MSFT']		
12/1/2018	-0.11204	['ADP', 'ZBRA', 'MSFT', 'ZBRA', 'GD', 'MSFT', 'FCX', 'ADP']		
1/1/2019	0.095341	['HAL', 'ZBRA', 'ADP', 'MDLZ', 'NTAP', 'IT', 'MCHP', 'ORLY']	HAL	9
2/1/2019	0.040933	['HAL', 'ZBRA', 'MDLZ', 'MCHP', 'WAT', 'HAL', 'MDLZ', 'BLL']	ZBRA	8
3/1/2019	0.028521	['ZBRA', 'MCHP', 'WAT', 'BLL', 'MSI', 'FLT', 'ZBRA', 'ADP']	ADP	8
4/1/2019	0.033522	['ZBRA', 'BLL', 'FLT', 'ZBRA', 'IT', 'NTAP', 'MDLZ', 'BLL']	MDLZ	7
5/1/2019	-0.08091	['FLT', 'IT', 'NTAP', 'MCHP', 'FLT', 'NTAP', 'IT', 'MSI']	NTAP	7
6/1/2019	0.085526	['FLT', 'FLT', 'MSI', 'MSI', 'BLL', 'MDLZ', 'FLT', 'ORLY']	IT	7
7/1/2019	0.018357	['MSI', 'MSI', 'BLL', 'ZBRA', 'BLL', 'MSI', 'MCHP', 'FLT']	MCHP	7
8/1/2019	0.010064	['BLL', 'BLL', 'MCHP', 'FLT', 'MCHP', 'ORLY', 'BLL', 'HAL']	ORLY	7
9/1/2019	-0.06318	['BLL', 'BLL', 'FLT', 'BLL', 'BLL', 'MSI', 'FLT', 'MDLZ']	WAT	7
10/1/2019	0.011105	['FLT', 'MSI', 'FLT', 'MDLZ', 'NTAP', 'MCHP', 'IT', 'WAT']	FLT	7
11/1/2019	0.053583	['FLT', 'FLT', 'NTAP', 'IT', 'ZBRA', 'ORLY', 'IT', 'NTAP']	MSI	7
12/1/2019	0.041795	['NTAP', 'ZBRA', 'NTAP', 'NTAP', 'HAL', 'ZBRA', 'ADP', 'WAT']	BLL	7

模型后续的发展:

Markowitz's Modern Portfolio Theory (现代投资组合理论)

Technical Indicators:

趋势 (ADX)+量(OBV)

