			Saved 2 Efficient Frontier Solutions		
	PFMean	4.8601%	PFMean	5.3129%	PFMean
	PFVar	0.002067976	PFVar	0.0025001	PFVar
	PFStD	4.5475%	PFStD	5.00%	PFStD
	R_F	0.03%			
	Sharpe	1.0622			

Means		Weights for Solver			
2.3151%	AAPL	-14.8391%	AAPL	-15.6600%	AAPL
0.8203%	AMGN	32.7424%	AMGN	33.7522%	AMGN
0.9489%	AXP	-10.0222%	AXP	-8.7189%	AXP
-0.5160%	BA	-5.4672%	BA	-4.8824%	BA
1.0535%	CAT	9.4480%	CAT	10.8852%	CAT
1.0748%	CRM	-18.5559%	CRM	-23.3286%	CRM
0.7671%	CSCO	-20.4149%	CSCO	-23.5153%	CSCO
0.9158%	CVX	-3.6336%	CVX	-4.2733%	CVX
-0.1249%	DIS	-65.0963%	DIS	-70.9602%	DIS
-0.6161%	DD	-16.3753%	DD	-17.0022%	DD
0.6423%	GS	4.6313%	GS	4.9272%	GS
1.1521%	HD	-0.6314%	HD	-0.2590%	HD
0.6816%	HON	23.1606%	HON	24.7322%	HON
0.3250%	IBM	-0.7083%	IBM	-0.2399%	IBM
0.3863%	INTC	10.1495%	INTC	9.4626%	INTC
0.7093%	JNJ	12.4316%	JNJ	14.1531%	JNJ
0.5787%	JPM	54.4170%	JPM	59.6907%	JPM
0.8336%	KO	-64.0631%	KO	-73.1697%	KO
0.9954%	MCD	-5.0831%	MCD	-6.0696%	MCD
-0.5298%	MMM	-123.5155%	MMM	-135.5354%	MMM
0.9253%	MRK	-20.5419%	MRK	-21.7658%	MRK
2.3013%	MSFT	65.1877%	MSFT	74.4133%	MSFT
1.0009%	NKE	41.1707%	NKE	44.1414%	NKE
1.0643%	PG	99.6238%	PG	107.5950%	PG
0.6803%	TRV	54.7025%	TRV	56.3680%	TRV
1.8226%	UNH	48.6412%	UNH	54.6180%	UNH
1.2898%	V	35.6159%	V	38.7531%	V
0.5864%	VZ	2.9062%	VZ	1.7942%	VZ
-0.9298%	WBA	-7.8405%	WBA	-10.0060%	WBA
0.9482%	WMT	-18.0401%	WMT	-19.8998%	WMT
	Total	100.0000%	Total	100.0000%	Total

6.2657%		
0.00360012		
6.00%		

Construct Risky-Risky Frontier

Weight 5	0.25
Weight 6	0.75
Mean	6.0275%
Cov	0.002985
StD	5.7453%

		StD	Mean
-16.7355%		5.7453%	6.0275%
36.1068%	-10.0	16.9711%	15.7942%
-5.7307%	-9.5	16.4099%	15.3178%
-3.5571%	-9.0	15.8492%	14.8414%
14.5264%	-8.5	15.2890%	14.3649%
-33.5159%	-8.0	14.7294%	13.8885%
-29.5368%	-7.5	14.1706%	13.4121%
-5.4403%	-7.0	13.6125%	12.9357%
-82.7944%	-6.5	13.0552%	12.4592%
-18.7907%	-6.0	12.4990%	11.9828%
5.5808%	-5.5	11.9439%	11.5064%
-0.1916%	-5.0	11.3900%	11.0300%
27.8452%	-4.5	10.8376%	10.5535%
1.3038%	-4.0	10.2869%	10.0771%
7.7506%	-3.5	9.7383%	9.6007%
16.3459%	-3.0	9.1920%	9.1243%
70.4978%	-2.5	8.6485%	8.6478%
-91.3735%	-2.0	8.1084%	8.1714%
-7.4722%	-1.5	7.5724%	7.6950%
-159.7230%	-1.0	7.0415%	7.2186%
-23.8198%	-0.5	6.5168%	6.7421%
94.7257%	0.0	6.0000%	6.2657%
49.6377%	0.5	5.4934%	5.7893%
123.4295%	1.0	5.0000%	5.3129%
58.6551%	1.5	4.5242%	4.8364%
66.6856%	2.0	4.0721%	4.3600%
43.3787%	2.5	3.6526%	3.8836%
0.5370%	3.0	3.2782%	3.4072%
-15.0142%	3.5	2.9659%	2.9307%
-23.3109%	4.0	2.7373%	2.4543%
100.0000%	4.5	2.6142%	1.9779%
	5.0	2.6118%	1.5015%
	5.5	2.7302%	1.0250%
	6.0	2.9550%	0.5486%
	6.5	3.2643%	0.0722%
	7.0	3.6366%	-0.4042%
	7.5	4.0546%	-0.8807%
	8.0	4.5055%	-1.3571%

Ef... (Efficient Frontier chart)

Chart labels: 8.0000%, 7.0000%, 6.0000%, 5.0000%, 4.0000%, 3.0000%, 2.0000%, 1.0000%, 0.0000%, -1.0000%, -2.0000% (MEAN axis); 0.0000%, 2.0000%, 4.0000% (x-axis)

Markers/labels: 5%, TG, CML, Pension 5%, SP500, PG, MRK, Equal Weighted, MCD, AM, PF, JNJ, VZ, TRV, KO

Legend: EF, CML, 6%, TG, Pension 5%, Pens...

8.5	4.9805%	-1.8335%
9.0	5.4733%	-2.3099%
9.5	5.9794%	-2.7864%
10.0	6.4958%	-3.2628%
10.5	7.0202%	-3.7392%
11.0	7.5510%	-4.2156%
11.5	8.0868%	-4.6921%
12.0	8.6267%	-5.1685%
12.5	9.1701%	-5.6449%
13.0	9.7163%	-6.1213%
13.5	10.2649%	-6.5978%
14.0	10.8154%	-7.0742%

PFMean	4.5142%
PFVar	0.00177682
PFStD	4.2152%
R_F	0.03%
Sharpe	1.0638
AAPL	-14.4375%
AMGN	32.6721%
AXP	-11.1511%
BA	-6.3857%
CAT	7.9869%
CRM	-14.3655%
CSCO	-17.8092%
CVX	-2.9462%
DIS	-61.1245%
DD	-15.7207%
GS	4.6161%
HD	-1.3801%
HON	23.3256%
IBM	-1.2568%
INTC	10.9182%
JNJ	10.1670%
JPM	50.1753%
KO	-56.0057%
MCD	-4.2281%
MMM	-114.8618%
MRK	-20.4190%
MSFT	58.1188%
NKE	39.0518%
PG	93.2580%
TRV	53.5185%
UNH	43.8373%
V	33.1547%
VZ	3.6124%
WBA	-5.7913%
WMT	-16.5293%
Total	100.0000%
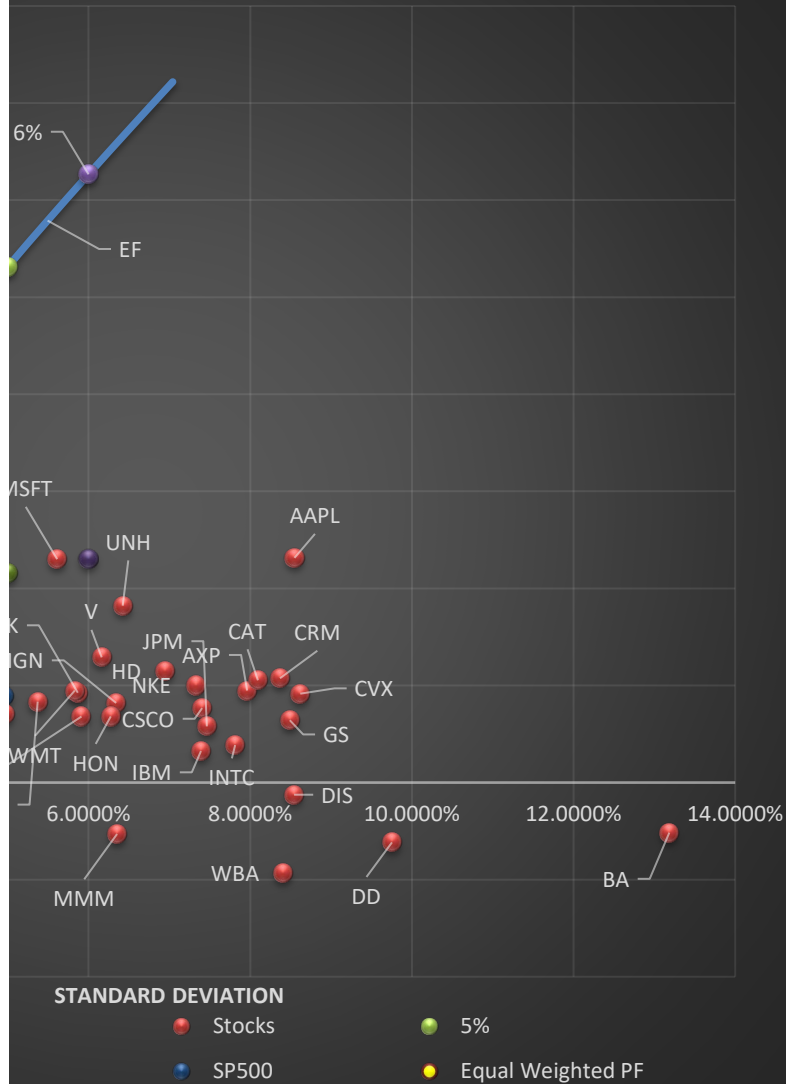
fficient Frontier

6%

EF

MSFT
UNH
AAPL
V
JPM CAT CRM
IGN HD AXP
NKE CVX
CSCO
GS
WMT HON IBM INTC
DIS
6.0000% 8.0000% 10.0000% 12.0000% 14.0000%
WBA
MMM DD BA

STANDARD DEVIATION

- Stocks
- 5%
- SP500
- Equal Weighted PF

sion 6%

Construct Risky-Riskless			Equal Weight		Saved Pension s=5%	
Weight R$_F$	0.2		PFMean	0.7367%	PFMean	2.1597%
Weight PF	0.8		PFVar	0.00206786	PFVar	0.0025001
			PFStD	4.5474%	PFStD	5%
Mean	3.6173%					
StD	3.3722%					

	StD	Mean				
	3.3722%	3.6173%				
0	4.2152%	4.5142%	AAPL	3.3333%	AAPL	0.0000%
0.1	3.7937%	4.0658%	AMGN	3.3333%	AMGN	0.0000%
0.2	3.3722%	3.6173%	AXP	3.3333%	AXP	0.0000%
0.3	2.9507%	3.1689%	BA	3.3333%	BA	0.0000%
0.4	2.5291%	2.7205%	CAT	3.3333%	CAT	0.0000%
0.5	2.1076%	2.2721%	CRM	3.3333%	CRM	0.0000%
0.6	1.6861%	1.8237%	CSCO	3.3333%	CSCO	0.0000%
0.7	1.2646%	1.3753%	CVX	3.3333%	CVX	0.0000%
0.8	0.8430%	0.9268%	DIS	3.3333%	DIS	0.0000%
0.9	0.4215%	0.4784%	DD	3.3333%	DD	0.0000%
1	0.0000%	0.0300%	GS	3.3333%	GS	0.0000%
1.1	-0.4215%	-0.4184%	HD	3.3333%	HD	0.0000%
1.2	-0.8430%	-0.8668%	HON	3.3333%	HON	0.0000%
1.3	-1.2646%	-1.3153%	IBM	3.3333%	IBM	0.0000%
1.4	-1.6861%	-1.7637%	INTC	3.3333%	INTC	0.0000%
1.5	-2.1076%	-2.2121%	JNJ	3.3333%	JNJ	0.0000%
			JPM	3.3333%	JPM	0.0000%
			KO	3.3333%	KO	0.0000%
			MCD	3.3333%	MCD	0.0000%
			MMM	3.3333%	MMM	0.0000%
			MRK	3.3333%	MRK	0.0000%
			MSFT	3.3333%	MSFT	77.7864%
			NKE	3.3333%	NKE	0.0000%
			PG	3.3333%	PG	4.6420%
			TRV	3.3333%	TRV	0.0000%
			UNH	3.3333%	UNH	17.5716%
			V	3.3333%	V	0.0000%
			VZ	3.3333%	VZ	0.0000%
			WBA	3.3333%	WBA	0.0000%
			WMT	3.3333%	WMT	0.0000%
			Total	100.0000%	Total	100.0000%

Saved Pension s=6%			Disavowel	
PFMean	2.3057%		PFMean	6.1317%
PFVar	0.00359989		PFVar	0.00360012
PFStD	6%		PFStD	6%

		EF VS Disavowel Difference:	0.1340%

AAPL	31.8151%	AAPL	0.0000%
AMGN	0.0000%	AMGN	0.0000%
AXP	0.0000%	AXP	0.0000%
BA	0.0000%	BA	6.8184%
CAT	0.0000%	CAT	22.9374%
CRM	0.0000%	CRM	-46.8272%
CSCO	0.0000%	CSCO	-35.0312%
CVX	0.0000%	CVX	-8.3602%
DIS	0.0000%	DIS	-72.2395%
DD	0.0000%	DD	-18.7375%
GS	0.0000%	GS	-5.9523%
HD	0.0000%	HD	14.1457%
HON	0.0000%	HON	-7.9212%
IBM	0.0000%	IBM	0.0000%
INTC	0.0000%	INTC	0.0000%
JNJ	0.0000%	JNJ	40.6867%
JPM	0.0000%	JPM	72.9332%
KO	0.0000%	KO	-101.7694%
MCD	0.0000%	MCD	-8.1323%
MMM	0.0000%	MMM	-136.2081%
MRK	0.0000%	MRK	-3.9602%
MSFT	68.1849%	MSFT	90.5007%
NKE	0.0000%	NKE	43.7054%
PG	0.0000%	PG	116.0396%
TRV	0.0000%	TRV	51.1434%
UNH	0.0000%	UNH	72.9094%
V	0.0000%	V	48.7464%
VZ	0.0000%	VZ	10.5911%
WBA	0.0000%	WBA	-18.3509%
WMT	0.0000%	WMT	-27.6674%
Total	100.0000%	Total	100.0000%

	0 SPY	Max	Min		Bin Ranges	Frequency
		12.5408%	-13.9247%			
Jun-22	-9.0370%				-14%	0
May-22	0.2255%				-13%	1
Apr-22	-8.8760%				-12%	0
Mar-22	3.3799%				-11%	0
Feb-22	-2.9961%				-10%	0
Jan-22	-5.0676%				-9%	2
Dec-21	4.1703%				-8%	2
Nov-21	-0.8067%				-7%	0
Oct-21	7.1010%				-6%	2
Sep-21	-5.0925%				-5%	2
Aug-21	2.9326%				-4%	1
Jul-21	2.7386%				-3%	2
Jun-21	1.8913%				-2%	2
May-21	0.6545%				-1%	1
Apr-21	5.4828%				0%	2
Mar-21	4.1129%				1%	8
Feb-21	2.7426%				2%	7
Jan-21	-0.5989%				3%	8
Dec-20	3.2125%				4%	6
Nov-20	10.3257%				5%	5
Oct-20	-2.1255%				6%	2
Sep-20	-4.2158%				7%	3
Aug-20	6.7469%				8%	1
Jul-20	6.1614%				9%	1
Jun-20	1.3188%				10%	0
May-20	4.6545%				11%	1
Apr-20	12.5408%				12%	0
Mar-20	-13.9247%				13%	1
Feb-20	-8.2475%					0
Jan-20	0.4501%					
Dec-19	2.3737%					
Nov-19	3.5558%					
Oct-19	2.6471%					
Sep-19	1.4664%					
Aug-19	-1.6885%					
Jul-19	1.9858%					
Jun-19	6.2420%					
May-19	-6.5895%					
Apr-19	4.4435%					
Mar-19	1.3544%					
Feb-19	3.1901%					
Jan-19	8.2844%					
Dec-18	-9.7991%					
Nov-18	1.8379%					
Oct-18	-6.7091%					

Sep-18	0.1412%
Aug-18	3.1421%
Jul-18	4.0857%
Jun-18	0.1254%
May-18	2.4018%
Apr-18	0.9152%
Mar-18	-3.1790%
Feb-18	-3.7038%
Jan-18	5.9927%
Dec-17	0.6957%
Nov-17	3.0108%
Oct-17	2.8241%
Sep-17	1.4999%
Aug-17	0.2913%
Jul-17	2.5211%

S&P 500 Returns