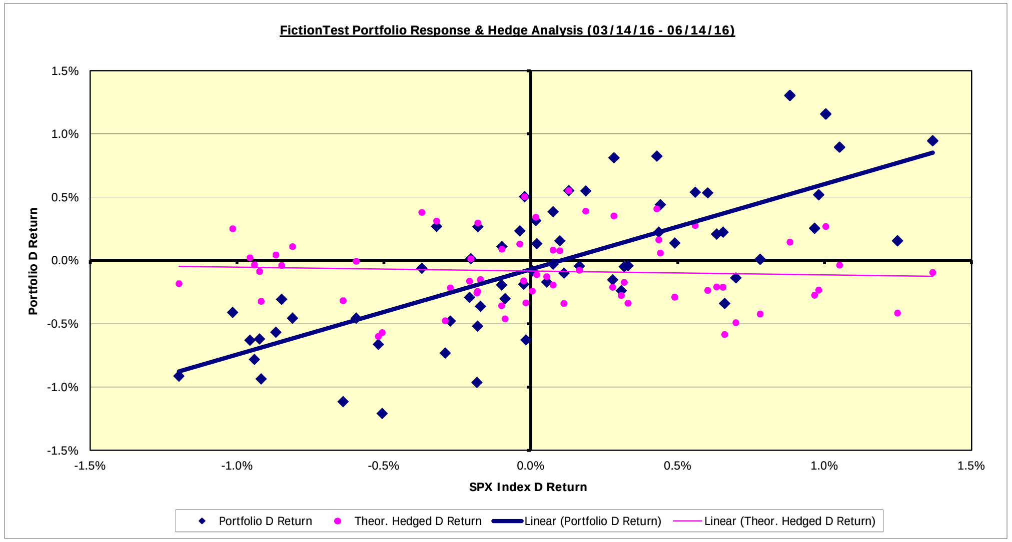
FictionTest Portfolio Response & Hedge Analysis (03/14/16 - 06/14/16): Correlation Matrix

Annualized Vol	*9%*	*10%*	*16%*	*11%*	*11%*	*19%*	*14%*	*14%*	*12%*	*12%*	*15%*
-	Portfolio D Return	SPX Index	IWM Equity	XLY Equity	XLP Equity	XLE Equity	XLF Equity	XLV Equity	XLI Equity	XLK Equity	XLB Equity
Portfolio D Return	1.00	0.7	0.8	0.6	0.3	0.4	0.5	0.7	0.5	0.7	0.4
SPX Index	0.74	1.0	0.9	0.9	0.5	0.6	0.8	0.7	0.8	0.8	0.7
IWM Equity	0.82	0.9	1.0	0.8	0.3	0.6	0.8	0.6	0.8	0.7	0.6
XLY Equity	0.65	0.9	0.8	1.0	0.5	0.4	0.7	0.5	0.7	0.8	0.6
XLP Equity	0.26	0.5	0.3	0.5	1.0	0.2	0.2	0.2	0.4	0.4	0.5
XLE Equity	0.41	0.6	0.6	0.4	0.2	1.0	0.5	0.3	0.6	0.4	0.7
XLF Equity	0.54	0.8	0.8	0.7	0.2	0.5	1.0	0.5	0.8	0.6	0.6
XLV Equity	0.72	0.7	0.6	0.5	0.2	0.3	0.5	1.0	0.4	0.6	0.3
XLI Equity	0.54	0.8	0.8	0.7	0.4	0.6	0.8	0.4	1.0	0.6	0.8
XLK Equity	0.67	0.8	0.7	0.8	0.4	0.4	0.6	0.6	0.6	1.0	0.5
XLB Equity	0.37	0.7	0.6	0.6	0.5	0.7	0.6	0.3	0.8	0.5	1.0

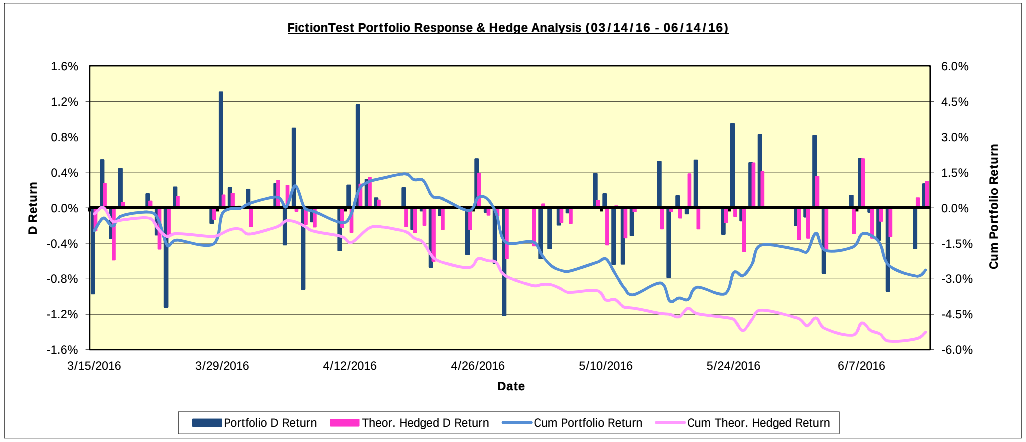
Theoretical Optimal Hedge Weights

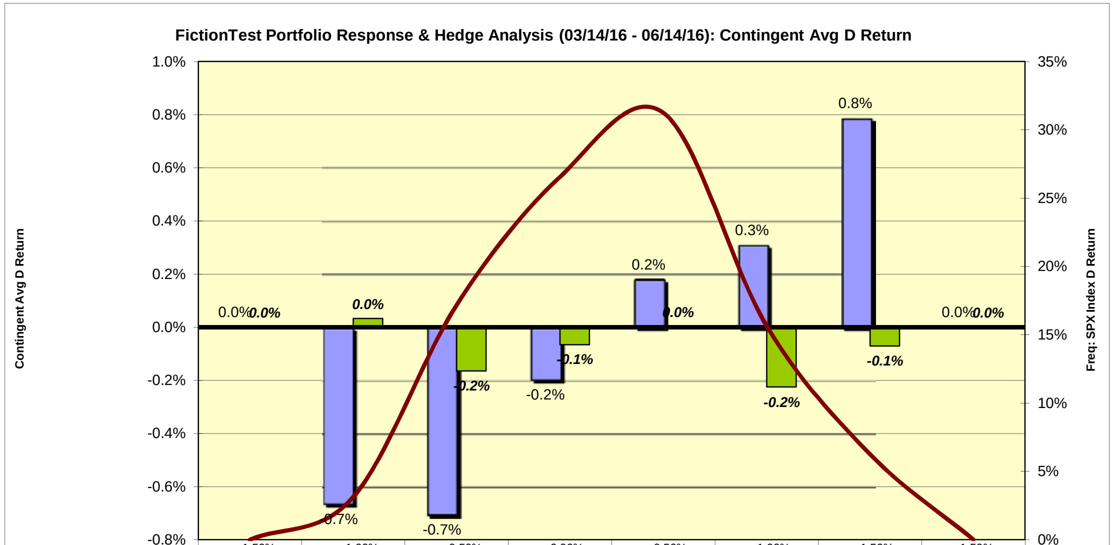
Run Solver to Optimize Weights!!

			-	
	-	-	*(03/14/16*	
Min eSSE	***0.05%***	-	*to 06/14/16)*	
	Optimal Weights	**Annualized Vol**	**Cum Return**	**Sharpe Ratio**
FictionTest	***41%***	***9%***	***-3%***	***(1.2)***
SPX Index	0%	10%	3%	*1.1*
IWM Equity	-28%	16%	6%	*1.5*
XLY Equity	0%	11%	0%	*0.1*
XLP Equity	0%	11%	3%	*0.9*
XLE Equity	0%	19%	8%	*1.7*
XLF Equity	0%	14%	1%	*0.3*
XLV Equity	-19%	14%	4%	*1.3*
XLI Equity	0%	12%	3%	*1.1*
XLK Equity	-9%	12%	2%	*0.5*
XLB Equity	0%	15%	6%	*1.6*
Total Stand-alone Hedge	*-57%*	*7%*	*3%*	*1.4*
Theoretical Hedged Port		***5%***	***-5%***	***(4.7)***
Correl(FictionTest,Total Stand-alone Hedge)		*0.86*		
		0.000%		



Ensure left & right Y-axis scaling for consistent 0!!





	<=-1.50%	<=-1.00%	<=-0.50%	<=0.00%	<=0.50%	<=1.00%	<=1.50%	>1.50%
FictionTest	0.0%	-0.7%	-0.7%	-0.2%	0.2%	0.3%	0.8%	0.0%
Theoretical Hedged Port	0.0%	0.0%	-0.2%	-0.1%	0.0%	-0.2%	-0.1%	0.0%
Freq: SPX Index D Return	0%	3%	17%	27%	31%	16%	6%	0%

SPX Index D Return Range

FictionTest Theoretical Hedged Port Freq: SPX Index D Return

-	*<-- Correl Bucket [Correl(Ticker,SPX Index D Return)] -->*			
Low -ve Correl	**Random**	**Low +ve Correl**	**Mod +ve Correl**	**Strong +ve Correl**
	NEM -0.08	ICE 0.27	SE 0.50	BRK/B 0.75
	TAHO 0.04	VIPS 0.30	NUVA 0.52	S15MEDAX 0.78
	WM 0.07	WMT 0.31	AYI 0.53	
	PRGO 0.11	OPHT 0.34	POST 0.53	
	WTM 0.12	BABA 0.35	XRAY 0.56	
	IRM 0.19	TSLA 0.36	ALSN 0.56	
	KAR 0.23	DO 0.37	A 0.59	
		WPG 0.37	C 0.62	
		TPX 0.37	MXIM 0.63	
		FIS 0.38	MET 0.63	
		DDR 0.40	DHR 0.64	
		CAB 0.40	MMC 0.71	
		GT 0.41	DNB 0.72	
		BHI 0.42	SNPS 0.73	
		CSGP 0.42		
		COST 0.42		
		SAVE 0.43		
		AMAT 0.44		
		JBLU 0.44		
		CME 0.44		
		MBLY 0.44		
		CVS 0.46		
		SYNA 0.46		
		THG 0.48		
		EMN 0.48		
		VIAV 0.49		
		PAG 0.50		

				-	- *Beta wrt SPX Index D Return*
Correl Bucket	**l(Ticker,SPX Index D Return)**	**Long**	**Short**	**Net**	**Risk-adj Net**
	(0.50)				
Low -ve Correl	(0.25)	0%	0%	0%	0%
Random	0.25	2%	-8%	-5%	1%
Low +ve Correl	0.50	49%	-12%	37%	58%
Mod +ve Correl	0.75	21%	-13%	8%	8%
Strong +ve Correl	1.00	1%	-1%	0%	1%
Total		*74%*	*-33%*	*41%*	*67%*