Microsoft Excel 16.0 Answer Report

Worksheet: [CMF Assessment.xlsm]Sheet1 Report Created: 3/10/2025 11:01:01 PM

Result: Solver found a solution. All Constraints and optimality conditions are satisf

Solver Engine

Engine: GRG Nonlinear

Solution Time: 0.047 Seconds. Iterations: 3 Subproblems: 0

Solver Options

Max Time Unlimited, Iterations Unlimited, Precision 0.000001, Use Automatic Scalir Convergence 0.0001, Population Size 100, Random Seed 0, Derivatives Forward, Remark Subproblems Unlimited, Max Integer Sols Unlimited, Integer Tolerance 1%, Assur

Objective Cell (Min)

Cell	Name	Original Value	Final Value
\$J\$24 (GMVP Weight	0.0003	0.0001

Va<u>riable</u> Cells

Cell	Name	Original Value	Final Value	Integer
\$J\$20	HPQ Weight	0.9611	0.1806	Contin
\$J\$21	IBM Weight	0.0389	0.3028	Contin
\$J\$22	MAR Weight	0	0.51664615748	Contin

Cell	Name	Cell Value	Formula	Status	Slack
\$J\$23	Total Weight	0.999999994490	\$J\$23=1	Binding	0
\$J\$20	HPQ Weight	0.1806	\$J\$20>=0	Not Binding	0.1806
\$J\$21	IBM Weight	0.3028	\$J\$21>=0	Not Binding	0.3028
\$J\$22	MAR Weight	0.516646157487	\$J\$22>=0	Not Binding	0.51664615748

Microsoft Excel 16.0 Sensitivity Report Worksheet: [CMF Assessment.xlsm]Sheet1 Report Created: 3/10/2025 11:01:02 PM

Va<u>riable</u> Cells

		Final	Reduced	
Cell	Name	Value	Gradient	
\$J\$20	HPQ Weight	0.18056457388		0
\$J\$21	IBM Weight	0.30278926311		0
\$J\$22	MAR Weight	0.51664615748		0

		Final	Lagrange
Cell	Name	Value	Multiplier
\$J\$23	Total Weight	0.99999999449 0	.00023798847

Microsoft Excel 16.0 Limits Report

Worksheet: [CMF Assessment.xlsm]Sheet1 Report Created: 3/10/2025 11:01:02 PM

	Objective	
Cell	Name	Value
\$J\$24	GMVP Weight	0.0001

	Variable		Lower	Objective	Upper	Objective
Cell	Name	Value	Limit	Result	Limit	Result
\$J\$20	HPQ Weight	0.1806	0.1806	0.0001	0.1806	0.0001
\$J\$21	IBM Weight	0.3028	0.3028	0.0001	0.3028	0.0001
\$J\$22	MAR Weight	0.51664615748	0.51664615748	0.00011899407	0.51664615748	0.00011899407

Microsoft Excel 16.0 Answer Report

Worksheet: [CMF Assessment.xlsm]Sheet1 Report Created: 3/10/2025 11:05:11 PM

Result: Solver found a solution. All Constraints and optimality conditions are sati

Solver Engine

Engine: GRG Nonlinear

Solution Time: 0.047 Seconds. Iterations: 3 Subproblems: 0

Solver Options

Max Time Unlimited, Iterations Unlimited, Precision 0.000001, Use Automatic Sca Convergence 0.0001, Population Size 100, Random Seed 0, Derivatives Forward, I Max Subproblems Unlimited, Max Integer Sols Unlimited, Integer Tolerance 1%, As

Objective Cell (Max)

Cell	Name	Original Value	Final Value
\$J\$37	Sharpe Ratio Weight	2.8721	4.0555

Variable Cells

Cell	Name	Original Value	Final Value	Integer
\$J\$31	IBM Weight	1.0000	0.4412	Contin
\$J\$32	MAR Weight	0.0000	0.5588	Contin

Cell	Name	Cell Value	Formula	Status	Slack
\$J\$33	Total Weight	1.0000	\$J\$33=1	Binding	0
\$J\$31	IBM Weight	0.4412	\$J\$31>=0	Not Binding	0.4412
\$J\$32	MAR Weight	0.5588	\$J\$32>=0	Not Binding	0.5588

Microsoft Excel 16.0 Sensitivity Report Worksheet: [CMF Assessment.xlsm]Sheet1 Report Created: 3/10/2025 11:05:11 PM

Va<u>riable</u> Cells

		Final	Reduced
Cell	Name	Value	Gradient
\$J\$31	IBM Weight	0.4412309607	0
\$J\$32	MAR Weight	0.5587690428	0

		Final	Lagrange
Cell	Name	Value	Multiplier
\$J\$3	3 Total Weight	1.0000000035	0.2574231050

Microsoft Excel 16.0 Limits Report

Worksheet: [CMF Assessment.xlsm]Sheet1 Report Created: 3/10/2025 11:05:11 PM

	Objective										
Cell		Name	Value								
	\$J\$37	Sharpe Ratio Weight	4.0555								

Va	ariable		Lower	Objective	Upper	Objective		
_Cell	Name		Limit	Result	Limit	Result		
\$J\$31 IBM Weig	ht	0.4412	0.4412	4.0555	0.4412	4.0555		
\$J\$32 MAR Weig	ght	0.5588	0.5588	4.0555	0.5588	4.0555		

Date 2/20/25 2/19/25 2/18/25 2/14/25	34.72 34.68	264.74 264.32 263.07 261.28	287.56	0.0139 0.0165	0.0016 0.0047 0.0068	-0.0030 0.0171	Annual Trading Days Selected Days Using Excel Formula Average Daily Return	252 126 HPQ -0.0021%	IBM	MAR 0.2019%			
2/13/25 2/12/25 2/11/25 2/10/25	33.3 33.04 33.15 32.82	259.19 255.81 254.7 249.27	288.24 290.45 288 304.45	0.0078 -0.0033 0.0100 0.0169	0.0131 0.0043 0.0215 -0.0122	-0.0076 0.0085 -0.0555 0.0016	CAGR Daily Volatility Annualized Volatility	-0.52% 1.85% 29.40%	82.39% 1.72% 27.27%	65.67% 1.35% 21.48%			
2/7/25 2/6/25 2/5/25 2/4/25 2/3/25	32.6 32.57 32.01	252.34 253.44 263.3 264.46 260.73	302.95 292.39 290.75	0.0009 0.0173 0.0003	-0.0382 -0.0044 0.0142	0.0355 0.0056 0.0010	Using VBA CAGR Annualized Volatility Covariance Matrix	HPQ -0.52% 29.28% HPQ Return	82.39% 27.17% IBM Return	MAR 65.67% 21.40% MAR Return			
1/31/25 1/30/25 1/29/25 1/28/25 1/27/25		255.7 258.27 228.63 225.66 224.13	289.66 288.64	0.0058 -0.0040 -0.0179	0.1219 0.0131 0.0068	0.0099 0.0035 0.0020	HPQ Return IBM Return MAR Return Stock	0.000340 0.000060 0.000076 Weight	0.000293	0.000038			
1/24/25 1/23/25 1/22/25 1/21/25	32.73 33.38 33.13 32.95	224.8 226.04 223.26 224.26	284.11 285.07 280.41 277.72	-0.0197 0.0075 0.0054 0.0134	-0.0055 0.0124 -0.0045 -0.0024	-0.0034 0.0165 0.0096 0.0019	HPQ IBM MAR Total	0.1806 0.3028 0.5166 1.0000					
1/17/25 1/16/25 1/15/25 1/14/25 1/13/25	32.35 32.79 32.67	224.79 222.66 220.03 217.75 217.4	276 276.05	-0.0135 0.0037 0.0015	0.0119 0.0104 0.0016	-0.0002 -0.0014 0.0151	T-bill 26-week T-bill* * As on 02/10/2025	0.000118994 Rate 4.36%	Source	URL https://home.	treasury.gov/resou	rce-center/data-chart	-center/inte
1/10/25 1/8/25 1/7/25 1/6/25	33.2 33.45 33.67 33.87	219.75 223.18 223.96 222.67	270.76 273.53 269.78 272.62	-0.0075 -0.0066 -0.0059 0.0218	-0.0155 -0.0035 0.0058 0.0001	-0.0102 0.0138 -0.0105 -0.0097	Stock IBM MAR	Weight 0.4412 0.5588		0% 10%	0.00% 1.69%	Return of OCP 4.36% 11.23%	
1/3/25 1/2/25 12/31/24 12/30/24 12/27/24	32.47 32.63	222.65 219.94 219.83 220.25 222.78	274.45 278.94 280.31	-0.0049 0.0000 -0.0197	0.0005 -0.0019 -0.0114	-0.0162 -0.0049 -0.0119	Portfolio Return Portfolio Volatility Maximized Sharpe Ratio	73.05% 16.94% 4.0555		20% 30% 40% 50% 60%	3.39% 5.08% 6.77% 8.47% 10.16%	18.10% 24.97% 31.84% 38.70% 45.57%	
12/26/24 12/24/24 12/23/24 12/20/24 12/19/24	33.44 33.23 32.94	224.89 224.41 221.93 223.36 223.92	286.39 283.63 283.96	0.0063 0.0088 0.0147	0.0111 -0.0064 -0.0025	-0.0012 0.0175	Assumed Risk Aversion Proportion of funds in ORP The investor is leveraging Return of OCP	7.9817 552.61%		70% 80% 90% 100%	11.86% 13.55% 15.24% 16.94%	52.44% 59.31% 66.18% 73.05%	
12/18/24 12/17/24 12/16/24 12/13/24	32.49 33.84 34.19 34.55	220.17 228.97 229.33 230.82	277.65 289.44 290.4 287.08	-0.0407 -0.0103 -0.0105 -0.0124	-0.0392 -0.0016 -0.0065 -0.0062	-0.0416 -0.0033 0.0115 -0.0101	Standard Deviation of OCP	135.18%		ocation Line			
12/12/24 12/11/24 12/10/24 12/9/24 12/6/24	34.94	232.26 230.12 231.72 230 238.04	291.73	-0.0112 -0.0423 0.0069	-0.0069 0.0075 -0.0344	0.0140 0.0024 -0.0194	0.00% 0.00% 0.00%						
12/5/24 12/4/24 12/3/24 12/2/24 11/29/24	36.36	234.75 233.49 229 227.39 227.41	289.63 284.93	-0.0118 0.0093 0.0284	0.0054 0.0194 0.0071 -0.0001	0.0098 0.0164 -0.0046 -0.0099	Wetn.n of						
11/27/24 11/27/24 11/26/24 11/25/24 11/22/24	34.66 39.1 39.3 38.13	226.92 228.83 226.13 222.97	285.6 288.18 288 284.29	-0.1205 -0.0051 0.0302 0.0058	-0.0084 0.0119 0.0141 0.0026	-0.0090 0.0006 0.0130 0.0030	0.00% 0.00%	A A A					
11/21/24 11/20/24 11/19/24 11/18/24 11/15/24	37.91 36.68 36.87 37.43 36.72	222.4 214.6 210.25 208.09 204.99	283.44 280.18 279.27 281.45 278.78	-0.0052 -0.0151 0.0192	0.0205 0.0103 0.0150	0.0033 -0.0078 0.0095	0.00%	4.50%		.00% tandard Deviation	13.50% n)	18.00%	
11/14/24 11/13/24 11/12/24 11/11/24	37.67	208.99 210.92 210.86 213.57	282.02 286.47 286.02 285.91	-0.0081 -0.0150 0.0228	-0.0092 0.0003 -0.0128 -0.0007	-0.0157 0.0016 0.0004 0.0180							
11/8/24 11/7/24 11/6/24 11/5/24 11/4/24	36.82 37.34 36.91 36.64 35.99	213.72 213.69 213.6 207.57 206.32	256.43	0.0116 0.0073 0.0179 -0.0080	0.0004 0.0286 0.0060 -0.0093	0.0620 0.0125 -0.0160							
11/1/24 10/31/24 10/30/24 10/29/24 10/28/24	36.54	208.25 206.72 204.9 210.43 212.91		0.0212 -0.0283 -0.0141 -0.0097	0.0074 0.0088 -0.0266 -0.0117	0.0021 -0.0162 0.0014 0.0051							
10/25/24 10/24/24 10/23/24 10/22/24	36.88 36.47 35.85 36.23	214.67 218.39 232.75 232.25	262.12 260.63 257.82 265.5	0.0112 0.0171 -0.0105 -0.0063	-0.0172 -0.0637 0.0022 0.0022	0.0057 0.0108 -0.0294 0.0020							
10/21/24 10/18/24 10/17/24 10/16/24 10/15/24	37.28 37.58 37.18 36.97	231.75 232.2 232.88 233.67 232.96	265.6 264.57 262.57 260.58	-0.0080 0.0107 0.0057 -0.0126	-0.0029 -0.0034 0.0030 -0.0098	0.0039 0.0076 0.0076 -0.0038							
10/14/24 10/11/24 10/10/24 10/9/24 10/8/24	37.44 37.01 36.75 36.58	235.26 233.26 233.02 234.3 228.62	261.56 262.63 260.54 261.88	0.0116 0.0070 0.0046 0.0160	0.0085 0.0010 -0.0055 0.0245	-0.0041 0.0080 -0.0051 0.0204							
10/7/24 10/4/24 10/3/24 10/2/24	35.91 35.99 35.6 35.18	227.12 226 222.72 219.73	255.16 254.61 249.48 248.82	-0.0022 0.0109 0.0119 0.0120	0.0049 0.0146 0.0135 0.0017	0.0022 0.0204 0.0026 0.0111							
10/1/24 9/30/24 9/27/24 9/26/24 9/25/24	35.87 35.41 36.85	219.35 221.08 220.84 223.43 221.23	248.6 253.04	0.0129 -0.0399 0.0219	0.0011 -0.0117 0.0099	-0.0177 0.0093 0.0210							
9/24/24 9/23/24 9/20/24 9/19/24	35.84 35.11 34.76 34.82	220.97 220.5 217.7 213.89	247.38 241.67 244.39 244.46	0.0206 0.0100 -0.0017 0.0084	0.0021 0.0128 0.0177 -0.0049	0.0234 -0.0112 -0.0003 0.0237							
9/18/24 9/17/24 9/16/24 9/13/24 9/12/24	33.76 33.32	214.94 214.13 217.16 214.79 211.61	235.61	0.0197 0.0131 0.0066	-0.0141 0.0110 0.0149	0.0135 0.0031 0.0045							
9/11/24 9/10/24 9/9/24 9/6/24 9/5/24	33.47 34.18 33.82	209.89 205.32 203.53 200.74 202.59	225.67 228.59 227.6	-0.0210 0.0106 -0.0170	0.0088 0.0138 -0.0092	-0.0129 0.0043 -0.0064							
9/4/24 9/3/24 8/30/24 8/29/24	35.33 35.38 36.18 35.46	204.11 201.28 202.13 198.9	229.46 230.72 234.69 231.37	-0.0014 -0.0224 0.0201 0.0199	0.0140 -0.0042 0.0161 0.0022	-0.0055 -0.0171 0.0142 0.0177							
8/28/24 8/27/24 8/26/24 8/23/24 8/22/24	35.6 35.57 35.66	198.46 198.73 197.98 196.1 195.96	227.62 224.67 225.26	0.0008 -0.0025 0.0164	0.0038 0.0095 0.0007	0.0130 -0.0026 0.0051							
8/21/24 8/20/24		197.21 196.03	224.51 223.13		0.0060	0.0062							