

**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 satisfied.****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 Scaling

Convergence 0.0001, Population Size 100, Random Seed 0, Derivatives Forward, Residual Max Change Unlimited

Max Subproblems Unlimited, Max Integer Sols Unlimited, Integer Tolerance 1%, Assume Non-Negative

**Objective Cell (Min)**

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

**Variable 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

**Constraints**

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  
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Variable Cells

Cell	Name	Final Value	Reduced Gradient
\$J\$20	HPQ Weight	0.1805645738E	0
\$J\$21	IBM Weight	0.30278926311	0
\$J\$22	MAR Weight	0.5166461574E	0

Constraints

Cell	Name	Final Value	Lagrange Multiplier
\$J\$23	Total Weight	0.9999999944E	0.00023798847

Microsoft Excel 16.0 Limits Report  
Worksheet: [CMF Assessment.xlsx]Sheet1  
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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 satisfied.****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 Scaling

Convergence 0.0001, Population Size 100, Random Seed 0, Derivatives Forward, Load/Save Solver Model

Max Subproblems Unlimited, Max Integer Sols Unlimited, Integer Tolerance 1%, Assume Non-Negative

**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

**Constraints**

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  
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Variable Cells

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

Constraints

Cell	Name	Final Value	Lagrange Multiplier
\$J\$33	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

Variable			Lower Objective		Upper Objective	
Cell	Name	Value	Limit	Result	Limit	Result
\$J\$31	IBM Weight	0.4412	0.4412	4.0555	0.4412	4.0555
\$J\$32	MAR Weight	0.5588	0.5588	4.0555	0.5588	4.0555

