Portfolio Risk Analysis Report

Report Date: February 23, 2026
Portfolio Size: 69 Assets
Analysis Period: 12 Months
Generated by: Automated Risk Analysis Pipeline

Risk Assessment Summary

HIGH RISK (RED): 11 Assets
MEDIUM RISK (YELLOW): 0 Assets
LOW RISK (GREEN): 58 Assets

Executive Summary

This report presents a comprehensive risk analysis of a portfolio containing 69 assets with a combined market capitalization of $7857.2 billion. **Key Findings:** • 11 assets (15.9%) are rated as HIGH RISK (RED) • 0 assets (0.0%) are rated as MEDIUM RISK (YELLOW) • Average portfolio volatility: 48.1% • Maximum drawdown observed: -81.7% **Risk Concentration:** The analysis reveals significant risk concentration in 11 assets requiring immediate attention and potential portfolio rebalancing. **Sentiment Analysis:** • 8 RED-flagged assets show negative market sentiment • Average sentiment score for flagged assets: -0.347 • News coverage indicates heightened market concern for these positions

Portfolio Overview

Sector Allocation

Sector	Assets	Market Cap ($B)	Percentage
Healthcare	7	1553.49	19.8%
Consumer Discretionary	10	1133.99	14.4%
Technology	6	981.34	12.5%
Financial Services	9	904.31	11.5%
Industrial	10	864.60	11.0%
Utilities	6	578.39	7.4%
Real Estate	6	568.21	7.2%
Consumer Staples	6	526.48	6.7%
Energy	6	471.73	6.0%
Materials	3	274.67	3.5%

Risk Analysis Results

Risk Distribution:
• HIGH RISK (RED): 11 assets
• MEDIUM RISK (YELLOW): 0 assets
• LOW RISK (GREEN): 58 assets

High Risk Assets

Symbol	Sector	Risk Rating	Volatility	Max Drawdown	Risk Score
VMK	Industrial	RED	48.1%	-41.1%	5
GY	Industrial	RED	42.5%	-43.7%	5
CFY	Real Estate	RED	49.5%	-42.9%	4
ZDG	Industrial	RED	44.4%	-56.5%	3
AOB	Industrial	RED	98.4%	-64.9%	2

NTY	Industrial	RED	200.3%	-81.7%	2
GRXQ	Real Estate	RED	63.6%	-63.6%	2
DION	Technology	RED	181.9%	-78.3%	2
CAB	Real Estate	RED	133.8%	-69.4%	2
SXS	Real Estate	RED	160.4%	-78.1%	2
TG	Materials	RED	40.4%	-30.6%	2

Machine Learning Analysis

Advanced machine learning techniques were applied to identify anomalies and predict future risk ratings. **Anomaly Detection Summary:**
• Total Anomalies Detected: 11
• Critical Anomalies: 4
• High Risk Anomalies: 6
• Anomaly Rate: 15.9%
Risk Prediction Model:
• Model Accuracy: 100.0%
• Rating Changes Predicted: 0
• Assets Predicted to Deteriorate: 0
• Assets Predicted to Improve: 0

Key Machine Learning Insights

• 4 assets show critical anomalous behavior requiring immediate review
• Anomaly detection identified 11 assets with unusual patterns
• Key risk drivers: Max Drawdown, Volatility, Sharpe Ratio

Critical Anomalies Detected

Symbol	Sector	Anomaly Score	Severity	Recommendation
NTY	Industrial	100.0	CRITICAL	Critical anomaly - Consider immediate po...
SXS	Real Estate	92.3	CRITICAL	Critical anomaly - Consider immediate po...
CAB	Real Estate	85.8	CRITICAL	Critical anomaly - Consider immediate po...
DION	Technology	84.4	CRITICAL	Critical anomaly - Consider immediate po...
GY	Industrial	79.5	HIGH	Significant anomaly - Conduct thorough d...
ZDG	Industrial	76.7	HIGH	Significant anomaly - Conduct thorough d...
VMK	Industrial	76.5	HIGH	Significant anomaly - Conduct thorough d...
AOB	Industrial	76.4	HIGH	Significant anomaly - Conduct thorough d...
GRXQ	Real Estate	75.7	HIGH	Significant anomaly - Conduct thorough d...
CFY	Real Estate	72.1	HIGH	Significant anomaly - Conduct thorough d...

Top Risk Factors (Feature Importance)

1. Max Drawdown: 42.7% importance
2. Volatility: 20.0% importance
3. Sharpe Ratio: 18.6% importance
4. Price Change 3M: 5.9% importance
5. Volume Decline: 5.4% importance

ML Validation Results

Overall Validation Status: WARNING
Checks Passed: 3 / 4

✓ **Anomaly Detection Validation:** PASS
total_assets: 69, anomalies_detected: 11, anomaly_rate: 15.9
■ **Risk Prediction Validation:** WARNING
model_accuracy: 100.0, predictions_made: 69, rating_changes: 0
✓ **Feature Quality Validation:** PASS
features_checked: 9, nan_features: 0, total_samples: 69
✓ **Feature Importance Validation:** PASS
total_importance: 100.0, top_feature: Max Drawdown, top_importance: 42.7

Validation Warnings (1):
1. Suspiciously high accuracy: 100.0% (possible overfitting)

Sentiment Analysis

Sentiment analysis was conducted on 11 RED-flagged assets using financial news from the past 12 months. **Key Findings:**
• Average sentiment score: -0.347
• Assets with negative sentiment: 8/11
• Total news articles analyzed: 247

Sentiment Analysis Results

Symbol	Sentiment Score	Label	News Count	Trend	Key Themes
CFY	-0.417	NEGATIVE	27	STABLE	earnings, regulatory, financial_health
DION	-0.391	NEGATIVE	20	IMPROVING	earnings, regulatory, market_share
CAB	-0.387	NEGATIVE	18	IMPROVING	operations, earnings, regulatory
AOB	-0.382	NEGATIVE	30	IMPROVING	financial_health, management, regulatory
GY	-0.375	NEGATIVE	24	DETERIORATING	financial_health, regulatory, earnings
TG	-0.370	NEGATIVE	18	DETERIORATING	regulatory, earnings, financial_health
ZDG	-0.366	NEGATIVE	15	STABLE	earnings, regulatory, management
GRXQ	-0.358	NEGATIVE	22	IMPROVING	earnings, market_share, financial_health
NTY	-0.280	NEUTRAL	27	STABLE	earnings, regulatory, operations
VMK	-0.257	NEUTRAL	19	DETERIORATING	regulatory, growth, earnings
SXS	-0.238	NEUTRAL	27	IMPROVING	regulatory, financial_health, growth

Detailed Asset Analysis

Asset: VMK

Sector: Industrial
Current Price: $125.96
Market Cap: $105.86B
Risk Rating: RED
Risk Metrics:
• Volatility: 48.1%
• Maximum Drawdown: -41.1%
• Beta: -0.16
• Sharpe Ratio: -0.03
• RSI: 18.2
Performance:
• 1-Month Return: -37.8%
• 3-Month Return: -29.9%
• 6-Month Return: 12.7%
Risk Flags:
• High Volatility, Extreme Drawdown, Severe Decline, Extended Decline, Momentum Breakdown
Market Sentiment:
• Sentiment Score: -0.257 (NEUTRAL)
• News Articles: 19
• Trend: DETERIORATING

Asset: GY

Sector: Industrial
Current Price: $102.64
Market Cap: $70.95B
Risk Rating: RED
Risk Metrics:
• Volatility: 42.5%
• Maximum Drawdown: -43.7%
• Beta: -0.04
• Sharpe Ratio: -0.39
• RSI: 28.3
Performance:
• 1-Month Return: -26.6%
• 3-Month Return: -39.3%
• 6-Month Return: -22.9%
Risk Flags:
• High Volatility, Extreme Drawdown, Severe Decline, Extended Decline, Momentum Breakdown
Market Sentiment:
• Sentiment Score: -0.375 (NEGATIVE)
• News Articles: 24
• Trend: DETERIORATING

Asset: CFY

Sector: Real Estate
Current Price: $152.35
Market Cap: $144.09B
Risk Rating: RED
Risk Metrics:
• Volatility: 49.5%
• Maximum Drawdown: -42.9%

• Beta: -0.31
• Sharpe Ratio: -0.20
• RSI: 24.1

Performance:

• 1-Month Return: -31.0%
• 3-Month Return: -12.8%
• 6-Month Return: 9.3%

Risk Flags:

• High Volatility, Extreme Drawdown, Severe Decline, Momentum Breakdown

Market Sentiment:

• Sentiment Score: -0.417 (NEGATIVE)
• News Articles: 27
• Trend: STABLE

Asset: ZDG

Sector: Industrial
Current Price: $177.59
Market Cap: $257.50B
Risk Rating: RED
Risk Metrics:

• Volatility: 44.4%
• Maximum Drawdown: -56.5%
• Beta: -0.10
• Sharpe Ratio: -0.70
• RSI: 41.1

Performance:

• 1-Month Return: -0.2%
• 3-Month Return: -9.3%
• 6-Month Return: -35.7%

Risk Flags:

• High Volatility, Extreme Drawdown, Poor Risk Return

Market Sentiment:

• Sentiment Score: -0.366 (NEGATIVE)
• News Articles: 15
• Trend: STABLE

Asset: AOB

Sector: Industrial
Current Price: $63.25
Market Cap: $57.09B
Risk Rating: RED
Risk Metrics:

• Volatility: 98.4%
• Maximum Drawdown: -64.9%
• Beta: -0.24
• Sharpe Ratio: -0.05
• RSI: 86.4

Performance:

• 1-Month Return: 83.7%
• 3-Month Return: 25.9%
• 6-Month Return: 14.0%

Risk Flags:

• High Volatility, Extreme Drawdown

Market Sentiment:

• Sentiment Score: -0.382 (NEGATIVE)

• News Articles: 30
• Trend: IMPROVING

Recommendations

Based on the comprehensive risk analysis, the following recommendations are provided:

Immediate Actions (RED-flagged assets):

1. Consider reducing position sizes for 11 high-risk assets
2. Implement stop-loss orders to limit further downside exposure
3. Review fundamental analysis for potential divestiture candidates
4. Monitor daily price movements and news flow closely

Medium-term Actions (YELLOW-flagged assets):

1. Conduct deeper due diligence on 0 medium-risk assets
2. Consider hedging strategies for positions with high volatility
3. Review correlation with overall portfolio risk
4. Set up enhanced monitoring and alerts

Portfolio-level Recommendations:

1. Diversify across sectors to reduce concentration risk
2. Consider alternative investments to reduce correlation
3. Implement systematic risk management framework
4. Schedule monthly portfolio risk reviews

Sentiment-based Actions:

1. Monitor news flow for 8 assets with negative sentiment
2. Consider contrarian opportunities if fundamentals remain strong
3. Assess impact of market sentiment on price movements
4. Review analyst coverage and institutional positioning

Appendix

Methodology

This risk analysis employs a four-stage pipeline methodology: **Stage 1 - Data Ingestion:** • Historical price data (252 trading days) • Trading volume information • Market capitalization data • Sector classifications **Stage 2 - Core Analysis:** • Volatility calculation (annualized) • Maximum drawdown analysis • Beta coefficient estimation • Risk-adjusted return metrics (Sharpe ratio) • Technical indicators (RSI) • Rule-based risk flagging system **Stage 3 - Sentiment Analysis:** • News article collection (12-month lookback) • Natural language processing for sentiment scoring • Trend analysis and confidence metrics • Key theme extraction **Stage 4 - Report Generation:** • Comprehensive risk assessment compilation • Visual data presentation • Actionable recommendations • Professional PDF report output

Risk Assessment Thresholds

RED Flag Thresholds: • Volatility > 40% (annualized) • Maximum drawdown < -20% • Volume decline > 50% • 1-month price decline > 15% **YELLOW Flag Thresholds:** • Volatility > 25% (annualized) • Maximum drawdown < -10% • Volume decline > 30% • Multiple warning indicators present **Sentiment Thresholds:** • Negative sentiment: Score < -0.3 • Positive sentiment: Score > 0.3 • Neutral sentiment: -0.3 ≤ Score ≤ 0.3

Report Generation Details:
• Generated: 2026-02-23 21:10:13
• Analysis Period: 12 months
• Total Assets Analyzed: 69
• Pipeline Version: 1.0

Test Data - Portfolio Details

Complete portfolio and risk analysis data has been exported to CSV files for further analysis:

Portfolio Data CSV: portfolio_data_20260223_211013.csv
Risk Analysis CSV: risk_analysis_20260223_211013.csv

The tables below provide summary information for quick reference.

Performance Metrics Data

Symbol	1M Return	3M Return	6M Return	Vol Decline	Sharpe Ratio
ABT	-0.8%	6.4%	6.5%	2.0%	0.52
AOB	83.7%	25.9%	14.0%	-1.0%	-0.05
ARB	1.1%	3.8%	8.5%	0.9%	0.77
ARLL	2.3%	5.6%	8.0%	-0.2%	0.56
BCFA	1.5%	4.1%	6.5%	-1.1%	0.52
BRP	4.1%	3.0%	6.4%	2.5%	0.64
CAB	93.8%	68.9%	60.2%	3.4%	0.13
CFY	-31.0%	-12.8%	9.3%	-8.2%	-0.20
CPX	0.4%	7.0%	9.9%	0.4%	0.67
CQHP	0.6%	4.8%	11.7%	0.6%	0.71
CUQV	3.1%	5.6%	13.2%	2.0%	0.63
DION	124.8%	56.5%	12.0%	-1.9%	0.21
DMUX	-0.5%	3.6%	6.5%	0.4%	0.54
DS	-1.0%	8.4%	10.0%	0.9%	0.83
DV	-1.7%	4.8%	6.2%	1.0%	0.52
GGC	4.7%	3.3%	8.9%	1.5%	0.71
GI	-0.1%	8.3%	14.7%	0.1%	0.73
GLX	0.1%	4.4%	14.5%	3.1%	0.71
GOP	0.8%	4.5%	13.2%	-0.8%	0.81
GP	2.8%	5.0%	8.0%	-1.6%	0.69
GQL	1.3%	2.4%	11.1%	-1.9%	0.66
GRXQ	44.0%	25.1%	51.1%	-1.6%	-0.33
GTJD	0.5%	5.8%	9.9%	-1.1%	0.68
GY	-26.6%	-39.3%	-22.9%	-9.3%	-0.39
MI	1.6%	5.7%	7.6%	-0.9%	0.45
MKN	1.6%	5.7%	9.7%	1.4%	0.77
MN	2.5%	4.4%	11.9%	-1.5%	0.73
NAP	4.6%	7.5%	10.2%	1.3%	0.70
NCZ	4.1%	7.2%	11.9%	0.3%	0.64
NG	2.2%	5.3%	8.4%	1.1%	0.52

NIE	-1.8%	2.1%	9.4%	2.8%	0.48
NIPR	-1.3%	2.4%	6.6%	-0.3%	0.61
NQ	0.8%	2.5%	9.8%	2.2%	0.48
NTY	62.7%	60.2%	-0.3%	27.7%	0.48
NZU	3.2%	6.0%	8.8%	-0.4%	0.54
PB	0.8%	6.0%	7.6%	-0.0%	0.76
PBSV	-0.1%	4.5%	12.3%	0.7%	0.72
PIF	0.6%	2.4%	3.7%	1.0%	0.44
PM	3.5%	4.0%	10.3%	5.8%	0.59
PP	0.4%	5.7%	8.9%	-0.5%	0.78
RFA	3.9%	1.7%	9.6%	-0.7%	0.55
RK	1.4%	3.7%	6.4%	4.5%	0.53
ROT	3.8%	4.3%	5.9%	0.7%	0.59
RQFE	-1.5%	2.7%	7.9%	-0.5%	0.69
RQK	0.4%	3.2%	11.7%	-0.6%	0.66
RU	1.2%	4.5%	8.0%	-0.5%	0.81
RWV	0.4%	3.0%	8.5%	0.8%	0.67
SE	-0.4%	1.7%	5.7%	1.8%	0.53
SEPF	2.6%	5.5%	12.7%	0.3%	0.81
SJJ	1.9%	4.9%	9.5%	0.3%	0.54
SNRB	3.5%	4.5%	7.4%	3.5%	0.57
SQI	1.7%	1.1%	5.2%	1.4%	0.44
SXS	140.2%	56.9%	-8.5%	5.4%	0.25
TBJZ	4.3%	7.8%	13.8%	2.8%	0.70
TG	3.3%	0.6%	5.2%	-4.1%	-0.25
VASC	-0.2%	0.3%	9.8%	1.4%	0.49
VL	1.7%	5.9%	6.9%	0.2%	0.59
VM	0.5%	1.4%	7.1%	-0.0%	0.65
VMK	-37.8%	-29.9%	12.7%	-4.1%	-0.03
VR	-1.0%	7.1%	7.2%	1.3%	0.54
XN	2.5%	4.7%	7.6%	0.8%	0.51
XNH	2.2%	5.1%	8.3%	2.6%	0.58
XOGX	3.3%	1.7%	12.9%	-1.1%	0.68
XU	3.5%	6.3%	8.4%	-2.6%	0.72
XY	2.1%	6.8%	7.1%	-0.9%	0.55
ZA	2.5%	1.3%	10.6%	0.1%	0.57
ZDG	-0.2%	-9.3%	-35.7%	-7.2%	-0.70
ZZS	1.8%	1.2%	6.8%	0.9%	0.42
ZZSG	-0.9%	4.2%	8.5%	0.7%	0.52

Risk Flags Details

Symbol	High Vol	Ext. DD	Vol Collapse	Severe Dec	Ext. Dec	Poor Sharpe	Mom. Break
VMK	✓	✓	✗	✓	✓	✗	✓
GY	✓	✓	✗	✓	✓	✗	✓
CFY	✓	✓	✗	✓	✗	✗	✓
ZDG	✓	✓	✗	✗	✗	✓	✗
AOB	✓	✓	✗	✗	✗	✗	✗
NTY	✓	✓	✗	✗	✗	✗	✗
GRXQ	✓	✓	✗	✗	✗	✗	✗
DION	✓	✓	✗	✗	✗	✗	✗
CAB	✓	✓	✗	✗	✗	✗	✗
SXS	✓	✓	✗	✗	✗	✗	✗
TG	✓	✓	✗	✗	✗	✗	✗
MN	✓	✗	✗	✗	✗	✗	✗
NAP	✓	✗	✗	✗	✗	✗	✗
CUQV	✓	✗	✗	✗	✗	✗	✗
PBSV	✓	✗	✗	✗	✗	✗	✗
NIPR	✓	✗	✗	✗	✗	✗	✗
RWV	✓	✗	✗	✗	✗	✗	✗
NG	✓	✗	✗	✗	✗	✗	✗
NQ	✓	✗	✗	✗	✗	✗	✗
BCFA	✓	✗	✗	✗	✗	✗	✗
ROT	✓	✗	✗	✗	✗	✗	✗
GTJD	✓	✗	✗	✗	✗	✗	✗
ZZS	✓	✗	✗	✗	✗	✗	✗
VASC	✗	✗	✗	✗	✗	✗	✗
ARLL	✗	✗	✗	✗	✗	✗	✗
DS	✗	✗	✗	✗	✗	✗	✗
XOGX	✗	✗	✗	✗	✗	✗	✗
ABT	✗	✗	✗	✗	✗	✗	✗
CQHP	✗	✗	✗	✗	✗	✗	✗
BRP	✗	✗	✗	✗	✗	✗	✗
XU	✗	✗	✗	✗	✗	✗	✗
DMUX	✗	✗	✗	✗	✗	✗	✗
RU	✗	✗	✗	✗	✗	✗	✗
NIE	✗	✗	✗	✗	✗	✗	✗
RFA	✗	✗	✗	✗	✗	✗	✗
VM	✗	✗	✗	✗	✗	✗	✗
RQFE	✗	✗	✗	✗	✗	✗	✗
RK	✗	✗	✗	✗	✗	✗	✗

SE	✗	✗	✗	✗	✗	✗	✗
PP	✗	✗	✗	✗	✗	✗	✗
SQI	✗	✗	✗	✗	✗	✗	✗
GLX	✗	✗	✗	✗	✗	✗	✗
ZZSG	✗	✗	✗	✗	✗	✗	✗
SNRB	✗	✗	✗	✗	✗	✗	✗
GGC	✗	✗	✗	✗	✗	✗	✗
DV	✗	✗	✗	✗	✗	✗	✗
SEPF	✗	✗	✗	✗	✗	✗	✗
RQK	✗	✗	✗	✗	✗	✗	✗
VR	✗	✗	✗	✗	✗	✗	✗
NCZ	✗	✗	✗	✗	✗	✗	✗
SJJ	✗	✗	✗	✗	✗	✗	✗
VL	✗	✗	✗	✗	✗	✗	✗
NZU	✗	✗	✗	✗	✗	✗	✗
GI	✗	✗	✗	✗	✗	✗	✗
TBJZ	✗	✗	✗	✗	✗	✗	✗
PB	✗	✗	✗	✗	✗	✗	✗
CPX	✗	✗	✗	✗	✗	✗	✗
ZA	✗	✗	✗	✗	✗	✗	✗
XN	✗	✗	✗	✗	✗	✗	✗
MKN	✗	✗	✗	✗	✗	✗	✗
GOP	✗	✗	✗	✗	✗	✗	✗
PM	✗	✗	✗	✗	✗	✗	✗
XNH	✗	✗	✗	✗	✗	✗	✗
ARB	✗	✗	✗	✗	✗	✗	✗
GP	✗	✗	✗	✗	✗	✗	✗
PIF	✗	✗	✗	✗	✗	✗	✗
GQL	✗	✗	✗	✗	✗	✗	✗
MI	✗	✗	✗	✗	✗	✗	✗
XY	✗	✗	✗	✗	✗	✗	✗

Data Summary:
• Total Assets: 69
• Data Generated: 2026-02-23 21:10:13
• Note: This test data is provided for further analysis, validation, and detailed review purposes.
• All metrics are calculated from 252 trading days of historical data.