Portfolio Risk Analysis Report

Report Date: February 24, 2026
Portfolio Size: 25 Assets
Analysis Period: 12 Months
Generated by: Automated Risk Analysis Pipeline

Risk Assessment Summary

HIGH RISK (RED): 3 Assets
MEDIUM RISK (YELLOW): 0 Assets
LOW RISK (GREEN): 22 Assets

Executive Summary

This report presents a comprehensive risk analysis of a portfolio containing 25 assets with a combined market capitalization of $2767.2 billion. **Key Findings:** • 3 assets (12.0%) are rated as HIGH RISK (RED) • 0 assets (0.0%) are rated as MEDIUM RISK (YELLOW) • Average portfolio volatility: 52.1% • Maximum drawdown observed: -75.0% **Risk Concentration:** The analysis reveals significant risk concentration in 3 assets requiring immediate attention and potential portfolio rebalancing. **Sentiment Analysis:** • 2 RED-flagged assets show negative market sentiment • Average sentiment score for flagged assets: -0.349 • News coverage indicates heightened market concern for these positions

Portfolio Overview

Sector Allocation

Sector	Assets	Market Cap ($B)	Percentage
Technology	2	517.27	18.7%
Industrial	3	434.35	15.7%
Healthcare	2	431.43	15.6%
Consumer Staples	3	299.71	10.8%
Materials	3	298.06	10.8%
Financial Services	4	226.04	8.2%
Utilities	4	217.89	7.9%
Consumer Discretionary	2	209.25	7.6%
Real Estate	2	133.17	4.8%

Risk Analysis Results

Risk Distribution:
• HIGH RISK (RED): 3 assets
• MEDIUM RISK (YELLOW): 0 assets
• LOW RISK (GREEN): 22 assets

High Risk Assets

Symbol	Sector	Risk Rating	Volatility	Max Drawdown	Risk Score
ZJ	Real Estate	RED	82.9%	-62.3%	5
DJP	Materials	RED	189.5%	-75.0%	2
GEU	Technology	RED	172.7%	-73.8%	2

Machine Learning Analysis

Advanced machine learning techniques were applied to identify anomalies and predict future risk ratings. **Anomaly Detection Summary:**
• Total Anomalies Detected: 4
• Critical Anomalies: 3
• High Risk Anomalies: 0
• Anomaly Rate: 16.0%
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

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

Critical Anomalies Detected

Symbol	Sector	Anomaly Score	Severity	Recommendation
DJP	Materials	100.0	CRITICAL	Critical anomaly - Consider immediate po...
ZJ	Real Estate	87.1	CRITICAL	Critical anomaly - Consider immediate po...
GEU	Technology	83.4	CRITICAL	Critical anomaly - Consider immediate po...

Top Risk Factors (Feature Importance)

1. Max Drawdown: 26.1% importance
2. Volatility: 22.3% importance
3. Sharpe Ratio: 11.4% importance
4. Volume Decline: 10.4% importance
5. Price Change 3M: 8.4% importance

ML Validation Results

Overall Validation Status: WARNING
Checks Passed: 3 / 4

✓ **Anomaly Detection Validation:** PASS
total_assets: 25, anomalies_detected: 4, anomaly_rate: 16.0
■ **Risk Prediction Validation:** WARNING
model_accuracy: 100.0, predictions_made: 25, rating_changes: 0
✓ **Feature Quality Validation:** PASS
features_checked: 9, nan_features: 0, total_samples: 25
✓ **Feature Importance Validation:** PASS
total_importance: 100.0, top_feature: Max Drawdown, top_importance: 26.1

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

Sentiment Analysis

Sentiment analysis was conducted on 3 RED-flagged assets using financial news from the past 12 months. **Key Findings:**
• Average sentiment score: -0.349
• Assets with negative sentiment: 2/3
• Total news articles analyzed: 59

Sentiment Analysis Results

Symbol	Sentiment Score	Label	News Count	Trend	Key Themes
GEU	-0.450	NEGATIVE	21	STABLE	operations, earnings, regulatory
ZJ	-0.352	NEGATIVE	19	DETERIORATING	regulatory, market_share, financial_health
DJP	-0.246	NEUTRAL	19	IMPROVING	earnings, regulatory, market_share

Detailed Asset Analysis

Asset: ZJ

Sector: Real Estate
Current Price: $134.42
Market Cap: $42.71B
Risk Rating: RED
Risk Metrics:
• Volatility: 82.9%
• Maximum Drawdown: -62.3%
• Beta: 0.17
• Sharpe Ratio: -0.06
• RSI: 27.3
Performance:
• 1-Month Return: -51.5%
• 3-Month Return: -47.1%
• 6-Month Return: -57.9%
Risk Flags:
• High Volatility, Extreme Drawdown, Severe Decline, Extended Decline, Momentum Breakdown
Market Sentiment:
• Sentiment Score: -0.352 (NEGATIVE)
• News Articles: 19
• Trend: DETERIORATING

Asset: DJP

Sector: Materials
Current Price: $135.13
Market Cap: $120.60B
Risk Rating: RED

Risk Metrics:
• Volatility: 189.5%
• Maximum Drawdown: -75.0%
• Beta: -0.62
• Sharpe Ratio: 0.40
• RSI: 94.9
Performance:
• 1-Month Return: 206.9%
• 3-Month Return: 197.6%
• 6-Month Return: 156.9%
Risk Flags:
• High Volatility, Extreme Drawdown
Market Sentiment:
• Sentiment Score: -0.246 (NEUTRAL)
• News Articles: 19
• Trend: IMPROVING

Asset: GEU

Sector: Technology
Current Price: $145.45
Market Cap: $106.82B
Risk Rating: RED
Risk Metrics:
• Volatility: 172.7%
• Maximum Drawdown: -73.8%
• Beta: 0.45
• Sharpe Ratio: 0.29
• RSI: 81.8
Performance:
• 1-Month Return: 91.6%
• 3-Month Return: 138.0%
• 6-Month Return: 58.3%
Risk Flags:
• High Volatility, Extreme Drawdown
Market Sentiment:
• Sentiment Score: -0.450 (NEGATIVE)
• News Articles: 21
• Trend: STABLE

Recommendations

Based on the comprehensive risk analysis, the following recommendations are provided:
Immediate Actions (RED-flagged assets):
1. Consider reducing position sizes for 3 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 2 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: 2026-02-24 07:44:23
• Analysis Period: 12 months
• Total Assets Analyzed: 25
• 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_20260224_074423.csv
Risk Analysis CSV: risk_analysis_20260224_074423.csv

The tables below provide summary information for quick reference.

Performance Metrics Data

Symbol	1M Return	3M Return	6M Return	Vol Decline	Sharpe Ratio
BGES	2.4%	1.7%	9.7%	3.2%	0.59
BHD	3.1%	5.8%	10.6%	0.7%	0.70
BUV	-0.5%	3.8%	9.4%	1.5%	0.67
CDVA	-0.2%	5.7%	11.2%	3.4%	0.56
CK	-1.8%	2.6%	5.6%	4.1%	0.54
DEC	4.2%	1.7%	11.9%	0.1%	0.58
DJP	206.9%	197.6%	156.9%	35.6%	0.40
DXR	3.9%	3.8%	7.8%	1.0%	0.59
DZ	2.6%	5.0%	5.6%	0.4%	0.46
GAIE	4.4%	2.1%	8.7%	1.0%	0.63
GEU	91.6%	138.0%	58.3%	0.7%	0.29
MHTY	0.1%	2.4%	10.8%	-0.4%	0.83
MVJ	0.4%	6.3%	10.8%	-1.1%	0.67
PXT	3.5%	1.4%	7.7%	1.5%	0.48
RT	-1.0%	0.7%	5.2%	-0.1%	0.54
RTW	-0.8%	4.8%	9.7%	0.6%	0.52
SJE	3.5%	3.8%	9.9%	1.7%	0.55
SKQM	3.2%	6.5%	9.5%	1.2%	0.79
XC	-0.1%	2.3%	10.4%	0.5%	0.59
XFH	2.9%	5.4%	12.1%	-2.2%	0.69
XMHW	-0.4%	0.8%	4.4%	0.8%	0.40
ZHY	2.6%	2.0%	8.3%	-0.8%	0.69
ZJ	-51.5%	-47.1%	-57.9%	-1.3%	-0.06
ZKB	-0.5%	1.8%	4.6%	-1.4%	0.47
ZYI	1.8%	3.4%	8.0%	1.4%	0.75

Risk Flags Details

Symbol	High Vol	Ext. DD	Vol Collapse	Severe Dec	Ext. Dec	Poor Sharpe	Mom. Break

ZJ	✓	✓	✗	✓	✓	✗	✓
DJP	✓	✓	✗	✗	✗	✗	✗
GEU	✓	✓	✗	✗	✗	✗	✗
SKQM	✓	✗	✗	✗	✗	✗	✗
RTW	✓	✗	✗	✗	✗	✗	✗
ZHY	✓	✗	✗	✗	✗	✗	✗
DXR	✓	✗	✗	✗	✗	✗	✗
BHD	✓	✗	✗	✗	✗	✗	✗
CK	✓	✗	✗	✗	✗	✗	✗
ZYI	✓	✗	✗	✗	✗	✗	✗
BUV	✗	✗	✗	✗	✗	✗	✗
CDVA	✗	✗	✗	✗	✗	✗	✗
ZKB	✗	✗	✗	✗	✗	✗	✗
RT	✗	✗	✗	✗	✗	✗	✗
XMHW	✗	✗	✗	✗	✗	✗	✗
MVJ	✗	✗	✗	✗	✗	✗	✗
DZ	✗	✗	✗	✗	✗	✗	✗
BGES	✗	✗	✗	✗	✗	✗	✗
SJE	✗	✗	✗	✗	✗	✗	✗
XC	✗	✗	✗	✗	✗	✗	✗
GAIE	✗	✗	✗	✗	✗	✗	✗
DEC	✗	✗	✗	✗	✗	✗	✗
PXT	✗	✗	✗	✗	✗	✗	✗
MHTY	✗	✗	✗	✗	✗	✗	✗
XFH	✗	✗	✗	✗	✗	✗	✗

Data Summary:
• Total Assets: 25
• Data Generated: 2026-02-24 07:44:23
• 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.