Portfolio Risk Analysis Report

Report Date: October 15, 2025
Portfolio Size: 25 Assets
Analysis Period: 12 Months
Generated by: Automated Risk Analysis Pipeline

Risk Assessment Summary

HIGH RISK (RED): 21 Assets
MEDIUM RISK (YELLOW): 0 Assets
LOW RISK (GREEN): 4 Assets

Executive Summary

This report presents a comprehensive risk analysis of a portfolio containing 25 assets with a combined market capitalization of $3644.0 billion. **Key Findings:** • 21 assets (84.0%) are rated as HIGH RISK (RED) • 0 assets (0.0%) are rated as MEDIUM RISK (YELLOW) • Average portfolio volatility: 33.9% • Maximum drawdown observed: -55.6% **Risk Concentration:** The analysis reveals significant risk concentration in 21 assets requiring immediate attention and potential portfolio rebalancing. **Sentiment Analysis:** • 13 RED-flagged assets show negative market sentiment • Average sentiment score for flagged assets: -0.306 • News coverage indicates heightened market concern for these positions

Portfolio Overview

Sector Allocation

Sector	Assets	Market Cap ($B)	Percentage
Technology	5	1201.57	33.0%
Healthcare	4	606.73	16.7%
Industrial	5	453.09	12.4%
Utilities	4	382.86	10.5%
Materials	2	352.22	9.7%
Financial Services	2	329.44	9.0%
Consumer Discretionary	1	164.69	4.5%
Real Estate	2	153.40	4.2%

Risk Analysis Results

Risk Distribution:
• HIGH RISK (RED): 21 assets
• MEDIUM RISK (YELLOW): 0 assets
• LOW RISK (GREEN): 4 assets

High Risk Assets

Symbol	Sector	Risk Rating	Volatility	Max Drawdown	Risk Score
AAG	Technology	RED	46.0%	-44.2%	5
ZUCJ	Utilities	RED	42.9%	-50.5%	4
ANV	Technology	RED	33.2%	-41.1%	3
DLU	Consumer Discretionary	RED	35.3%	-54.7%	3
PCUF	Industrial	RED	41.8%	-32.4%	2
BVEL	Healthcare	RED	42.0%	-44.8%	2
GEG	Technology	RED	28.7%	-34.3%	2

TISW	Utilities	RED	38.6%	-55.6%	2
SQ	Industrial	RED	41.0%	-54.1%	2
MU	Financial Services	RED	32.6%	-36.4%	2
TMH	Healthcare	RED	24.8%	-20.1%	1
NRV	Technology	RED	19.3%	-21.7%	1
MT	Technology	RED	26.6%	-20.8%	1
ZWV	Materials	RED	27.6%	-22.8%	1
DGM	Real Estate	RED	33.9%	-27.3%	1
BTW	Industrial	RED	32.3%	-28.0%	1
MQ	Healthcare	RED	38.7%	-20.4%	1
PJ	Utilities	RED	33.4%	-25.1%	1
CUP	Industrial	RED	39.7%	-32.8%	1
ZO	Industrial	RED	35.4%	-29.5%	1
ZJJ	Real Estate	RED	40.0%	-38.2%	1

Sentiment Analysis

Sentiment analysis was conducted on 21 RED-flagged assets using financial news from the past 12 months. **Key Findings:**
• Average sentiment score: -0.306
• Assets with negative sentiment: 13/21
• Total news articles analyzed: 480

Sentiment Analysis Results

Symbol	Sentiment Score	Label	News Count	Trend	Key Themes
ZUCJ	-0.432	NEGATIVE	20	DETERIORATING	earnings, regulatory, financial_health
DLU	-0.388	NEGATIVE	26	DETERIORATING	financial_health, earnings, regulatory
BTW	-0.386	NEGATIVE	26	DETERIORATING	earnings, regulatory, management
ZWV	-0.363	NEGATIVE	30	DETERIORATING	regulatory, earnings, operations
SQ	-0.352	NEGATIVE	30	IMPROVING	regulatory, earnings, financial_health
BVEL	-0.330	NEGATIVE	20	IMPROVING	earnings, regulatory, financial_health
CUP	-0.325	NEGATIVE	17	IMPROVING	regulatory, financial_health, earnings
NRV	-0.323	NEGATIVE	18	IMPROVING	regulatory, financial_health, operations
PCUF	-0.320	NEGATIVE	23	IMPROVING	operations, regulatory, financial_health
PJ	-0.317	NEGATIVE	20	DETERIORATING	earnings, regulatory, operations
AAG	-0.312	NEGATIVE	16	DETERIORATING	earnings, regulatory, operations
ZO	-0.306	NEGATIVE	19	DETERIORATING	regulatory, management, financial_health
TISW	-0.301	NEGATIVE	19	STABLE	regulatory, earnings, financial_health
GEG	-0.298	NEUTRAL	17	DETERIORATING	regulatory, financial_health, earnings
MT	-0.296	NEUTRAL	24	IMPROVING	regulatory, financial_health, earnings

TMH	-0.266	NEUTRAL	21	STABLE	financial_health, earnings, management
DGM	-0.258	NEUTRAL	16	STABLE	earnings, operations, financial_health
ANV	-0.257	NEUTRAL	30	IMPROVING	financial_health, earnings, regulatory
MU	-0.223	NEUTRAL	29	DETERIORATING	regulatory, earnings, management
ZJJ	-0.220	NEUTRAL	30	IMPROVING	earnings, financial_health, regulatory
MQ	-0.151	NEUTRAL	29	IMPROVING	regulatory, financial_health, earnings

Detailed Asset Analysis

Asset: AAG

Sector: Technology
Current Price: $340.30
Market Cap: $152.46B
Risk Rating: RED
Risk Metrics:
• Volatility: 46.0%
• Maximum Drawdown: -44.2%
• Beta: 0.17
• Sharpe Ratio: -0.73
• RSI: 40.1
Performance:
• 1-Month Return: -19.8%
• 3-Month Return: -12.7%
• 6-Month Return: -9.8%
Risk Flags:
• High Volatility, Extreme Drawdown, Severe Decline, Poor Risk Return, Momentum Breakdown
Market Sentiment:
• Sentiment Score: -0.312 (NEGATIVE)
• News Articles: 16
• Trend: DETERIORATING

Asset: ZUCJ

Sector: Utilities
Current Price: $118.90
Market Cap: $131.27B
Risk Rating: RED
Risk Metrics:
• Volatility: 42.9%
• Maximum Drawdown: -50.5%
• Beta: 0.05
• Sharpe Ratio: -1.31
• RSI: 25.2
Performance:
• 1-Month Return: -9.4%
• 3-Month Return: -30.1%
• 6-Month Return: -43.1%
Risk Flags:
• High Volatility, Extreme Drawdown, Extended Decline, Poor Risk Return
Market Sentiment:
• Sentiment Score: -0.432 (NEGATIVE)
• News Articles: 20

• Trend: DETERIORATING

Asset: ANV

Sector: Technology
Current Price: $173.98
Market Cap: $183.01B
Risk Rating: RED
Risk Metrics:
• Volatility: 33.2%
• Maximum Drawdown: -41.1%
• Beta: -0.10
• Sharpe Ratio: -0.89
• RSI: 39.7
Performance:
• 1-Month Return: -7.1%
• 3-Month Return: -30.4%
• 6-Month Return: -18.1%
Risk Flags:
• Extreme Drawdown, Extended Decline, Poor Risk Return
Market Sentiment:
• Sentiment Score: -0.257 (NEUTRAL)
• News Articles: 30
• Trend: IMPROVING

Asset: DLU

Sector: Consumer Discretionary
Current Price: $92.39
Market Cap: $164.69B
Risk Rating: RED
Risk Metrics:
• Volatility: 35.3%
• Maximum Drawdown: -54.7%
• Beta: 0.24
• Sharpe Ratio: -1.32
• RSI: 63.8
Performance:
• 1-Month Return: -3.4%
• 3-Month Return: -31.8%
• 6-Month Return: -44.7%
Risk Flags:
• Extreme Drawdown, Extended Decline, Poor Risk Return
Market Sentiment:
• Sentiment Score: -0.388 (NEGATIVE)
• News Articles: 26
• Trend: DETERIORATING

Asset: PCUF

Sector: Industrial
Current Price: $90.74
Market Cap: $90.76B
Risk Rating: RED

Risk Metrics:
• Volatility: 41.8%
• Maximum Drawdown: -32.4%
• Beta: -0.10
• Sharpe Ratio: 1.31
• RSI: 59.8
Performance:
• 1-Month Return: 12.0%
• 3-Month Return: 49.0%
• 6-Month Return: 35.7%
Risk Flags:
• High Volatility, Extreme Drawdown
Market Sentiment:
• Sentiment Score: -0.320 (NEGATIVE)
• News Articles: 23
• 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 21 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 13 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: 2025-10-15 07:32:22
• 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_20251015_073222.csv
Risk Analysis CSV: risk_analysis_20251015_073222.csv

The tables below provide summary information for quick reference.

Performance Metrics Data

Symbol	1M Return	3M Return	6M Return	Vol Decline	Sharpe Ratio
AAG	-19.8%	-12.7%	-9.8%	-9.4%	-0.73
ANV	-7.1%	-30.4%	-18.1%	8.1%	-0.89
BON	-0.1%	1.6%	0.7%	-4.9%	0.11
BTW	8.8%	13.4%	-1.4%	-4.7%	0.95
BVEL	10.7%	-5.1%	-19.9%	-4.8%	0.20
CUP	3.1%	-3.0%	-7.1%	-4.6%	0.21
DGM	-1.7%	-8.9%	-13.2%	-2.3%	-0.12
DLU	-3.4%	-31.8%	-44.7%	3.1%	-1.32
GEG	-7.9%	-15.7%	-21.1%	-6.3%	-1.16
GY	26.9%	30.1%	29.5%	1.5%	1.20
MQ	27.3%	32.7%	64.6%	6.1%	1.49
MT	-8.1%	-2.0%	23.7%	-7.0%	0.65
MU	-3.9%	-2.9%	-14.7%	-4.7%	-0.72
NRV	9.1%	8.8%	9.0%	-5.6%	-0.23
NT	14.9%	24.7%	35.7%	-2.4%	1.22
PCUF	12.0%	49.0%	35.7%	-15.4%	1.31
PI	-1.9%	-3.7%	11.4%	-5.9%	0.98
PJ	-0.0%	4.2%	-13.5%	-4.3%	0.75
SQ	-7.6%	-5.7%	-41.3%	-0.6%	0.08
TISW	4.0%	-12.2%	-34.7%	-4.8%	-1.07
TMH	-3.5%	10.9%	9.5%	8.2%	1.03
ZJJ	11.0%	23.5%	11.8%	-0.2%	-0.44
ZO	1.1%	-13.2%	1.9%	1.9%	-0.07
ZUCJ	-9.4%	-30.1%	-43.1%	-0.3%	-1.31
ZWV	-4.1%	2.1%	3.6%	-9.2%	-0.09

Risk Flags Details

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

AAG	✓	✓	✗	✓	✗	✓	✓
ZUCJ	✓	✓	✗	✗	✓	✓	✗
ANV	✗	✓	✗	✗	✓	✓	✗
DLU	✗	✓	✗	✗	✓	✓	✗
PCUF	✓	✓	✗	✗	✗	✗	✗
BVEL	✓	✓	✗	✗	✗	✗	✗
GEG	✗	✓	✗	✗	✗	✓	✗
TISW	✗	✓	✗	✗	✗	✓	✗
SQ	✓	✓	✗	✗	✗	✗	✗
MU	✗	✓	✗	✗	✗	✓	✗
TMH	✗	✓	✗	✗	✗	✗	✗
NRV	✗	✓	✗	✗	✗	✗	✗
MT	✗	✓	✗	✗	✗	✗	✗
ZWV	✗	✓	✗	✗	✗	✗	✗
PI	✓	✗	✗	✗	✗	✗	✗
DGM	✗	✓	✗	✗	✗	✗	✗
BTW	✗	✓	✗	✗	✗	✗	✗
MQ	✗	✓	✗	✗	✗	✗	✗
PJ	✗	✓	✗	✗	✗	✗	✗
CUP	✗	✓	✗	✗	✗	✗	✗
ZO	✗	✓	✗	✗	✗	✗	✗
ZJJ	✗	✓	✗	✗	✗	✗	✗
GY	✗	✗	✗	✗	✗	✗	✗
NT	✗	✗	✗	✗	✗	✗	✗
BON	✗	✗	✗	✗	✗	✗	✗

Data Summary:
• Total Assets: 25
• Data Generated: 2025-10-15 07:32:22
• 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.