

# RESILIENCE MONITOR

REPUTATION HEALTH RISK FORECASTING AND BENCHMARKING

SVB Financial Group

March 9, 2023

Data Audit: RVM\_CRR-SIVB-45007-9605



Form F8005 ~~Strictly Confidential~~

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## Description

This analysis of reputational value is based on data collected over approximately 3 years from the End Date shown at right. This report helps risk professionals manage reputation risk and board members oversee risk strategies for mission critical assets.

## Context

Reputational risk is the threat of economic or political damage from energized disappointed stakeholders whose expectations have shifted. Energized means emotionally engaged, as in angry or frightened. The art of reputation risk management is to minimize the gap between stakeholder expectations and operational reality by investing in expectation management and operational controls.

Reputation risk management is a strategic investment in removing threats to an enterprises' overall objectives. Governance with respect to leadership, budget and strategy; and risk governance in particular, are the most important processes comprising enterprise-level reputation risk management.

## Vital Signs and Key Metrics

Simulation Start Date	March 24, 2022	
Simulation End Date	March 9, 2023	
Simulation Binding RVM%	0.855	
Current RVM% & Industry Rank	0.376	259
RVM% Sim/Current	0.8669	0.3756
RVM Sim/Current	2.0082	1.3611
Losses Gate 1/RM	25	3.00
Losses Gate 2/RM	22	4.00
Losses Gate 3/RM	17	5.00
Losses Gate 4/RM	15	6.00
Losses Gate 5/RM	13	7.00
RVM% Vol Sim/Current	0.0329	0.0694
RVM Vol Sim/Current	0.2094	0.0862

## Subjectivities and Notices

This report comprises an analysis of publicly available data that have been subjected to proprietary algorithms maintained and operated by Steel City Re. The sources are believed to be reliable. The actuarial analysis was prepared by Steel City Re's Maths Unit.

However, Steel City Re is not an auditor and has not independently verified the underlying data. Because of the possibility of human or mechanical error as well as other factors, all information contained herein is provided "As Is" without warranty of any kind.

- RVM-CRR
- Simulator Loss Gate 1
- Simulator Loss Gate 2
- Simulator Loss Gate 3
- Simulator Loss Gate 4
- Simulator Loss Gate 5
- Period Rebased ROE

### Equity and RVM Performance Overview

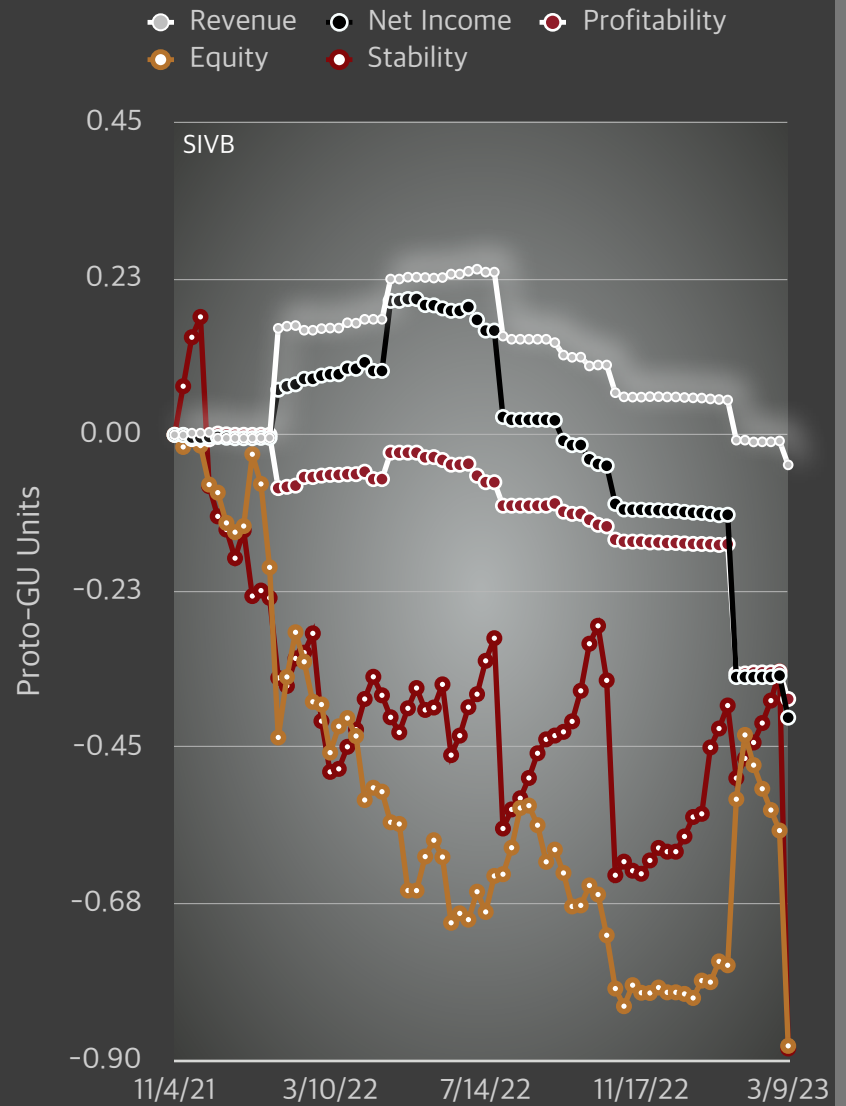
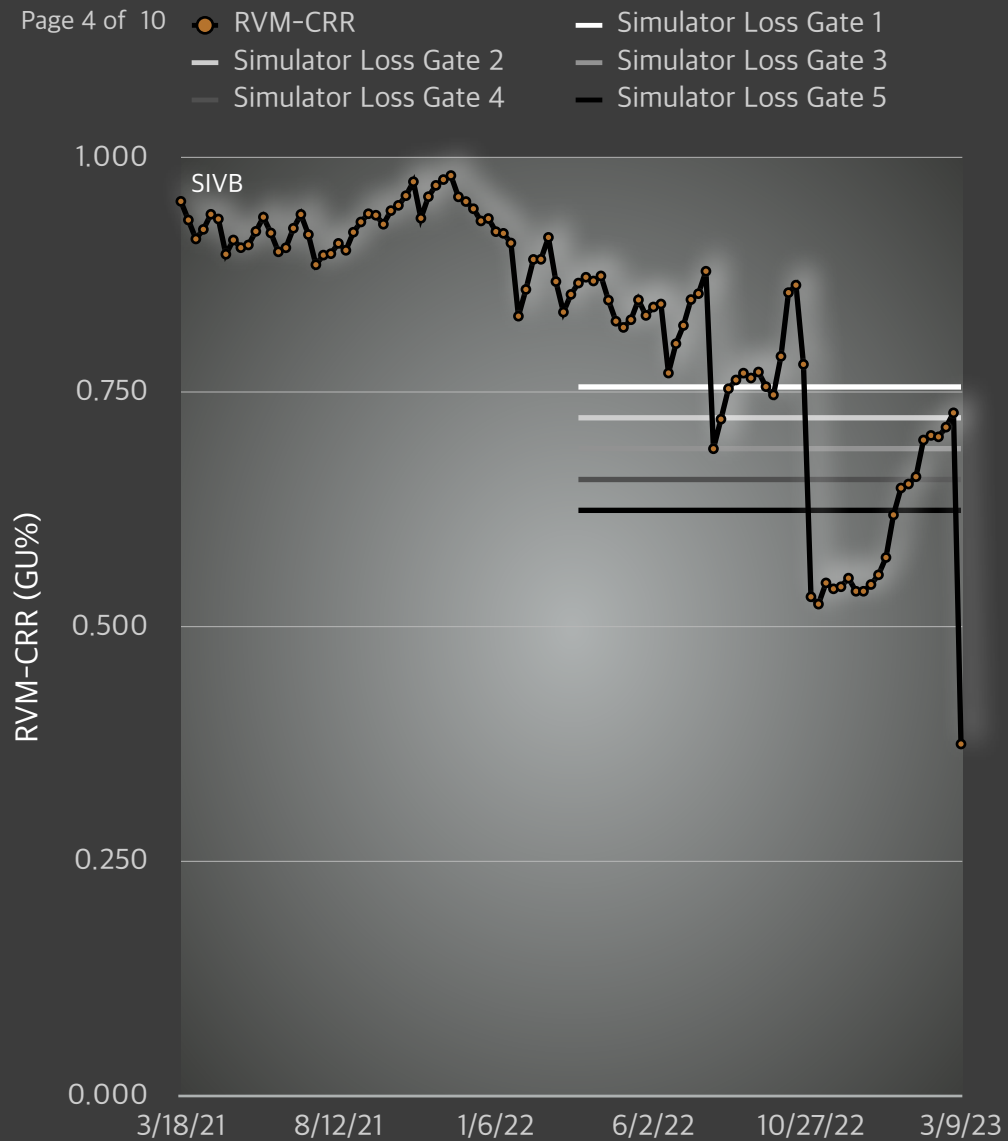


#### Definitions

RVM-CRR is a non-financial indication of reputational value measured in Gerken Units (GU%).

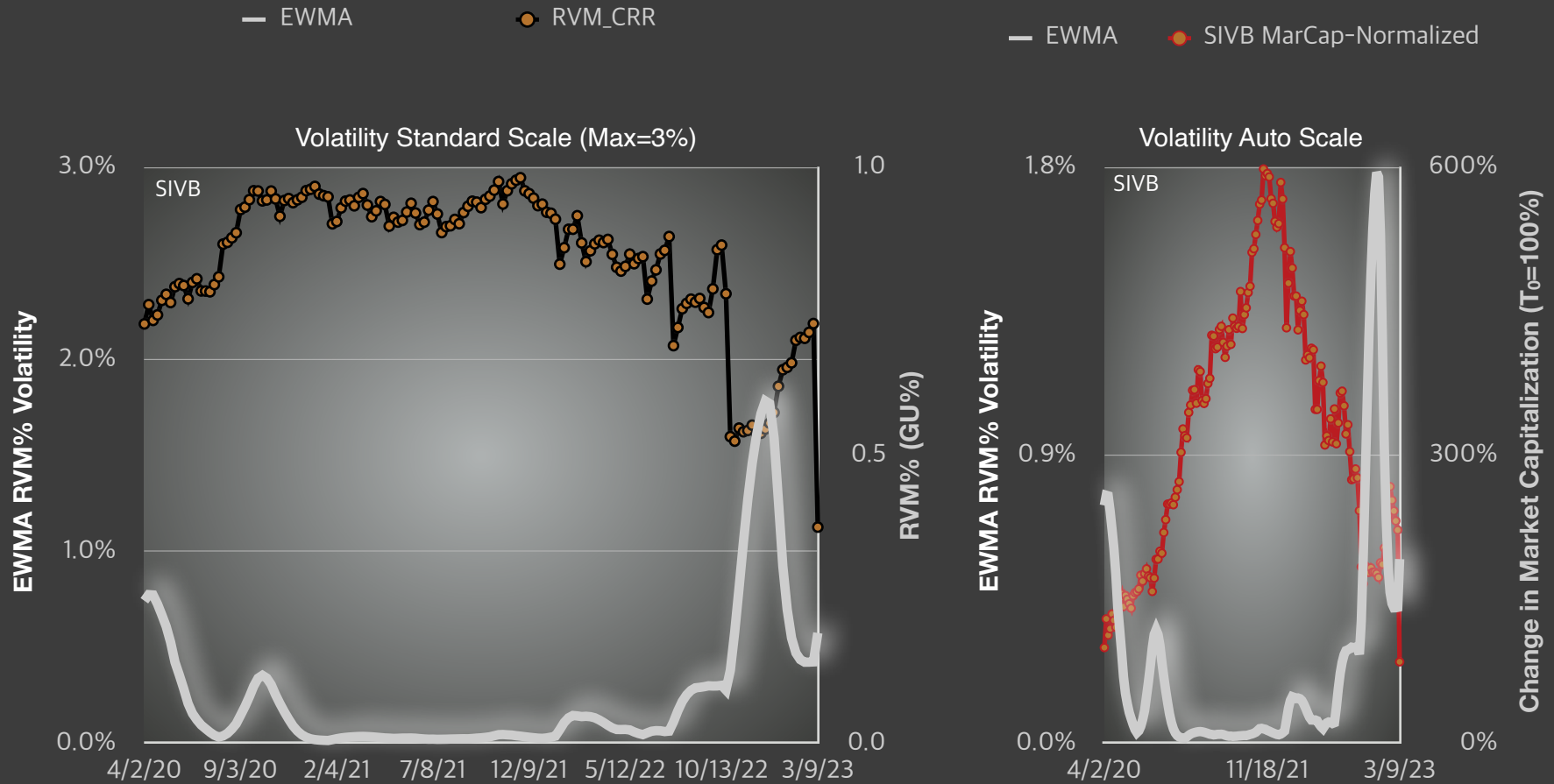
The one year historic RVM volatility is the basis for pricing and for the values of the Loss Gates that determine triggers and payment limits. Policy form *F1001 Reputation Value Insurance (RVI) Policy RVM* describes insurance mechanics in detail.

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Detailed view of reputational value (RVM-CRR) movement and changes in its underlying components

## Strategic Oversight of Mission-Critical (Reputation) Assets



Volatility in reputational value (EWMA RVM%) – a quantitative measure of stakeholders' certainty in a company's ability to meet their expectations – is a leading sign of shifting stakeholder expectations that can trigger bank runs and stock price collapses. Corroborating measures are drops in reputational value (RVM%) and market capitalization.

## Benchmarking and Forecasting



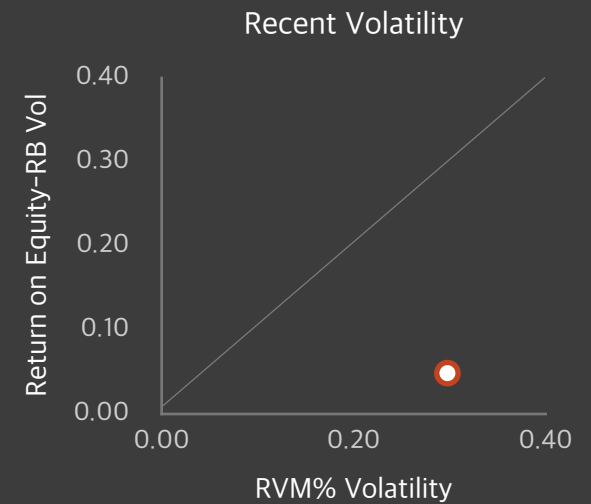
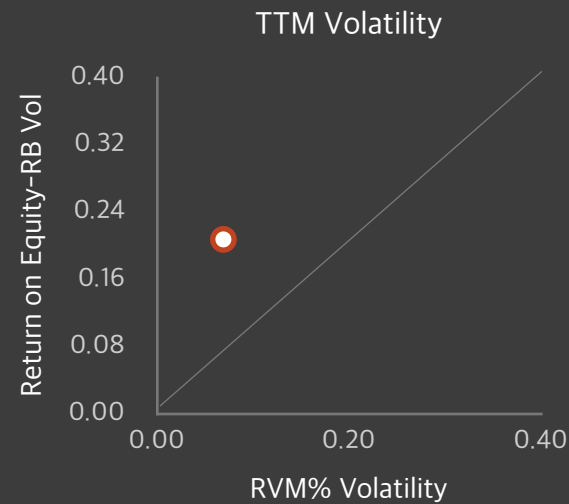
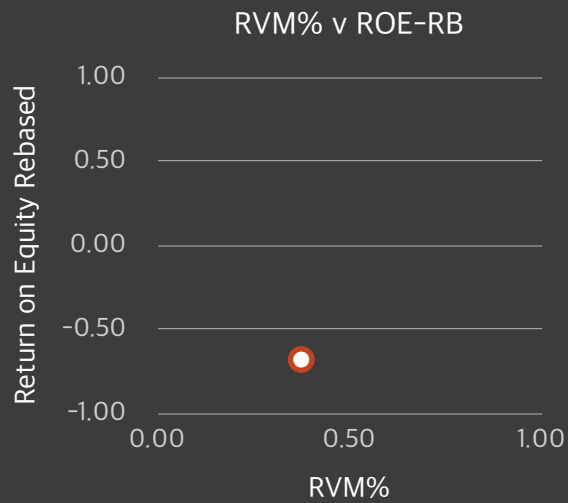
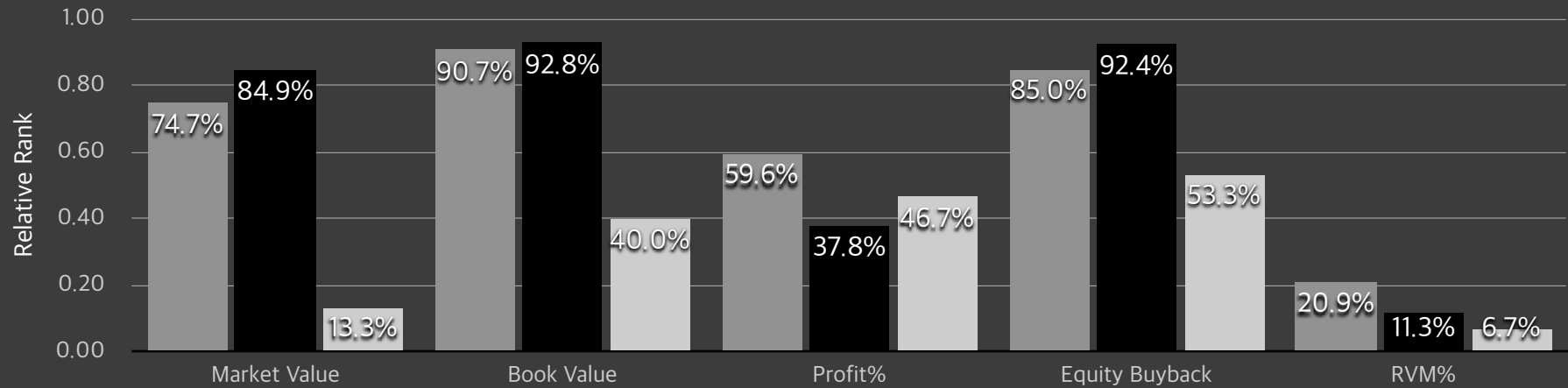
# SIVB

Finance  
Group Count is 1552

Regional Banks  
Group Count is 291

SIVB20230309  
Group Count is 15

### Peer Ranking by Sector, Industry and Proxy Groups



## Benchmarking and Forecasting



Current

Simulator

Loss Gate 1

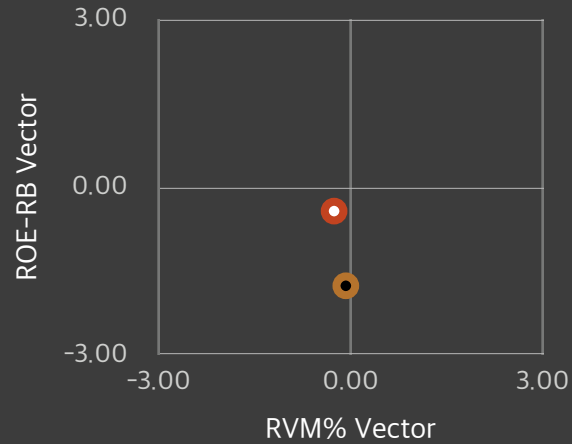
Loss Gate 2

Loss Gate 3

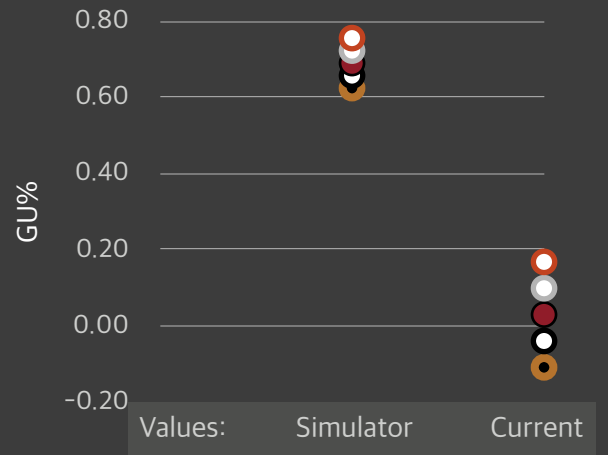
Loss Gate 4

Loss Gate 5

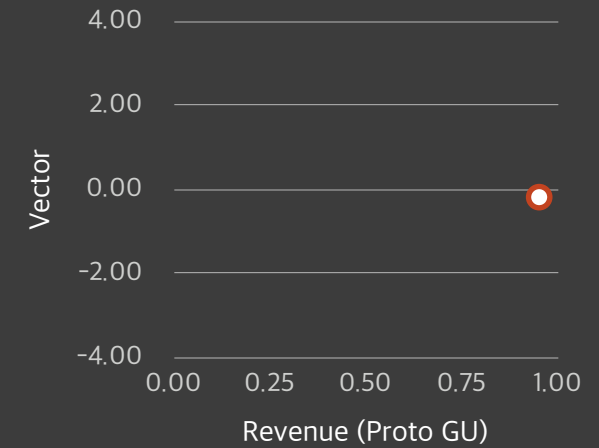
RVM% v ROE-RB Vector



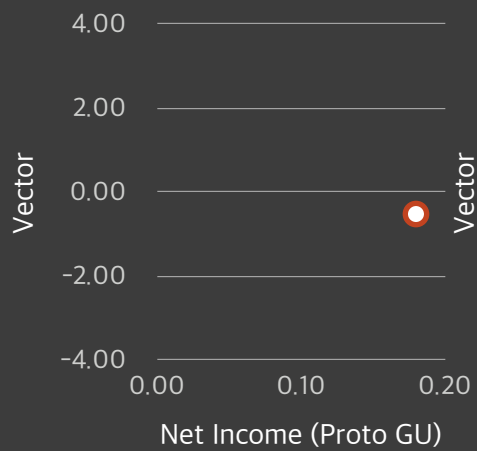
Loss Gate Distribution



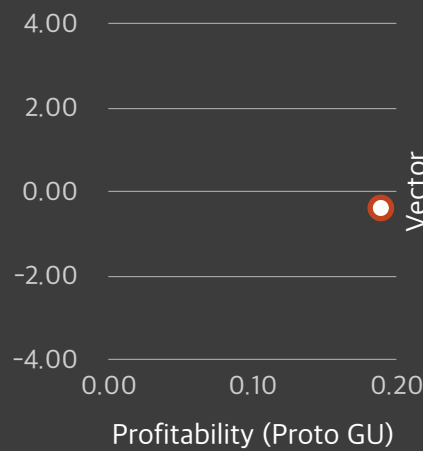
Revenue



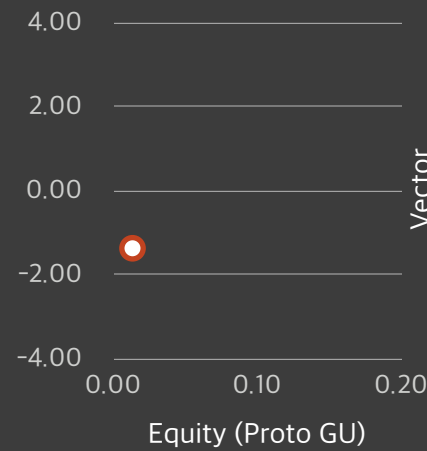
Net Income



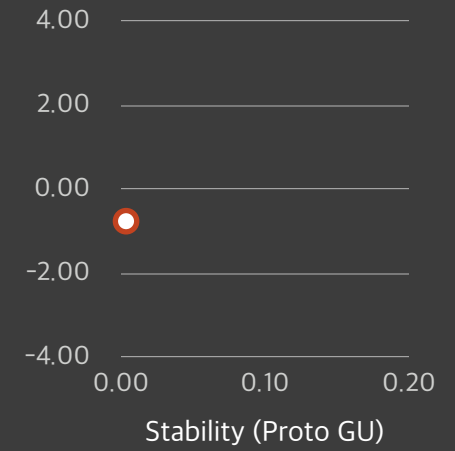
Profitability



Equity



Stability





## Page 1

End date of the 3-year data sweep

Data source file for audit start point

## Page 2: Vital Signs and Key Metrics

### TTM Experience Simulation Window

**RVM% Binding** = Value 1-2 weeks before experience simulation.  
Baseline for all Loss Gate calculations.

**RVM% Sim/Current** = Value at start and end of experience simulation.

**RVM Sim/Current** = Value of a pre-percentile ranked reputational value metric (research purposes).

**Loss Gates 1-5.** Number of breaches and the range multiple (~# standard deviation-like) of the Loss Gate.

**RVM% Vol Sim/Current** = Volatility value (standard-deviation) at start and end of experience simulation.

**RVM Vol Sim/Current** = Volatility value (standard-deviation) of a pre-percentile ranked reputational value metric (research purposes).

## Page 3

### Equity and RVM% Performance Overview

Equity ROI and RVM% chart overlay

Left vertical axis: Market capitalization time series normalized to the S&P500 index.

Right vertical axis: RVM%. Black line with gold centers: RVM% value time series (range 0-1).

Horizontal black, gray and white lines: Loss Gates 1-5 of the experience simulation.

## Page 4

### Equity and RVM% Subcomponent Performance Overview

Left chart: RVM%

Vertical axis: RVM%. Black line with gold centers: RVM% value time series (same as page 3).

Horizontal black, gray and white lines: Loss Gates 1-5 of the experience simulation (same as page 3).

Right chart: Subcomponents of the RVM% value, change during experience simulation

Vertical axis: Proto GU Units.

**Revenue** - Normalized expected forward twelve months sales per share time series (range -1 to 1).

**Net Income** - Normalized expected forward twelve months net income % time series (range -1 to 1).

**Profitability** - Normalized expected forward twelve months net income time series (range -1 to 1).

**Equity** - Normalized current share price per expected forward twelve months earnings multiple time series (range -1 to 1).

**Stability** - Normalized inverse exponentially weighted moving average share price volatility time series (EWMA  $\lambda$  0.97) (range -1 to 1).



## Page 5

### EWMA RVM% Volatility, RVM%, & Market Cap

*Trailing ten period exponentially weighted moving average of 13 trailing weeks of RVM% variance.*

Left: Fixed scales of RVM% volatility and RVM% value.

Right: Self-adjusting scales for both RVM% volatility and change in market capitalization.

## Page 6

### Benchmarking and Forecasting

*Top row: Benchmarking relative to sector, industry, and custom peer/proxy-defined group, spot value at end date (range 0-1)*

*Bottom row: Spot relationships between Market Capitalization and RVM%*

Left: Rebased return on equity, trailing twelve months, spot value vs RVM% spot value.

Center: Rebased return on equity volatility, trailing twelve months, spot value vs RVM% volatility trailing twelve months, spot value.

Right: Rebased return on equity volatility, exponentially weighted moving average (EWMA  $\lambda$  0.97) spot value vs RVM% volatility exponentially weighted moving average (EWMA  $\lambda$  0.97) spot value.

## Page 7

### Benchmarking and Forecasting: Magnitude and Direction of Change

*All vector value calculations: (End value - Initial value)/Trailing Twelve Month (TTM) Median value.*

#### Top row

Left: Rebased return on equity, trailing twelve months, vector vs RVM% vector, comparing value at the beginning of the experience simulation and at the end.

Center: Values of the five Loss Gates (based on trailing twelve month RVM% volatility) for the experience model based on the initial RVM% value and volatility (simulation) and the end values (current).

#### Balance of Top Row and Bottom Row

*Vector vs spot value plots of the subcomponents of the RVM% value (right chart, page 4).*

Top Right: **Revenue** - Normalized expected sales per share end value (range -1 to 1) vs its vector (End value - Initial value)/Median value.

Bottom Left: **Net Income** - Normalized expected forward twelve months net income % end value (range -1 to 1) vs its vector (End value - Initial value)/Median value.

Bottom Left Center: **Profitability** - Normalized expected forward twelve months net income end value (range -1 to 1) vs its vector (End value - Initial value)/Median value.

Bottom Right Center: **Equity** - Normalized current share price per expected forward twelve months earnings multiple end value (range -1 to 1) vs its vector (End value - Initial value)/Median value.

Bottom Right: **Stability** - Normalized inverse exponentially weighted moving average share price volatility end value (EWMA  $\lambda$  0.97) (range -1 to 1) vs its vector (End value - Initial value)/Median value.

## Glossary

Term	Page	Meaning
Ct	2	Count. Refers to number of times the particular loss gate has been breached by the weekly RVM% value.
EWMA	5	Exponentially-weighted moving average.
EWMA RVM% Volatility	5	Exponentially-weighted moving average of the volatility of the reputational value metric percentile (RVM%, aka RVM-CRR) value. This is a leading indicator of shifting stakeholder expectations.
GU%	3, 4, 5, 7	Gerken Unit percentile, the preferred unit of measure for reputational value metric percentile (RVM%). Named after Peter Gerken, a founder of Steel City Re.
Losses Gate n/Ct/RM	2	Details on an insurance trigger: priority (n), breach count (Ct), and magnitude of basis risk.
MarCap	5	Market capitalization.
Proto-GU	4, 7	Unit of measure of a subcomponent of the reputational value metric—proto Gerken Unit.
RB	6, 7	Rebased. Calculation baseline set to 0 or 100%.
RM	2	Range multiple—the parametric insurance equivalent of a deductible and basis risk.
ROE	3	Return on equity.
ROE-RB	7	Return on equity, rebased.
RVI	3	Reputation value insurance.
RVM	2, 3	Two meanings. Informally, the reputation value metric. Technically, the reputation value metric raw score of the amalgamated subcomponents, each measured in proto Gerken Units.
RVM-CRR	3, 4, 5	Reputation value metric - Corporate, relative reputation. Older term used to describe the normalized reputation value metric percentile (RVM%), reported in Gerken Units % (GU%).
RVM%	2, 5, 6	Reputation value metric percentile. The final form of a firm's measure of reputation value, also known historically as the RVM-CRR. Reported in Gerken Units % (GU%), it is an indicator of the value created by stakeholder expectations.
T <sub>0</sub>	5	Time zero.
TTM	6	Trailing twelve months.
Vector	7	Directional measure of historic change in value over time. Calculated as final value minus initial value divided by median value.
Vol	6	Volatility.