

Risk architecture Part 1. Scoring Logic for Individual Measures

November 13, 2025

Series introduction

The risk architecture is built in three layers.

- 1) Layer 1. Risks points are calculated and assigned for each measure (maximum risk points per measure and assignment logic are defined in Risk Architecture Part 1. Scoring Logic for Individual Measures).
- 2) Layer 2. Risk points are calculated and assigned for measure combinations that are associated with financial trajectories, and that show up in an institution's data. Measure Combinations are subtly different and include:
 - a. **archetypes** - structural patterns that quietly shape an institution's long-term health. They're not fully captured by a single ratio, but rather by combinations of factors, such as revenue dependence, program mix, debt loads, or enrollment trends. So far, the research has identified nine archetypes that signal risk and three that signal resilience;
 - b. **patterns** - recur with some frequency across higher education segments, but not enough to be considered as archetypes. Think of them as emerging archetypes; and
 - c. **accelerators** - patterns that, if present in an organization's data profile, accelerate its financial decline. They include protracted enrollment decline, softness in two or more financial health ratios (e.g., primary reserves, viability, operating margins, etc.), and expenditure patterns suggestive of inefficient operations.

Max risk points per measure combination are defined in Risk Architecture Part 2. Scoring Logic for Archetypes, Patterns, and Accelerators

- 3) Layer 3. Overall risk level assignment (low, medium, high, critical) is based on a percent value calculated as the total risk points assigned to an institution / total available (maximum) risk points. Thresholds are defined in the risk scoring engine.js (analyzer), and are currently set as follows:

Assignment	Range
Low	0-25%
Moderate	26-48%
High	48-68%
Critical	>68%

This file provides details about Layer 1.

Analyzers are listed in alphabetical order.

Academic Programs Sustainability — Risk Scoring Map (max 12 pts)

Structure

- Scale risk (grads per program): up to +6 (quartile logic)
- Cost risk (student-facing exp. per degree): up to +4 (quartile logic)

- Combo bonus: +2 when both scale & cost risks present
- Total capped at 12

Scale risk (grads per program; lower is riskier)

- Institution $\leq$ peer 25th percentile $\rightarrow$ +3 (and may accumulate up to +6 when multiple scale flags fire)

Cost risk (SFE per degree; higher is riskier)

- Institution $\geq$ peer 75th percentile $\rightarrow$ +4

Combo bonus

- If any scale risk > 0 and cost risk $> 0 \rightarrow$ +2

Peer-relative micro-rules used inside the measure helpers

- Enrollment measures (e.g., grads per program): ratio to peer avg $< 0.8 \rightarrow$ +2; $0.8 - < 1.0 \rightarrow$ +1; $\geq 1.0 \rightarrow \leq +0.5$
 - Cost measures (e.g., SFE per degree): ratio to peer avg $> 1.2 \rightarrow$ +2; $1.0 - \leq 1.2 \rightarrow$ +1; $\leq 1.0 \rightarrow \leq +0.5$
- (These helper thresholds determine sub-points that feed the quartile/accumulation logic.)

Acceptance & Yield — Risk Scoring Map (max = sector-dependent: Public = 10 pts, Private = 8 pts)

This is a brand-strength *trend* indicator, not a prestige indicator. It does not measure raw selectivity. Instead it measures brand trajectory relative to peers, using:

- Application momentum
- Selectivity change direction, not level
- Yield movement, not level

Components (as implemented)

Factor	Weight (proportion of max points)	Metric
Applications trend vs peers	40% of total points	Change in applications over ~10 years
Acceptance rate trend vs peers	30% of total points	Direction & magnitude of selectivity change
Yield rate trend vs peers	30% of total points	Change in student conversion / attractiveness

Peer comparison is relative to mean change among the peer group, not absolute values.

1. Applications Trend Scoring (40% of total)

Scoring thresholds

Condition (institution vs peers)	Points Awarded
$\geq 15\%$ <i>below</i> peers	full 40% of max
8–14.9% below peers	~75% of 40%

Condition (institution vs peers)	Points Awarded
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3–7.9% below peers	~50% of 40%
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0–2.9% below peers	~25% of 40%
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≥ peer mean	0
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Absolute change in applications 2014→2023 Points

< -30%	full 40% of max
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-10% to -29.9%	~50% of 40%
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-0.1% to -9.9%	~25% of 40%
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≥ 0%	0
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2. Acceptance Rate Trend Scoring (30% of total)

Acceptance rate change vs peers Points

≥ 15% <i>more increase</i> than peers	full 30%
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8–14.9% more increase	~67% of 30%
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3–7.9% more increase	~33% of 30%
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Less increase than peers	0
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3. Yield Rate Trend Scoring (30% of total)

Yield change vs peers	Points
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≥ 15% <i>worse</i> than peers	full 30%
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8–14.9% worse	~67% of 30%
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3–7.9% worse	~33% of 30%
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Same or better than peers	0
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Total Risk Score

clamped at 10 for publics, 8 for privates

Risk Level

% of max points Risk Level

≥ 75%	High
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% of max points Risk Level

$\geq 50\%$	Moderate
25–49%	Low–Moderate
$<25\%$	Low

Adjusted Operating Margin (AOM) — Risk Scoring Map (max 8 pts)

This measure assesses an institution's ability to sustain operations using recurring income — that is, income from tuition, fees, state appropriations, and other core activities, *excluding* one-time gains or losses and investment income.

It shows whether an institution can cover its ongoing expenses from its ongoing revenues.

In short: A measure of structural operating health, not short-term profit or loss.

Components

- 3-yr rolling avg (sector-aware) up to 5
- Peer quartile up to 2
- Current-year distress (sector-aware) up to 5
- Trend deterioration up to 2
- OM–AOM divergence kicker +1
- Final clamped to 8

Public cut-points (illustrative from code)

- 3-yr avg: $< -2\% = +5$, -2 to $<0 = +4$, 0 – $<2 = +2$, 2 – $<4 = +1$, $\geq 4 = 0$
- Current year: $< -10\% = +5$, -10 – $<-5 = +4$, -5 – $<-2 = +3$, -2 – $<0 = +2$, 0 – $<2 = +1$, $\geq 2 = 0$

Private cut-points

- 3-yr avg: $< -15\% = +5$, -15 – $<-10 = +4$, -10 – $<-5 = +3$, -5 – $<0 = +2$, 0 – $<3 = +1$, $\geq 3 = 0$
- Current year: $< -20\% = +5$, -20 – $<-15 = +4$, -15 – $<-10 = +3$, -10 – $<-5 = +2$, -5 – $<0 = +1$, $\geq 0 = 0$

Peer quartile: bottom = +2; below median = +1; $\geq$ median = 0

Trend: change rate $< -2\%/yr = +2$; -2 to $< -1\%/yr = +1$

OM–AOM divergence: if $AOM \geq 0$ but plain $OM \leq -2\%$ for last 2 years $\rightarrow +1$ (then clamp to 8)

- 3-yr rolling avg (40% $\rightarrow$ 4 pts): critical +4; concerning +3; adequate +1
- Trend (20% $\rightarrow$ 2 pts): declining +2; stable +0.5; improving 0
- Volatility (10% $\rightarrow$ 1 pt): $>0.15 +1$; 0.10 – $0.15 +0.5$

- Peer percentile (10% → 1 pt): bottom quartile +1; < median +0.5
Clamp to 10. (Sector-neutral thresholds.)

Appropriations Dependency — Risk Scoring Map

This analyzer

- Uses absolute dependency %, not peer-relative percentiles.
- Uses trend direction, not volatility bands.
- Treats public universities and community colleges identically.
- Does not dynamically scale scoring to Carnegie type, enrollment size, or mission.

Applicability:

- Public Universities (sector = '1')
- Community Colleges (sector = '4')
- Private institutions are scored as Not Applicable (0 pts)

Maximum Points:

- 20 pts total
 - 15 pts → Current dependency level
 - 5 pts → Dependency trend (change over time)

1. Current Dependency Level (0–15 pts)

(Dependency = % of core revenue from state appropriations)

Dependency % (2023)	Risk Points	Meaning (as currently interpreted)
≤ 20%	0	Highly diversified revenue base
20–30%	~4 pts (25% of 15)	Mild reliance
30–60%	~4 pts (same as above; currently coded same bucket)	Material reliance
60–70%	4 (explicit constant return)	High reliance
≥ 70%	8 (explicit constant return)	Very high exposure to state volatility

2. Dependency Trend (0–5 pts)

(Annualized % change from 2010 → 2023)

Annualized Trend	Points	Logic
$\leq -2\%$ / yr (decreasing dependency)	0	Improving resilience
Between -2% and $+2\%$ / yr (flat)	≈ 2 pts (33% of 5)	Stable exposure
$+2-5\%$ / yr (increasing dependence)	$\approx 3-4$ pts (67% of 5)	Worsening exposure
$> +5\%$ / yr (rapid increase)	5	Significant rising political risk

3. Total Score and Risk Level

% of Max Risk Level

$\leq 10\%$ Minimal

10–25% Limited

25–50% Moderate

50–75% High

$> 75\%$ Critical

4. Peer Comparison

Peer benchmarking *is performed* but:

- Does not change scoring
- Appears only in narrative text
(e.g., “above peer average = higher exposure”)

Capitalization Ratio — Risk Scoring Map (max 10 pts)

Meaning: expendable net assets $\div$ total assets (balance-sheet strength)

This measure evaluates balance sheet strength — the share of total assets that are financed with equity rather than debt.

It reflects the institution’s long-term solvency and its ability to withstand external shocks without excessive borrowing.

In short: A gauge of how much of the university is owned, not owed.

Status thresholds

- critical < 0.25
- concerning $0.25- < 0.40$
- adequate $0.40- < 0.60$
- excellent ≥ 0.60

Points

Current value (20% → 2 pts): critical +2; concerning +1.5; adequate +0.5

Composite Financial Index (CFI) — Risk Scoring Map (max 10 pts)

This is a summary indicator of overall financial health prepared by the Department of Education. It combines several core ratios (operating results, viability, reserves, and return on net assets) into a single standardized score. CFI provides a quick, directional view of whether financial performance is improving or deteriorating over time.

In short: A composite “vital signs” score for institutional finance. Status thresholds (CFI score)

- < 0.0 severe distress
- 0.0–<1.5 stress
- 1.5–<3.0 adequate/monitor
- ≥ 3.0 strong

Points

- Current level / 3-yr avg if available (60% → 6 pts):
<0.0 +6; <1.5 +4; <3.0 +2; ≥3.0 0
- Long-term change (40% → 4 pts):
decline < -0.8 +4; < -0.4 +2; improving/stable 0
- Peer quartiles are recorded as narrative (informational), not points.
Clamp to 10. (Sector-neutral thresholds.)

Debt to Revenue — Risk Scoring Map

Measures

- Long-term growth in total debt (2010 → 2023)
- Long-term growth in debt-to-operating-revenue ratio
- Sector-aware maximum scoring:
 - Publics: max 8 pts
 - Privates: max 10 pts

Component	Public Max Private Max Interpretation		
Debt Growth % (2010–23)	0–4 pts	0–5 pts	Rising debt load
Debt-to-Revenue Ratio Growth % (2010–23)	0–4 pts	0–5 pts	Declining debt-service capacity
Debt Growth – Thresholds			

Growth %	Public Points (max 4)	Private Points (max 5)
≤ 0% (debt declined)	0	0
0–20% (pub) / 0–15% (priv)	~20% of max	~20% of max
20–40% (pub) / 15–30% (priv)	~40% of max	~40% of max
40–80% (pub) / 30–60% (priv)	~70% of max	~70% of max
> 80% (pub) / > 60% (priv)	max points	max points

Debt-to-Revenue Ratio Growth – Thresholds

Growth %	Public Points (max 4)	Private Points (max 5)
≤ 0% (ratio improves)	0	0
0–8% (pub) / 0–5% (priv)	~20% of max	~20% of max
8–20% (pub) / 5–15% (priv)	~40% of max	~40% of max
20–40% (pub) / 15–30% (priv)	~70% of max	~70%
> 40% (pub) / > 30% (priv)	max points	max points

Total Score → Risk Level

Public Score (0–8) Private Score (0–10) Risk Level

≤25% of max	Low
25–50% of max	Moderate
50–75% of max	High
>75% of max	Critical

Enrollment — Risk Scoring Map (max 18 pts)

This measure tracks student demand and market position over time.

It focuses on the trend (long- and short-term) and the institution's performance relative to peers, not its absolute size.

Declining or underperforming enrollment signals weakening demand and future revenue stress.

In short: A market-demand indicator, not a scale measure.

Components

- Long-term vs peers (10y): 0–5 pts

- Short-term vs peers (5y): 0–3 pts
- Fallback (no peer data): absolute 10y trend 0–4 pts
- Missing long-term data: +3 pts penalty

Peer-relative thresholds (how much worse than peer avg.)

- $\geq 30\%$ worse $\rightarrow +5$ (LT) / $+3$ (ST)
- 15–29% worse $\rightarrow +4$ (LT) / $+2$ (ST)
- 5–14% worse $\rightarrow +3$ (LT) / $+1$ (ST)
- 0–4.9% worse $\rightarrow +2$ (LT only)
- Up to 10% better $\rightarrow +1$ (LT only)
- $\geq 10\%$ better $\rightarrow 0$

Absolute fallback (10y change)

- $\leq -20\% \rightarrow +4$
- -10% to $-19.9\% \rightarrow +3$
- -5% to $-9.9\% \rightarrow +2$
- -0.1% to $-4.9\% \rightarrow +1$
- $\geq 0\% \rightarrow 0$

Institutional Support (Administrative) Expenditure *Share* — Risk Scoring Map (max 6 pts)

(Share of total core operating expenses.)

This measure captures the portion of total spending dedicated to institutional overheads. It looks at relative administrative cost burden, not staffing quality or service effectiveness.

A growing share signals potential inefficiency and erosion of the academic core. It is also a product of declining enrollment and/or net revenue per fte and/or appropriations.

Components

- Peer-relative cost level (0–5 pts)
- Trend (0–1 pt)

Peer-Relative Thresholds (Cost per FTE vs Peer Median)

Cost per FTE Relative to Peers Points

$\leq$ Peer median	0
1–10% higher	+1
10–20% higher	+2

Cost per FTE Relative to Peers Points

20–30% higher	+3
30–40% higher	+4
>40% higher	+5

Trend Component (5-year real-dollar change)

Condition	Points
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Stable or decreasing	0
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Increasing >10%	+1
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Notes

- No sector-aware scoring differences.
- If peer data unavailable → fallback to sector-standard quartile bands.
- Cap at 6 points.

Student–Faculty Ratio — Risk Scoring Map (max 2 pts)

Components (as implemented)

- Current SFR level only → 0–2 pts
- No peer-relative scoring used for points
- No trend points (trend only appears in narrative text)

Absolute cut-points (sector-agnostic; same for public/private)

- < 8:1 → +2 (Very high cost model)
- 8–<12:1 → +1 (Premium cost model)
- 12–<18:1 → +1 (Balanced efficiency)
- 18–<25:1 → +0 (Efficiency focus)
- ≥ 25:1 → +2 (Quality concerns)

Peer rules (for scoring)

- None. The analyzer builds a peer list and shows peer context in findings, but risk points are not peer-relative.

Trend treatment

- Trend is calculated and mentioned in the write-up; it does not change points.

Instructional Expenditure *Share* — Risk Scoring Map (max 6 pts)

(“How much of the operating budget goes to instruction.”)

This measure captures the portion of total spending dedicated to direct instruction — faculty salaries, instructional technology, academic departments, and classroom activities.

A declining share signals a potential erosion of the academic core.

In short: A measure of academic investment intensity.

Components

- Peer-relative percentile / deviation (0–4 pts)
- Trend direction (0–2 pts)

Peer-Relative Thresholds (Share vs. total core spending)

Relative to Peer Median	Points
≥ Peer median + 2+ percentage points	0 (normal / appropriately instructional)
Within ±2 percentage points of peer median	+1
2–5 percentage points <i>below</i> peers	+2
5–8 percentage points below	+3
> 8 percentage points below peers	+4

Trend Component (5-year trend in instructional share)

Direction	Points
Increasing or stable	0
Decreasing 0.5–1.5 pp over 5 yrs	+1
Decreasing >1.5 pp over 5 yrs	+2

Notes

- If peer group < 20 institutions, fallback to absolute share:
 - ≥45% of total expense → 0
 - 40–44.9% → +1
 - 35–39.9% → +2
 - 30–34.9% → +3
 - <30% → +4
- Cap total at 6 points.

Net Income Ratio — Risk Scoring Map (max 10 pts)

Measures: Operating sustainability (annual surplus/deficit) based on:

- Current-year net income ratio
- Recent 3-year rolling average
- Long-term trend (start→end of series)
- Volatility (stability of earnings over time)
- Peer percentile position

Components (weights = implemented in code)

Component	Weight	Raw Points Before Clamping
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Current-year ratio	20%	0–2 pts
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3-year rolling average	40%	0–4 pts
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Trend (2010→2023)	20%	0–2 pts
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Volatility (std deviation)	10%	0–1 pt
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Peer quartile adjustment	10%	0–1 pt
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Total maximum = 10 points (clamped).

Status Thresholds Used in All Components

Net Income Ratio Level	Status	Code	Meaning
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< -5%	critical		Persistent annual operating deficit
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-5% to < 0%	concerning		Near-breakeven / weak surplus
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0% to < 3%	adequate		Small positive operating margin
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≥ 3%	excellent		Strong and sustainable margin
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1. Current-Year Ratio (max ~2 pts)

Status	Points
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critical (<-5%)	+2
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concerning (-5 to <0%)	+1.5
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adequate (0-<3%)	+0.25
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Status	Points
excellent ($\geq 3\%$)	0

2. 3-Year Rolling Average (max ~4 pts)

Status	Points
critical	+4
concerning	+2
adequate	+0.5
excellent	0

3. Trend (oldest year $\rightarrow$ newest) (max 2 pts)

Trend Pattern	Points
Declining by >2 percentage points	+2
Stable (± 2 pts)	+0.5
Improving by >2 pts	0

4. Volatility (standard deviation) (max 1 pt)

Std Dev	Points
> 5.0	+1
> 3.0 to 5.0	+0.5
≤ 3.0	0

5. Peer Percentile Adjustment (max 1 pt)

Peer Percentile Position	Points
Bottom quartile (<25 th percentile)	+1
Below median (25th–49th)	+0.5
$\geq$ median	0

Final Scoring

% of Max Risk Level

< 25%	Low
25–44%	Moderate
45–64%	High
≥ 65%	Critical

Net Tuition per FTE — Risk Scoring Map (max = 6 pts)

Overview

This analyzer evaluates pricing power and revenue sustainability based on:

1. Current net tuition revenue per FTE relative to peers
2. 2010–2023 growth trend

Total max = 6 points

- 4 pts → Current level
- 2 pts → Trend

1. Current Net Tuition Level vs. Peer Average (0–4 pts)

Thresholds vary by sector:

Public Institutions (sector = 1)

% Difference vs Peer Avg Points Meaning

≥ +20% above peers	0	Strong pricing position
+5% to +19.9%	+1	Mild premium
–10% to +4.9%	+2	Near-market / neutral
–25% to –10.1%	+3	Below-market pricing pressure
< –25%	+4	Significant pricing weakness / revenue exposure

Private Institutions (sector = 2)

(Same logic, different threshold anchors)

% Difference vs Peer Avg Points

≥ +15% above peers	0
0% to +14.9% above peers	+1

% Difference vs Peer Avg Points

–15% to –0.1% +2

–30% to –15.1% +3

< –30% +4

2. Tuition Trend, 2010–2023 (% change) (0–2 pts)

2010–2023 Trend Points

> +20% 0 (strong demand or pricing strategy)

+10% to +20% +0.5

0% to +9.9% +1

< 0% (declining) +2

If Trend Data Missing

Condition Points

3. Total Score & Risk Level

max = 6

Total Points Risk Level (as coded)

0 Low

1–2 Moderate

3–4 High

≥5 Critical

4. Peer Comparison Role

- Peer benchmarking directly affects scoring (current-year position)
- Peer comparisons for trend are display-only (no effect on scoring)

Pell Dependency — Risk Scoring Map (max 4 pts)

Measures

- The share of students receiving Pell Grants (proxy for income mix & exposure to federal aid policy)
- Peer-relative standing (percentile among similar institutions)

- Higher Pell % = higher policy-risk in current scoring logic, and greater pressure on retention strategies as means of revenue retention
(*this is not a value judgment about mission*)

Components

Component Points How It Works

Overall Pell Dependency 0–2 pts Based on % of Pell recipients at the institution

Peer Position / Percentile 0–2 pts Based on how Pell % compares to peers in same sector & Carnegie

Sector-Aware Thresholds (from code)

Sector 0 pts (Low Exposure) 1 pt (Moderate Exposure) 2 pts (High Exposure)

Public < 35% Pell 35–50% > 50%

Private < 25% Pell 25–40% > 40%

Peer Comparison Logic

Percentile Position Points Meaning

Bottom quartile (≤ 25 th) +2 High relative dependency vs peers

Below median (26–50th) +1 Moderate

Above median (> 50 th) 0 Low relative risk

Total Score → Risk Level

Total Points (0–4) Level

0 Low

1–2 Moderate

3 High

4 Critical

Primary Reserve Ratio — Risk Scoring Map (max 10 pts)

Meaning: expendable net assets / total expenses (liquidity runway).

This measure assesses liquidity and financial flexibility — how long an institution could operate using expendable reserves if no new revenues came in. It converts expendable net assets into months of operating capacity.

In short: A “cash-on-hand” indicator.

3-yr rolling avg (up to 7 pts)

- $< 15\% \rightarrow +7$
- $15\text{--}<25\% \rightarrow +5$
- $25\text{--}<35\% \rightarrow +3$
- $35\text{--}<50\% \rightarrow +1$
- $\geq 50\% \rightarrow 0$

Trend (up to 3 pts)

- Declining $< -5\%/yr \rightarrow +3$
- Declining -2 to $-5\%/yr \rightarrow +2$
- Minor decline $\rightarrow +1$
- Stable/improving $\rightarrow 0$

Risk level bands (informational): ≥ 7 High; 4–6 Moderate. (Sector-neutral; peers used only for context in report.)

Program Distribution (Portfolio Balance Index) — Risk Scoring Map (max 8 pts)

This measure evaluates the breadth and concentration of academic programs across degree levels and disciplines.

It detects both monoculture risk (too much concentration in one area) and sprawl risk (too many small, under-enrolled programs).

In short: A measure of academic portfolio balance. Metric & Rule of Thumb

- Portfolio Balance Index (PBI) = $z(\text{Top-5 share}) - z(\text{Concentration Stability Index})$
- Score on the worst absolute PBI across award levels; then apply peer-gap add-on.

Base points (by |PBI|)

- $\geq 0.18 \rightarrow +6$
- $0.10\text{--}0.18 \rightarrow +3$
- $< 0.10 \rightarrow +0$

Peer-gap add-on

- $|\text{institution PBI} - \text{peer median PBI}| \geq 0.20 \rightarrow +2$
- Total capped at 8

Sector support

- Works for Public (1), Private (2), Community College (4).

Research Expenditure — Risk Scoring Map (max 6 pts) – not currently implemented

Components

- Current level (share of total spend): 0–6 pts
- Trend since 2010 (total change in %-pts): 0–2 pts
- Inefficiency check (too high a share): +2 pts (included in total; still capped at 6)

Public cut-points (current level)

- >15% → +0
- 8–15% → +1
- 4–8% → +3
- 2–4% → +5
- <1% → +6
- Inefficiency add-on: ≥35% → +2 (cap still 6)

Private cut-points (current level)

- >12% → +0
- 6–12% → +1
- 3–6% → +3
- 1–3% → +5
- <0.5% → +6
- Inefficiency add-on: ≥40% → +2 (cap still 6)

Trend (2010→2023, research share)

- < -2 %-pts → +2
- < 0 to ≥ -2 → +1
- ≥ 0 → +0

Applicability

- Only scored for Carnegie 15–20 (research & master's). Otherwise returns “Not Applicable.”

Research Grants & Contracts vs Research Expenditures — Risk Scoring Map (max 8 pts)

This measure examines the volume and trajectory of externally funded research activity, particularly the share supported by government grants and contracts. It signals both the institution's research competitiveness and its exposure to changes in federal and state funding.

In short: A measure of research vitality and funding dependence.

Components (peer-relative CAGR vs peers, 2010–2023)

- Research Expenditure CAGR gap: 0–3 pts
- Government Grants & Contracts CAGR gap: 0–3 pts
- Gov Grants as % of Research CAGR gap: 0–2 pts

CAGR gap to points (applies to each component)

- Gap ≥ -1 pp (i.e., within 1% of peer CAGR or better) → full points for that component
- Gap ≥ -3 pp and < -1 pp → half of that component's max
- Gap < -3 pp → 0

Applicability & peers

- Research-university filter by Carnegie (defaults to 15/16/17). Uses standardized peer filtering when available; falls back to legacy filtering.

Retention — Risk Scoring Map (max 6 pts)

This retention analyzer is mostly level-based, not peer-based. It assumes retention level itself is the primary performance indicator, and applies a trend penalty only when retention has dropped meaningfully. It does not currently:

- Differentiate by selectivity
- Adjust scoring by student mix (Pell, adult learners, part-time)
- Use peer-relative percentile scoring
- Detect “stability at low levels”

Components (as implemented)

Component	Weight in scoring	Notes
Current retention level	0–4 pts	Sector-aware absolute thresholds (no peer-relative points)
Long-term trend (2010 → 2023)	0–2 pts	Only declines incur points
Cap	6 pts	Hard-coded clamp

Sector-Aware Thresholds (Current-Year Retention Rate)

This analyzer uses different cut-points for Public vs. Private institutions.

Public Institutions

Current Retention Rate	Points	Meaning
> 85%	0	Excellent / no risk
75–85%	2	Good but not elite
65–75%	3	Concerning
< 60%	4	Critical

(Implicitly, 60–65% = 2–3 pts depending on flow in code)

Private Institutions

Current Retention Rate Points Meaning

> 90%	0	Excellent / no risk
80–90%	2	Good but not elite
70–80%	4	Concerning
< 65%	4	Critical

The key difference: Privates are held to a higher baseline expectation.

Trend Penalty (applies to both sectors)

Change in Retention (2010 → 2023) Points

Decline > 8 percentage points +2

All other cases (stable or improving) 0

No nuanced trending — it is binary:

- If decline is large, add 2
- Otherwise 0

Peer Context

Peer benchmarking is displayed in the narrative, but:

- No peer-relative scoring is applied
- Retention risk points do not change based on peer averages or percentile

Peer analysis is used only for:

- Rankings
- Narrative comparison lines
- Report interpretation language

Risk Level Mapping

Total Points Risk Level

0–2	Low
3–5	Moderate
6	High

Return on Net Assets (RONA) — Risk Scoring Map (max 10 pts)

This measure assesses the change in total net assets over time, capturing the relationship between surplus generation and asset growth. It shows whether the institution is building or depleting its net worth.

In short: A profitability trend measure for the balance sheet.

Status thresholds

- critical < -5%
- concerning -5% to < 0%
- adequate 0% to < 3%
- excellent $\geq$ 3%

Points (mirrors Net Income structure)

- Current value (2 pts): critical +2; concerning +1.5; adequate +0.5
- 3-yr rolling avg (4 pts): critical +4; concerning +3; adequate +1
- Trend (2 pts): declining +2; stable +0.5
- Volatility (1 pt): >5% +1; 3–5% +0.5
- Peer percentile (1 pt): bottom quartile +1; < median +0.5
Clamp to 10. (Sector-neutral thresholds.)

Salaries & Benefits per FTE — Risk Scoring Map (max 6 pts)

This measure tracks personnel cost intensity — how much an institution spends per student FTE on salaries and benefits. It reflects both compensation competitiveness and cost discipline.

In short: A measure of human-capital cost structure.

Components

- Peer-relative compensation cost per FTE (0–5 pts)
- 5-year trend in real-dollar cost (0–1 pt)

Peer-Relative Thresholds (Cost per FTE vs. peer median)

(Same for publics, privates, and CCs — sectors only change peer set)

Cost per FTE relative to peer median Points

$\leq$ Peer median	0
1–10% higher	+1
10–20% higher	+2
20–30% higher	+3

Cost per FTE relative to peer median Points

30–40% higher +4

>40% higher +5

Trend Component (inflation-adjusted 5-year change)

5-year change Points

Stable or decreasing in real dollars 0

Increasing >10% in real dollars +1

Quick Interpretation Guide (for report output)

Result Meaning

0–1 pts Compensation levels are aligned with scale and peer set

2–3 pts Compensation intensity is elevated relative to peers; cost structure may be less flexible

4–5 pts Compensation model is structurally expensive relative to peer institutions

6 pts High-cost labor model + rising compensation; cost rigidity likely affects strategic agility

This is purely structural, not evaluative:

It says “*the cost of labor is high relative to enrollment and peers*”, not “*staff are overpaid*”.

Student Services Expenditure Share — Risk Scoring Map (max 6 pts)

(“How much of the operating budget is allocated to student support.”)

This measure assesses the share of spending devoted to student-facing support, such as advising, counseling, career services, and student life. Changes over time indicate whether institutions are maintaining investment in student success infrastructure.

In short: A measure of student-support investment.

Components

- Peer-relative expenditure share (0–4 pts)
- Trend direction (0–2 pts)

Peer-Relative Thresholds

(Share of total core expenses vs peer median)

Relative Position	Points
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Within ± 2 percentage points of peers	0
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2–4 pp below peers	+1
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Relative Position	Points
4–6 pp below	+2
6–8 pp below	+3
>8 pp below peers	+4

Trend Component (5-year change in share)

Condition	Points
Stable or increasing	0
Decreasing >1.0 pp over 5 yrs	+1
Decreasing >2.0 pp over 5 yrs	+2

Fallback (if peer set < 20 institutions)

Student Services Share Points

≥12% of total expense	0
10–11.9%	+1
8–9.9%	+2
6–7.9%	+3
<6%	+4

Notes

- No sector-specific scoring difference.
- Cap total = 6 pts.
- This analyzer captures allocation, not effectiveness.

Tuition Dependency — Risk Scoring Map (Public max 8 pts; Private max 18 pts)

Meaning: tuition as % of core revenues.

This measure captures the proportion of total operating revenue derived from student tuition and fees. It reflects the institution's exposure to enrollment volatility and the extent to which its financial model depends on maintaining tuition revenue. High tuition dependency means the institution is more vulnerable to shifts in demand, discounting, or market competition; low dependency generally signals more diversified revenue streams.

In short: A measure of revenue concentration and exposure to enrollment risk.

Public thresholds → points

- <45% minimal → 0

- 45–<55% low → ~+2 (1/4 of 8)
- 55–<65% moderate → ~+3 (3/8 of 8)
- 65–<75% high → ~+5 (5/8 of 8)
- ≥75% very high → +8

Private thresholds → points

- <46% minimal → 0
- 46–<60% low → 0
- 60–<75% moderate → 0
- 75–<85% high → +4
- ≥85% very high → +8

(Private is intentionally stricter near the top end; scoring jumps in the high/very-high bands. Peer benchmarking is included in reporting; points are determined by these bands.)

Unrestricted Net Assets per FTE (UNA/FTE) — Risk Scoring Map (max 4 pts)

This measure gauges financial flexibility per student — how much unrestricted wealth an institution has to absorb shocks or invest strategically. It's a key indicator of cushion and capacity.

In short: A per-student financial safety net.

Components

- UNA per FTE level (0–4 pts)

Cut-Points (all sectors — dollar values normalized in the tool to 2023 baseline range)

UNA / FTE	Points
≥ \$15,000	0
\$10,000–14,999	+1
\$5,000–9,999	+2
\$2,500–4,999	+3
< \$2,500	+4

Notes

- No trend or peer adjustments.
- If UNA < 0 → automatically +4.

Viability Ratio — Risk Scoring Map (max 8 pts)

Meaning: (expendable net assets ÷ long-term debt)

This measure evaluates the institution's capacity to cover long-term debt with expendable resources. A high ratio signals manageable leverage; a low ratio means debt obligations could overwhelm available assets.

In short: A measure of debt sustainability.

3-yr rolling avg (50% of max → 4 pts)

- Public: <0.10 → +4; <0.20 → +3; <0.30 → +2; <0.40 → +1; ≥0.40 → 0
- Private: <0.20 → +4; <0.30 → +3; <0.40 → +2; <0.50 → +1; ≥0.50 → 0

Peer position (25% of max → 2 pts)

Bottom quartile +2; below median +1; ≥ median 0

Current-year distress (25% of max → 2 pts)

- Public: <0.05 → +2; <0.10 → +1.3; <0.15 → +0.7
- Private: <0.10 → +2; <0.20 → +1.3; <0.30 → +0.7
(Values are rounded from fractions of the 2-pt bucket.)

Annual operating margin and federal policy for information only – no risk points