

Public Release of the New PPP–SIRRIPA Calculator

An immediate, transparent and freely accessible equity-valuation calculation tool

Now available The new PPP–SIRRIPA Calculator is being made available to the public as a practical calculation tool. It allows users to enter their own assumptions and obtain immediate, reproducible results.

Access the calculator: <https://ppp-sirripa-ai.samrainsysrp.chatgpt.site>

What the calculator provides

The calculator converts explicit assumptions about valuation, earnings growth and risk into a coherent set of prospective indicators:

- PPP — Potential Payback Period, expressed in years.
- SIRR — the annualized earnings-power return implied by PPP.
- SPARR — the annualized return attributable to prospective price repricing.
- SIRRIPA — the framework's total prospective return.
- SRP — the Stock Risk Premium above the entered risk-free rate.

Two earnings situations

- Positive EPS, when current earnings per share are positive.
- Volatile earnings or transition, when earnings are negative, zero, recovering or highly unstable. Users select $k = 2$ or $k = 3$ according to the year in which normalized positive EPS is reached.

Transparent inputs and readable calculations

The tool requires manual inputs. It does not retrieve market data automatically. For a positive-EPS company, the price/earnings ratio is calculated from share price and earnings per share:

$$P/E = \frac{\text{Share price}}{\text{Earnings per share}}$$

The calculator displays this ratio automatically when current EPS is positive.

The initial earnings-growth rate g is assumed to decline linearly toward the discount rate r . The calculator uses the following arithmetic-average approximation:

$$\bar{g} = \frac{g + r}{2}$$

$\bar{g}$ represents the average rate used to approximate the decline from g to r .

The discount rate is calculated automatically from the risk-free rate, beta and the market risk premium using CAPM:

$$r = R_f + \beta \times \text{MRP}$$

R_f = risk-free rate; β = beta; MRP = market risk premium.

The Stock Internal Rate of Return annualizes the PPP horizon:

$$\text{SIRR} = 2^{1/\text{PPP}} - 1$$

SIRR is expressed as an annual percentage.

The Stock Risk Premium compares SIRRIPA with the risk-free rate:

$$\text{SRP} = \text{SIRRIPA} - R_f$$

A positive SRP indicates prospective compensation above the entered risk-free rate.

Designed for immediate verification

Alongside the principal results, the public calculator provides:

- An assisted reading that summarizes the result in standardized language.
- A SIRRIPA sensitivity table showing the effect of changes in growth g and discount rate r around the central scenario.
- A method and audit trail displaying key intermediate assumptions and outputs.

Deterministic operation The same valid inputs produce the same numerical results and the same rule-based interpretation. The present public version is a deterministic calculation engine, not yet a conversational AI assistant.

Purpose of this public release

This release is intended to make PPP–SIRRIPA calculations directly accessible to investors, students, academics and institutions. It can already serve as a standalone replacement for the existing manual calculation page, while offering a clearer interface, CAPM-based discount-rate entry, sensitivity analysis and an auditable calculation trail.

The next stage will be to strengthen independent mathematical testing and user feedback, then progressively add the functions of a specialized AI assistant: input checking, contextual explanations, methodological questions and scenario construction.

Important scope and precautions

- Users remain responsible for the accuracy, relevance and date of all inputs.
- The outputs are estimates produced from the stated assumptions and methodological approximations.
- The calculator does not provide individualized investment advice or a recommendation to buy, hold or sell any security.
- The central result should always be read together with the sensitivity analysis and audit trail.
- Independent review is appropriate before material investment, academic or institutional use.

Accompanying instructions A separate User Instructions document explains each input, calculation, result, sensitivity table and verification step in detail.

Rainsy Sam

August 2026

Instructions for Using the PPP–SIRRIPA Calculator

Manual inputs • deterministic calculations • transparent assumptions

Purpose This calculator provides immediate PPP–SIRRIPA estimates from assumptions entered by the user. It is a calculation aid, not individualized investment advice.

Calculator: <https://ppp-sirripa-ai.samrainsysrp.chatgpt.site>

Quick start

- Choose the earnings assumption that matches the company.
- Enter the requested market, earnings, growth and risk assumptions.
- Select Analyze now, then review the results, sensitivity table and audit trail together.

1. Select the language

Use the language selector to display the calculator in English or French. The calculation method is unchanged.

2. Select the earnings situation

Choose the assumption that best reflects the available earnings data:

- Positive EPS — use when current earnings per share are positive.
- Volatile earnings or transition — use when earnings are negative, zero, recovering or highly unstable.
Select $k = 2$ when normalized positive EPS is available in Year 2, or $k = 3$ when it is available in Year 3.

Important In the volatile-earnings mode, Year k is the normalization year. The EPS entered for that year must be positive.

Enter the assumptions

3. Identify the company or index

Enter a name for the case being evaluated, for example Company X. This label is used only to identify the analysis.

4. Enter the price and earnings data

For Positive EPS, enter the current share price and current earnings per share (EPS). The calculator displays the price/earnings ratio automatically:

$$P/E = \frac{\text{Share price}}{\text{Earnings per share}}$$

P/E is meaningful here only when current EPS is positive.

For Volatile earnings or transition, enter the current price plus EPS for Year 0 and each year through the selected normalization year. Use negative values for losses and 0 for break-even earnings.

5. Enter the initial EPS growth rate

Enter g as an annual percentage. Under the calculator's simplified assumption, growth declines linearly from the initial rate g toward the discount rate r . The method uses the arithmetic average growth rate:

$$\bar{g} = \frac{g + r}{2}$$

$\bar{g}$ is the average rate used to approximate the linear decline from g to r .

Input discipline Use a supportable forward-looking growth assumption. A precise-looking output cannot compensate for an unrealistic input.

6. Enter the discount-rate components

Enter the risk-free rate R_f , beta β and the market risk premium MRP. The calculator derives r using the Capital Asset Pricing Model (CAPM):

$$r = R_f + \beta \times \text{MRP}$$

r = CAPM discount rate; R_f = risk-free rate; β = beta; MRP = market risk premium.

- Beta accepts values from 0 to 10.
- MRP accepts values from 0% to 10%.
- Check that all rates are entered as percentages in the displayed fields.

Run and read the analysis

7. Select Analyze now

After editing the assumptions, select Analyze now to refresh every output. Read the principal indicators as follows:

Indicator	Meaning
PPP	Potential Payback Period: the estimated valuation horizon, expressed in years.
SIRR	Stock Internal Rate of Return: the annualized earnings-power return implied by PPP.
SPARR	Stock Price Appreciation Rate of Return: the annualized repricing component.
SIRRIPA	The total prospective return reported by the framework.
SRP	Stock Risk Premium: SIRRIPA minus the risk-free rate.

The calculator annualizes the PPP horizon into SIRR using:

$$\text{SIRR} = 2^{1/\text{PPP}} - 1$$

SIRR is shown as an annual percentage.

The stock risk premium is calculated as:

$$\text{SRP} = \text{SIRRIPA} - R_f$$

A positive SRP means SIRRIPA exceeds the entered risk-free rate.

8. Read the assisted interpretation

The assisted-reading panel converts the calculated figures into a short standardized explanation. Its wording is deterministic: the same valid inputs produce the same calculations and the same rule-based interpretation.

Do not read one figure in isolation Consider PPP, SIRR, SPARR, SIRRIPA and SRP together, then test whether the conclusion survives reasonable changes in the assumptions.

Test and verify the result

9. Review SIRRIPA sensitivity

The sensitivity table varies growth g across the columns and discount rate r across the rows around the central scenario. The highlighted cell is the current central case.

- Moving right generally tests a higher growth assumption.
- Moving downward generally tests a higher discount rate.
- A result that changes sharply with small input changes should be treated as fragile.

10. Review the method and audit trail

Use the audit panel to verify the intermediate assumptions and outputs used by the engine, including the selected normalization year, calculated P/E where applicable, CAPM discount rate, average growth rate, estimated terminal EPS, exit P/E and discounted terminal price.

Before relying on an output

- ☐ Confirm that price and EPS use compatible per-share units and the same currency.
- ☐ Check that beta, the risk-free rate and MRP correspond to the intended market and horizon.
- ☐ For volatile earnings, confirm that k and the sequence of EPS values describe the intended transition.
- ☐ Compare the central result with the sensitivity range rather than relying only on one estimate.
- ☐ Retain a dated record of the inputs if the calculation will be cited or shared.

Important precautions

- The calculator does not retrieve or validate live financial data. Users remain responsible for the accuracy, timing and source of every input.
- Outputs are estimates produced by the PPP–SIRRIPA methodology and its stated approximations; they are not forecasts, guarantees or recommendations to buy, hold or sell a security.
- Extreme or internally inconsistent assumptions may produce results that are mathematically computable but economically uninformative.
- Independent professional review is appropriate before using the results for material investment, academic or institutional decisions.

Methodological scope The public calculator is presently a deterministic calculation engine. Future versions may add conversational explanations, input checks, methodological questions and scenario construction without changing the need for transparent assumptions and verifiable calculations.

Rainsy Sam

Originator and Developer of the PPP–SIRRIPA Framework