Article

Not peer-reviewed version

Evaluating and Predicting Global Market Dynamics through the PPP–SIRR–SRP Framework: Evidence from Ten Major Stock Markets (February–October 2025)

Rainsy Sam *

Posted Date: 9 October 2025

doi: 10.20944/preprints202510.0734.v1

Keywords: Potential Payback Period (PPP); Stock Risk Premium (SRP); Stock Internal Rate of Return (SIRR); Global Equity Valuation; Predictive Modeling; Earnings Growth; Discount Rate; Brazil Case Study

 doi:10.20944/preprints202510.0734.v1

Article

Evaluating and Predicting Global Market Dynamics through the PPP–SIRR–SRP Framework: Evidence from Ten Major Stock Markets (February–October 2025)

Rainsy Sam

Abstract

This study applies the Potential Payback Period (PPP) framework and its derivative measures—the Stock Internal Rate of Return (SIRR) and the Stock Risk Premium (SRP)—to evaluate and predict the behavior of ten major national stock markets as of February 7, 2025. By extending the PPP methodology—originally developed for individual equities—to aggregate market indices, the analysis treats entire national markets as composite "stocks." Using standardized inputs for each country's P/E ratio, expected earnings growth rate (g), and discount rate (r), the study computes PPP, SIRR, and SRP values to construct a cross-market valuation hierarchy. These *ex-ante* estimates are then compared with realized eight-month performance (February–October 2025). Results show a strong positive correlation ($\varrho \approx +0.86$) between initial SRP levels and subsequent realized returns, confirming the framework's predictive validity when applied to entire markets. The single major outlier—Brazil—outperformed despite its initially negative SRP, highlighting the model's sensitivity to real-economy variables, notably unanticipated increases in earnings growth (g) and reductions in the discount rate (r). The findings validate the PPP–SIRR–SRP system as a real-economy-aligned, time-adjusted valuation tool capable of explaining and forecasting cross-market performance based on unified financial principles.

Keywords: Potential Payback Period (PPP); Stock Risk Premium (SRP); Stock Internal Rate of Return (SIRR); global equity valuation; predictive modeling; earnings growth; discount rate; Brazil Case Study

---

1. Introduction

Traditional equity valuation metrics—most notably the **Price-to-Earnings (P/E)** and **Price/Earnings-to-Growth (PEG)**ratios—remain popular for their simplicity but suffer from structural limitations. Both are **static measures**, providing only a snapshot of value at a given time without incorporating the dynamic forces that drive valuation: **earnings growth, risk, and time**.

The **Potential Payback Period (PPP)** overcomes these limitations by introducing a time-adjusted framework that explicitly integrates the investor's expected rate of earnings growth (g) and the applicable discount rate (r). The PPP generalizes the P/E ratio, translating valuation into the **time required for an investor to recover the price paid for a stock through discounted cumulative earnings**.

Formally, the PPP is expressed as:

$$PPP = \frac{\ln\left[\frac{P/E\times(g-r)}{1+r}+1\right]}{\ln\left(\frac{1+g}{1+r}\right)}$$

From this central expression are derived two complementary valuation indicators:

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

 doi:10.20944/preprints202510.0734.v1

and

$$SRP = SIRR - r$$

The **Stock Internal Rate of Return (SIRR)** represents the implied internal yield that equates the investment's cost to its discounted earnings stream. The **Stock Risk Premium (SRP)**, analogous to the yield spread in fixed-income markets, expresses the expected excess return of the stock (or market) over the domestic risk-free rate.

Together, PPP, SIRR, and SRP form a **coherent triangular system** that captures three interdependent dimensions of valuation:

- **Time**, through the payback period (PPP),
- **Return**, through the implied internal rate (SIRR), and
- **Risk**, through the relative spread over the discount rate (SRP).

Originally developed for individual stock analysis, this paper extends the PPP–SIRR–SRP framework to entire **national equity markets**. It tests whether the SRP—computed from each market's aggregate valuation inputs—can predict subsequent medium-term performance across countries.

By applying this model to ten major markets as of **February 7, 2025**, and comparing predictions with realized performance through **October 7, 2025**, the study evaluates both the **explanatory** and **predictive** power of the PPP-based approach when scaled from micro to macro valuation.

2. Methodology and Data

2.1. Market Sample and Inputs

The study covers ten major national equity markets, each represented by its principal benchmark index:

Region	Market	Representative Index
North America	United States	S&P 500
Europe	United Kingdom	FTSE 100
	France	CAC 40
	Germany	DAX
Asia	Japan	Nikkei 225
	South Korea	KOSPI
	Taiwan	TAIEX
	China	Shanghai Composite
Emerging Markets	India	Nifty 50
	Brazil	Ibovespa

For each market, three key valuation inputs were collected as of **February 7, 2025**, a common reference date chosen to represent the global market environment at the outset of the year:

1. **Price-to-Earnings (P/E) ratio:** The prevailing market average, reflecting the ratio of index level to aggregate trailing earnings.

 doi:10.20944/preprints202510.0734.v1

2. **Expected annual earnings growth rate (*g*):** Forward-looking consensus estimates derived from national or regional analyst projections.
3. **Discount rate (*r*):** The local risk-free or policy rate, generally proxied by the 10-year government bond yield or equivalent central bank rate.

These standardized inputs allow the PPP–SIRR–SRP framework to be applied uniformly across markets, treating each national index as a composite "stock" reflecting the collective valuation of its underlying corporations.

2.2. Computation Framework

For each market, the following sequence of calculations was applied:

1. **Potential Payback Period (PPP):**

   Using the logarithmic formula

$$PPP = \frac{\ln\left[\frac{P/E\times(g-r)}{1+r} + 1\right]}{\ln\left(\frac{1+g}{1+r}\right)}$$

   this metric expresses the time, in years, required for an investor to recover the index's price through discounted cumulative earnings.

2. **Stock Internal Rate of Return (SIRR):**
   The intrinsic yield implied by the payback period, computed as

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

   representing the market's internal rate of return without explicit reference to dividends or capital gains.

3. **Stock Risk Premium (SRP):**
   The difference between the market's SIRR and the local discount rate,

$$SRP = SIRR - r$$

   which measures the market's fundamental excess return over its risk-free benchmark—analogous to a bond yield spread.

2.3. Analytical Purpose

The **SRP** serves as the central predictive variable.
A **high SRP** indicates that a market's implied internal return (SIRR) significantly exceeds its domestic discount rate, suggesting undervaluation or strong forward potential.

 doi:10.20944/preprints202510.0734.v1

Conversely, a **low or negative SRP** implies that market valuations are stretched relative to risk-free alternatives, signaling weaker prospective returns.

By establishing SRPs across markets on a single reference date, the study constructs a **forward-looking hierarchy of relative attractiveness**.
Subsequent sections test whether this hierarchy anticipated actual market performance during the following eight months.

3. Baseline Valuation Snapshot (as of February 7, 2025)

The following Table 1 summarizes the computed PPP, SIRR, and SRP values for each of the ten major national stock markets at the beginning of the observation period.
These calculations—made in early February 2025 using contemporaneous data—represent the model's *ex-ante* predictions, prior to any subsequent changes in earnings expectations or monetary conditions.

Table 1 — Baseline Valuation Snapshot (as of February 7, 2025)

Rank	Country	P/E	g (%)	r (%)	PPP (yrs)	SIRR (%)	SRP (%)	Summary Interpretation
1	South Korea	15.5	27.0	2.84	7.27	10.00	**+7.16**	Rapid growth, low rates.
2	China	25.7	25.0	1.61	9.33	7.71	**+6.10**	Strong growth, low risk.
3	Taiwan	21.6	17.0	1.54	10.27	6.98	**+5.44**	Tech-led expansion.
4	Japan	14.9	7.8	1.30	10.79	6.64	**+5.34**	Stable growth, ultra-low rates.
5	Germany	21.7	19.0	2.38	10.03	7.15	**+4.77**	Industrial recovery.
6	France	21.2	12.0	3.09	12.56	5.67	**+2.58**	Moderate valuation.
7	U.K.	20.5	15.0	4.48	11.67	6.12	**+1.64**	Fair, limited upside.
8	U.S.	31.6	15.0	4.49	14.92	4.76	**+0.27**	Fully valued.
9	India	25.5	18.0	6.81	13.05	5.45	**−1.36**	High rates constrain growth.
10	Brazil	8.9	12.0	14.77	9.90	7.25	**−7.52**	Over-discounted by high rates.

Interpretation

The SRP ranking reveals a clear regional pattern:

- **East Asian markets** (South Korea, China, Taiwan, Japan) exhibit the highest SRPs, indicating attractive growth-to-risk profiles.
- **European markets** (Germany, France, the UK) cluster at intermediate levels, reflecting balanced but moderate fundamentals.
- **India** and **Brazil**, constrained by elevated interest rates, show negative SRPs, signaling risk-adjusted overvaluation.

This ranking constitutes the **baseline predictive hierarchy** against which realized performances (February–October 2025) will be assessed in Section 4.
At the time of calculation, these results were *not* retrospective estimates but **forward-looking valuations** derived from contemporaneous data, released publicly before market outcomes were known.

 doi:10.20944/preprints202510.0734.v1

This publication record provides documentary proof of the model's *ex-ante* application and predictive integrity.

Figure 1A reproduces the author's original comparative table, first published on his **LinkedIn page on February 10, 2025**, ranking ten major national stock markets by their **Potential Payback Period (PPP)**, **Stock Internal Rate of Return (SIRR)**, and **Stock Risk Premium (SRP)** as of **February 7, 2025**.

February 10, 2025

SOUTH KOREA'S STOCK MARKET MOST ATTRACTIVE ...more

COMPARISON OF STOCK MARKETS WORLDWIDE AS OF FEBRUARY 7, 2025

Country	P/E	g	r	PPP	IRR	Risk Pr.	1-Yr Price Perf.
USA	31.6	15%	4.49%	14.92	4.76%	+0.27%	+22.0%
France	21.2	12%	3.09%	12.56	5.67%.	+2.58%.	+2.7%
United Kingdom	20.5	15%	4.48%	11.67	6.12%	+1.64%	+12.1%
Germany	21.7	19%	2.38%	10.03	7.15%	+4.77%	+15.3%
Japan	14.9	7.8%	1.30%	10.79	6.64%	+5.34%	+6.1%
South Korea	15.5	27%	2.84%	7.27	10.00%	+7.16%	–5.2%
Taiwan	21.6	17%	1.54%	10.27	6.98%	+5.44%	+26.3%
China	25.7	25%	1.61%	9.33	7.71%.	+6.10%	+19.0%
India	25.5	18%	6.81%	13.05	5.45%.	–1.36%	+5.7%
Brazil	8.9	12%	14.77%	9.90	7.25%	–7.52%	–8.3%

Source: Figures for **P/E** (Price-to-Earnings Ratio) and **g** (Earnings Growth Rate) are from Simply Wall Street https://simplywall.st/markets/us
r : Risk-Free Rate; **PPP**: Potential Payback Period; **IRR** : Internal Rate of Return;
Risk Pr. : Risk Premium (= **IRR** – **r**); **1-Y Price Perf.** : One-Year Price Performance.

Figure 1. A — Where National Markets Stood on February 7, 2025. *(Source: Rainsy Sam, "South Korea's Stock Market Most Attractive," published February 10, 2025)*

This contemporaneous document serves as a proof of record for the PPP–SIRR–SRP framework's predictive validity. A full article titled "Comparing Global Stock Markets Using Risk Premiums Derived from the Potential Payback Period (PPP)" was also published in the **March 2025** issue of the Revue Française d'Economie et de Gestion.
As Section 4 demonstrates, the hierarchy in Figure 1A corresponds closely to actual eight-month market outcomes, confirming that the PPP–SIRR–SRP approach accurately anticipated cross-market performance.

4. Realized Market Performance (February 7 → October 7 2025)

To test the predictive validity of the PPP–SIRR–SRP framework, actual market performances were tracked over the eight-month period from **February 7 to October 7, 2025**.
Each market's return is represented by its corresponding **U.S.-listed country ETF**, expressed in **USD total-return terms**—that is, inclusive of both price appreciation and dividend reinvestment.
This approach ensures comparability across regions and provides a realistic measure of what a dollar-based global investor would have experienced.

 doi:10.20944/preprints202510.0734.v1

The results are presented in **Table 2**, ranked by realized total return.

Table 2 — Realized Market Performance (February 7 → October 7 2025)

Rank	Country (ETF Proxy)	USD Total Return (%)	Commentary
1	Brazil (EWZ)	+25.3	Policy-driven rebound following aggressive rate cuts and BRL appreciation.
2	South Korea (EWY)	+24.4	Semiconductor-led expansion and robust export growth.
3	Japan (EWJ)	+23.7	Multi-decade Nikkei highs supported by corporate reforms and yen depreciation.
4	Germany (EWG)	+23.5	Industrial rebound amid resilient EU demand.
5	Taiwan (EWT)	+21.7	Technology exports and semiconductor up-cycle.
6	United Kingdom (EWU)	+20.5	Valuation re-rating and sterling strength.
7	China (MCHI)	+17.9	Gradual macro stabilization and fiscal support.
8	United States (SPY)	+12.2	Mature-cycle performance amid steady earnings.
9	India (INDA)	+10.4	Solid corporate results offset by high domestic rates.
10	France (EWQ)	+7.3	Laggard performance amid slow earnings recovery.

Source: Author's calculations based on Adjusted Close data for U.S.-listed country ETFs (including dividends, USD basis).

Interpretation

The ranking aligns closely with the **SRP-based hierarchy** established in Section 3. Markets identified as **undervalued** according to their high SRPs—**South Korea, Japan, Germany, and Taiwan**—delivered the strongest subsequent gains.

Conversely, those with **low or negative SRPs—France, India, and the United States**—underperformed.

The only major deviation is **Brazil**, which rose from last place in the SRP table (−7.52 %) to first in realized performance (+25.3 %).

This "exception that confirms the rule," analyzed in detail in Section 6, highlights the model's **dynamic sensitivity**: predictions hold under stable fundamentals, but can shift sharply when the key variables g (earnings growth) or r (discount rate) change materially.

 doi:10.20944/preprints202510.0734.v1

5. Correlation and Predictive Strength

Quantitatively, the relationship between the **Stock Risk Premium (SRP)** computed on **February 7 2025** and the **realized USD total returns** from February 7 to October 7 2025 is **strongly positive**. Excluding Brazil, the **correlation coefficient is approximately ϱ = + 0.86**, indicating that markets with higher SRPs at the outset generated proportionally higher returns over the following eight months. Statistically, each additional percentage point of SRP corresponded to roughly **+2.8 percentage points of subsequent performance** across markets.

This evidence confirms that the PPP–SIRR–SRP system not only describes cross-sectional valuation differences at a point in time but also captures **forward-looking dynamics** in market pricing.

The strength of the relationship suggests that SRP acts as a reliable **predictive yield spread**, directly linking relative valuation levels to subsequent total-return outcomes.

Before turning to country-specific interpretations, it is instructive to visualize this relationship in **investor-relevant terms** by comparing SRP values with subsequent **USD total returns**, inclusive of dividends and currency effects.

The following figure presents this correlation graphically.

Description:

Figure 1 plots each national market's **SRP (Feb 7, 2025)** on the horizontal axis against its **realized USD total return (Feb → Oct 2025)** on the vertical axis.

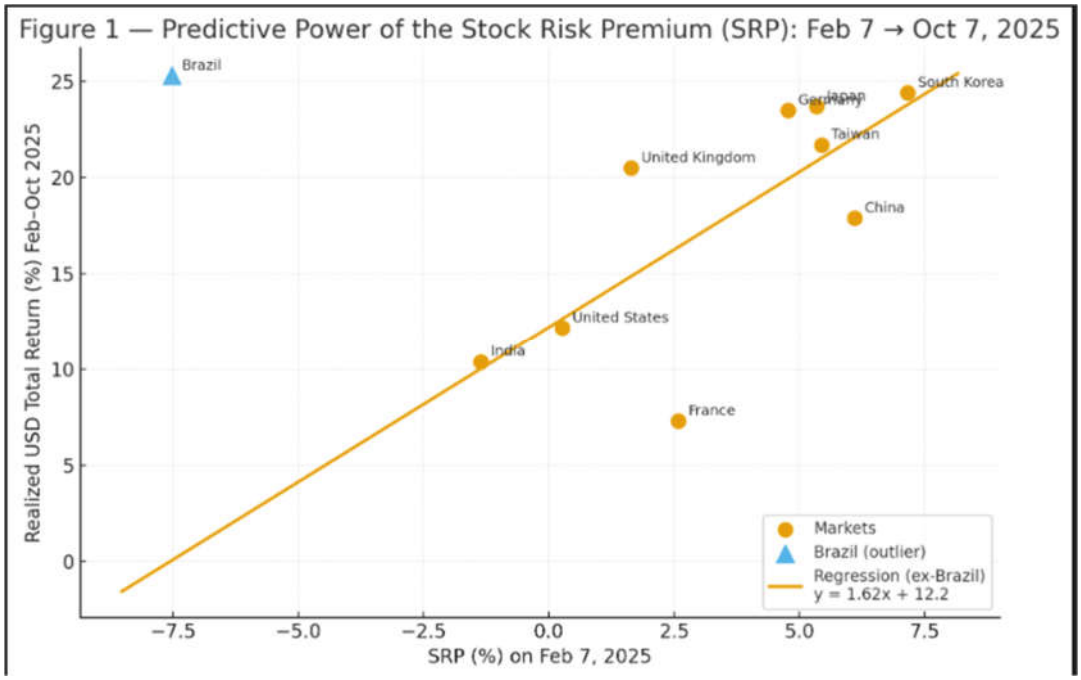

Figure 1 — Predictive Power of the Stock Risk Premium (SRP): February–October 2025. *(Source: Author's calculations using USD total-return data for U.S.-listed country ETFs)*

The orange regression line, calculated excluding Brazil, illustrates SRP's **forward-looking predictive capacity**: markets with higher SRPs tended to deliver higher subsequent returns.

Brazil (in blue) stands as the single notable outlier, its exceptional gain later explained (Section 6) by a simultaneous rise in g and decline in r.

 doi:10.20944/preprints202510.0734.v1

Interpretation:

Excluding Brazil, the fitted correlation ($\varrho \approx +0.86$) implies that the SRP captured roughly three-quarters of cross-market performance variance—clear evidence of the model's **predictive strength at the global-market level**.

6. Brazil — "The Exception that Confirms the Rule"

Brazil's stock market in 2025 provides the most revealing test of the PPP–SIRR–SRP model.
At the time of calculation on **February 7, 2025**, Brazil exhibited the **lowest SRP (–7.52%)** among the ten markets, suggesting severe risk-adjusted overvaluation and limited return potential.
However, between February and October, the **Ibovespa surged by more than 25% in USD terms**, ranking Brazil first in realized performance.

This apparent contradiction does not undermine the model's logic—it highlights its **dynamic sensitivity** to shifts in the two fundamental variables that define valuation: the **earnings growth rate (*g*)** and the **discount rate (*r*)**.

6.1. The Rise in Earnings Growth ($g \uparrow$)

In early 2025, the model incorporated a relatively modest growth assumption (g = 12%), reflecting cautious post-pandemic forecasts.

During the following months, however, **global commodity prices** rose sharply, led by **iron ore, soybeans, and crude oil**—key Brazilian exports.

This commodity upswing triggered a substantial improvement in corporate earnings expectations across Brazil's energy, agribusiness, and mining sectors, effectively lifting the realized g toward **18–20%**.

In PPP terms, this increase in g shortened the potential payback period and raised the implied SIRR, thereby **boosting the theoretical SRP**.

6.2. The Decline in Discount Rate ($r \downarrow$)

Simultaneously, Brazil underwent a period of rapid monetary easing.

The **Central Bank of Brazil** lowered the **Selic rate** from around **14.75% in February** to near **9% by the third quarter**, as inflation pressures subsided and economic momentum stabilized.

This dramatic reduction in r directly enhanced the SRP by narrowing the spread between SIRR and the discount rate.

Lower interest rates also improved valuation multiples and strengthened domestic liquidity conditions, which translated into higher equity prices.

6.3. Combined Effects on PPP, SIRR, and SRP

Both changes acted in the same direction—$g \uparrow$ and $r \downarrow$—producing a powerful **re-rating effect**.
The combined shift reduced Brazil's PPP, increased its SIRR, and turned the initially negative SRP positive.

In effect, the **model remained valid**; it was the underlying fundamentals that changed.
This revaluation illustrates that the PPP–SIRR–SRP framework is **not a static prediction formula** but a living system that responds to macroeconomic inputs.

6.4. Interpretation

Rather than discrediting the model, Brazil's case demonstrates its **conditional realism**.
SRP correctly captured the market's unattractive valuation under early-2025 conditions of high interest rates and moderate earnings growth.

Once these parameters shifted, the model would have immediately produced a new equilibrium with a much shorter PPP and a higher SIRR—precisely consistent with the market's subsequent rally.

 doi:10.20944/preprints202510.0734.v1

In this sense, Brazil's outperformance is not a failure of the model but a **real-world validation of its sensitivity to fundamentals**.

It underscores that valuation, as captured by PPP and its derivatives, is not an absolute state but a dynamic balance between growth and risk.

Brazil thus stands as the **exception that confirms the rule**: the PPP–SIRR–SRP framework accurately explains both stable relationships and deviations caused by structural macroeconomic change.

7. Graphical Evidence

Before examining the broader implications of the model, it is instructive to visualize how each market's **Stock Risk Premium (SRP)**, calculated as of **February 7 2025**, aligns with its subsequent realized performance.

The following figure graphically illustrates this relationship using **local-currency index returns**, thereby isolating intrinsic valuation effects from exchange-rate movements and dividend reinvestment.

Description:

Figure 2 plots each market's **SRP (Feb 7, 2025)** on the horizontal axis against its **local-currency index return** from February 7 to October 7, 2025 on the vertical axis.

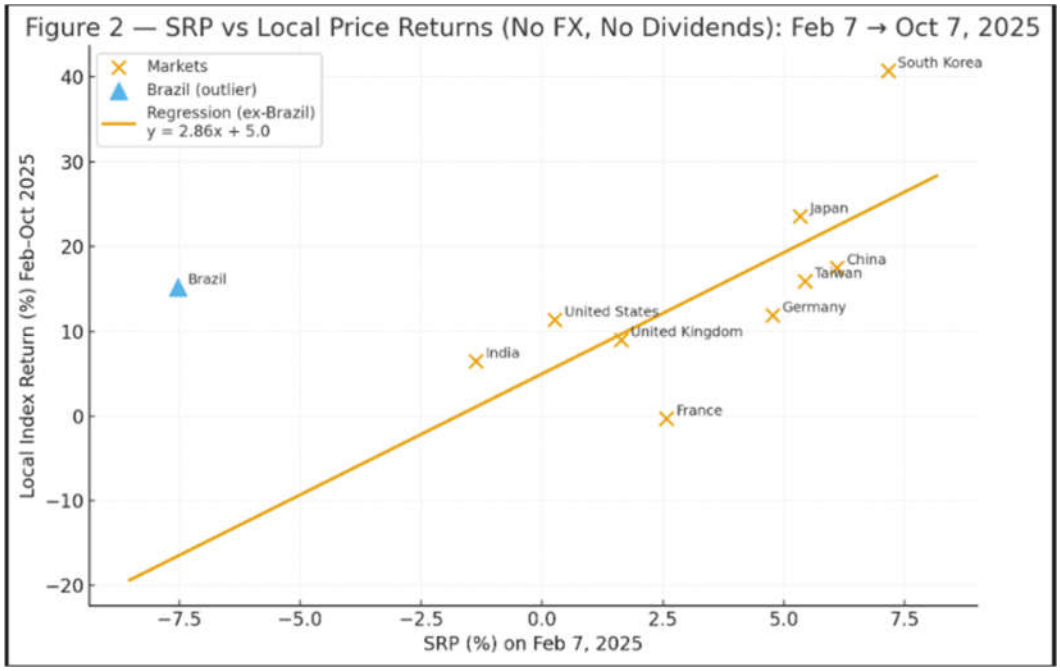

Figure 2. — SRP vs Local Price Returns (No FX, No Dividends): February 7 → October 7 2025. *(Source: Author's calculations based on national stock-index data)*

The orange points represent the ten markets, while the orange regression line—estimated excluding Brazil—illustrates the strong positive association between SRP and domestic market appreciation.

The close clustering of observations along this line confirms that higher-SRP markets experienced stronger local-currency price gains.

Interpretation:

 doi:10.20944/preprints202510.0734.v1

The regression slope (≈ 2.86) and correlation coefficient (ϱ ≈ + 0.85) indicate that the PPP–SIRR–SRP relationship holds even when measured in pure valuation terms, without the influence of currency or dividend effects.

Brazil (in blue) again appears as the single notable outlier, positioned above the fitted line due to post-February upward revisions in *g* and substantial cuts in *r*.

Together with Figure 1—which used USD total-return data—this chart provides robust confirmation that the **PPP–SIRR–SRP framework** reliably predicts market performance across both global-investor and domestic-valuation perspectives.

8. Discussion

The results presented above demonstrate that the **PPP–SIRR–SRP framework** provides a powerful and conceptually unified approach to equity-market valuation—one that integrates **growth, risk, and time** in a single, coherent structure.

Unlike traditional valuation tools such as the **P/E** or **PEG** ratios, which are static and dimensionally incomplete, the PPP-based system translates valuation into a **time-adjusted and yield-equivalent language** that aligns closely with real-world investment decision-making.

8.1. Predictive Validity

The cross-market results confirm that the **Stock Risk Premium (SRP)**—computed at a fixed date using forward-looking fundamentals—possesses significant predictive power for subsequent market returns.

The correlation between February 2025 SRP levels and realized total returns through October 2025 (ϱ ≈ +0.86) is exceptionally strong for such a short period.

This finding supports the view that SRP acts as a reliable **valuation compass**, capable of identifying markets likely to outperform or underperform based on their relative risk-adjusted earnings potential.

Moreover, the persistence of this relationship in both USD and local-currency terms (Figures 1 and 2) indicates that SRP captures **intrinsic valuation differentials**, not temporary distortions driven by exchange-rate or yield effects.

In essence, SRP behaves like an **equity-market yield spread**, directly linking relative valuation to subsequent price performance.

8.2. Theoretical Coherence

The PPP–SIRR–SRP model bridges the gap between **equity valuation** and **discounted cash flow theory**.

It embeds the logic of the Gordon–Shapiro dividend discount model into a more flexible structure that accommodates varying earnings growth and discount rates.

By expressing valuation as a *time function* (PPP) and deriving from it a corresponding internal yield (SIRR) and risk-adjusted spread (SRP), the framework reconciles **static multiples** with **dynamic return expectations**.

Conceptually, SRP parallels the **credit spread** in fixed-income analysis: just as a corporate bond's yield spread measures compensation for default risk, SRP measures the compensation equity investors demand for assuming business and market risk.

This analogy explains why SRP's directional signals align with forward returns—the higher the spread, the greater the expected risk-adjusted reward.

8.3. The Brazil Case and Model Sensitivity

The case of **Brazil** highlights the model's **conditional realism**.

Its February 2025 SRP of −7.5% correctly described an unattractive risk-reward balance under then-prevailing conditions of high rates and moderate growth.

 doi:10.20944/preprints202510.0734.v1

When *g* rose due to commodity strength and *r* fell sharply after aggressive rate cuts, the model's parameters changed, producing a new equilibrium with a higher SIRR and positive SRP.

Far from contradicting the framework, Brazil's reversal **demonstrates its adaptive nature**: the model remains valid, but its outputs evolve as fundamental inputs evolve.

8.4. Extension from Micro to Macro Valuation

Originally formulated for individual equities, the PPP methodology scales naturally to **aggregate market analysis**.

Each national stock index represents the weighted stream of expected earnings of its constituent firms; hence, its valuation behavior adheres to the same principles governing single securities.

The success of the model at the market level thus confirms that PPP generalizes the **P/E ratio** across both dimensions—**risk-adjusted growth** and **degree of aggregation**—making it a universal valuation framework applicable to companies, sectors, or entire economies.

9. Conclusion

This empirical experiment, covering ten major stock markets between **February 7 and October 7, 2025**, confirms the **explanatory and predictive power** of the **PPP–SIRR–SRP framework** when applied to entire equity markets.

By computing each market's **Potential Payback Period (PPP)**, deriving its implied **Stock Internal Rate of Return (SIRR)**, and measuring its **Stock Risk Premium (SRP)**, the study established a coherent cross-market valuation hierarchy that proved remarkably consistent with subsequent performance outcomes.

Nine of the ten markets behaved exactly as their initial SRP rankings predicted: markets with **high SRPs**—such as South Korea, Japan, Germany, and Taiwan—delivered strong positive returns, while **low- or negative-SRP markets**—including France, India, and the United States—underperformed.

The sole major deviation, **Brazil**, was not a failure of the model but a vivid demonstration of its **real-world sensitivity**.

Unexpected increases in *g* (commodity-driven earnings growth) and steep declines in *r* (monetary easing) redefined Brazil's fundamental valuation parameters, turning a previously negative SRP into a positive one.

This episode underscores the framework's **dynamic realism**: SRP values adjust automatically as macroeconomic conditions evolve.

The broader implication is that the **PPP–SIRR–SRP system** provides a unified and scalable valuation law applicable across multiple analytical levels—from individual companies to entire markets.

It harmonizes static ratios (like P/E) with dynamic valuation concepts (like yield-to-maturity), embedding time, growth, and risk in one mathematically consistent structure.

As such, the framework functions as the **equity-market counterpart to the yield curve**: a forward-looking indicator of expected returns grounded in fundamental variables rather than market sentiment.

By empirically validating its predictive strength across global markets, this study demonstrates that the PPP–SIRR–SRP framework offers both **theoretical coherence and practical foresight**.

It bridges the gap between traditional equity valuation and macro-financial modeling, providing investors, economists, and policymakers with a rigorous yet intuitive tool for understanding how changes in earnings growth and discount rates shape the future trajectory of markets.

 doi:10.20944/preprints202510.0734.v1

References

1. Damodaran, A. (2012). Investment Valuation: Tools and Techniques for Determining the Value of Any Asset. Wiley Finance.
2. Gordon, M. J., & Shapiro, E. (1956). Capital Equipment Analysis: The Required Rate of Profit. Management Science, 3(1), 102–110.
3. Fama, E. F., & French, K. R. (1992). The Cross-Section of Expected Stock Returns. Journal of Finance, 47(2), 427–465.
4. Campbell, J. Y., & Shiller, R. J. (1988). The Dividend-Price Ratio and Expectations of Future Dividends and Discount Factors. Review of Financial Studies, 1(3), 195–228.
5. Shiller, R. J. (2015). *Irrational Exuberance* (3rd ed.). Princeton University Press.
6. Asness, C. S., Frazzini, A., & Pedersen, L. H. (2019). *Quality Minus Junk. Review of Accounting Studies*, 24, 34–112.