https://www.investopedia.com/terms/r/relativeppp.asp

What Is Relative Purchasing Power Parity (RPPP)?

Relative purchasing power parity (RPPP) is an expansion of the traditional purchasing power parity <https://www.investopedia.com/updates/purchasing-power-parity-ppp/> (PPP) theory to include changes in inflation over time. Purchasing power is the power of money expressed by the number of goods or services that one unit can buy, and which can be reduced by inflation <https://www.investopedia.com/terms/i/inflation.asp>. RPPP suggests that countries with higher rates of inflation will have a devalued currency.

Key Takeaways

* Relative purchasing power parity (RPPP) is an economic theory that states that exchange rates and inflation rates (price levels) in two countries should equal out over time.
* Relative PPP is an extension of absolute PPP in that it is a dynamic (as opposed to static) version of PPP.
* While PPP is useful in understanding macroeconomics in theory, in practice RPPP does not seem to hold true over short time horizons.

Understanding Relative Purchasing Power Parity (RPPP)

According to relative purchasing power parity (RPPP), the difference between the two countries’ rates of inflation and the cost of commodities will drive changes in the exchange rate <https://www.investopedia.com/terms/e/exchangerate.asp> between the two countries.

RPPP expands on the idea of purchasing power parity and complements the theory of absolute purchasing power parity (APPP). The APPP concept declares that the exchange rate between the two nations will be equal to the ratio of the price levels for those two countries, and APPP is discussed later in this article.

Purchasing Power Parity in Theory

Purchasing power parity (PPP) is the idea that goods in one country will cost the same in another country, once their exchange rate is applied. According to this theory, two currencies <https://www.investopedia.com/terms/c/currency.asp> are at par when a market basket of goods is valued the same in both countries.

The comparison of prices of identical items in different countries will determine the PPP rate; however, an exact comparison is difficult due to differences in product quality, consumer attitudes, and economic conditions in each nation. Also, purchasing power parity is a theoretical concept that may not be true in the real world, especially in the short run.

In 2023, the purchasing power index of the United States is 115.75.1

Dynamics of RPPP

RPPP is essentially a dynamic form of PPP, as it relates the change in two countries' inflation rates to the change in their exchange rate. The theory holds that inflation will reduce the real purchasing power <https://www.investopedia.com/terms/p/purchasingpower.asp> of a nation's currency. Thus if a country has an annual inflation rate of 10%, that country's currency will be able to purchase 10% less real goods at the end of one year.

RPPP also complements the theory of absolute purchasing power parity (APPP), which maintains that the exchange rate between two countries will be identical to the ratio of the price levels for those two countries.

This concept comes from a basic idea known as the law of one price <https://www.investopedia.com/terms/l/law-one-price.asp>. This theory states that the real cost of a good must be the same across all countries after the consideration of the exchange rate.

Example of RPPP

Suppose that over the next year, inflation causes average prices for goods in the U.S. to increase by 3%. In the same period, prices for products in Mexico increased by 6%. We can say that Mexico has had higher inflation than the U.S. since prices there have risen faster by three points.

According to the concept of relative purchase power parity, that three-point difference will drive a three-point change in the exchange rate between the U.S. and Mexico. So we can expect the Mexican peso to depreciate <https://www.investopedia.com/terms/c/currency-depreciation.asp> at the rate of 3% per year, or that the U.S. dollar should appreciate at the rate of 3% per year.

Limitations of RPPP

Users of RPPP information must be mindful of several limitations in the inherent process of calculating RPPP. Some of the limitations include:

* *Inaccurate Assumption of Perfect Competition. *RPPP assumes perfect competition in all markets which is often not the case in the real world. Imperfect competition, market distortions, and barriers to trade can lead to deviations from RPPP.
* *Inaccurate Assumptions that Goods Are Homogeneous.* RPPP assumes that goods and services are identical across countries, which is rarely true in reality. Differences in product quality, branding, and consumer preferences can affect price levels.
* *Excluded Transport Costs and Trade Barriers:* RPPP does not consider transportation costs or trade barriers, which can significantly impact the prices of internationally traded goods and create deviations from parity.
* *Not All Goods Are Tradeable:* RPPP focuses on tradable goods and services, but many items are not easily traded across borders (e.g., housing, local services). These non-traded goods can create disparities in price levels.
* *Limited Data and Timing:* Accurate and timely data on price levels

can be challenging to obtain, especially in developing countries, making it difficult to apply RPPP accurately.

Exchange rates can also be influenced by speculative trading and market sentiment; therefore, actual exchange rates may deviate from RPPP calculations.

RPPP vs. APPP

There's a couple of differences between relative purchasing power parity and absolute purchasing power parity (APPP). First, PPP is primarily concerned with comparing the relative price levels of two or more countries to determine their exchange rates. Absolute PPP is a simpler concept that focuses on the absolute price levels within a single country.

Second, PPP suggests that exchange rates should adjust over time to equalize the purchasing power of currencies, allowing for a more accurate representation of the real exchange rate. APPP implies that exchange rates should be fixed or constant based on the ratio of absolute price levels between two countries.

Last, PPP takes into account changes in price levels over time while APPP does not. Because APP assumes that exchange rates should always be at a constant ratio, it does not account for inflation.

What Is the Formula for Purchasing Power Parity?

The formula for purchasing power parity (PPP) is Cost of Good X in Currency 1 / Cost of Good X in Currency 2. This allows an individual to make comparisons of currencies and the value of a basket of goods they can buy.

What Country Has the Highest Purchasing Power?

According to the crowdsourced database Numbeo, Luxembourg has the highest purchasing power with a purchasing power index number of 127.1 in 2023. Other top countries include Qatar (123.6), United Arab Emirates (123.4), and Switzerland (118.7). The lowest country in 2023 is Nigeria (8.4).1

Why Is Purchasing Power Parity Important?

Purchasing power parity is important because it allows economists to compare two different economies <https://www.investopedia.com/articles/fundamental-analysis/ppp-big-mac.asp>, primarily the economic productivity and the standard of living among nations. It seeks to equalize currencies to determine the value of a basket of goods.

The Bottom Line

Relative purchasing power parity is an economic theory that suggests exchange rates between two countries' currencies should adjust over time to reflect differences in their price levels. According to PPP, if one country experiences higher inflation than another, its currency should depreciate to maintain the same purchasing power across borders, promoting equilibrium in international trade.

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1. Numbeo. "Purchasing Power Index by Country 2023 <https://www.numbeo.com/quality-of-life/rankings_by_country.jsp?title=2023&displayColumn=1>."

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Related Terms

Burgernomics: What It Means, How It Works <https://www.investopedia.com/terms/b/burgernomics.asp> Burgernomics refers to the Economist's Big Mac Index, which tracks purchasing power parity using the cost of a McDonald's Big Mac as the price benchmark.

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Understanding Purchasing Power and the Consumer Price Index <https://www.investopedia.com/terms/p/purchasingpower.asp> Purchasing power is the value of a currency in terms of the goods or services one unit of it can buy. Discover how purchasing power impacts investors.

more <https://www.investopedia.com/terms/p/purchasingpower.asp>

Starbucks Index: What it is, How it Works, Criticisms <https://www.investopedia.com/terms/s/starbucks-index.asp> The Starbucks Index is a measure of purchasing power parity comparing the cost of a tall latte in local currency against the U.S. dollar in 16 countries.

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Big Mac PPP: Overview, Calculations, Disadvantages <https://www.investopedia.com/terms/b/bigmacppp.asp> The Big Mac PPP is a survey done by The Economist that examines the purchasing power of various currencies based on the relative price of a Big Mac.

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Gross Domestic Product (GDP) Formula and How to Use It <https://www.investopedia.com/terms/g/gdp.asp> Gross domestic product is the monetary value of all finished goods and services made within a country during a specific period.

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Uncovered Interest Rate Parity (UIP): Definition and Calculation

<https://www.investopedia.com/terms/u/uncoveredinterestrateparity.asp>

Uncovered interest rate parity (UIP) is a theory that the difference in

two countries' interest rates is equal to the expected changes between

their currency exchange rates.

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