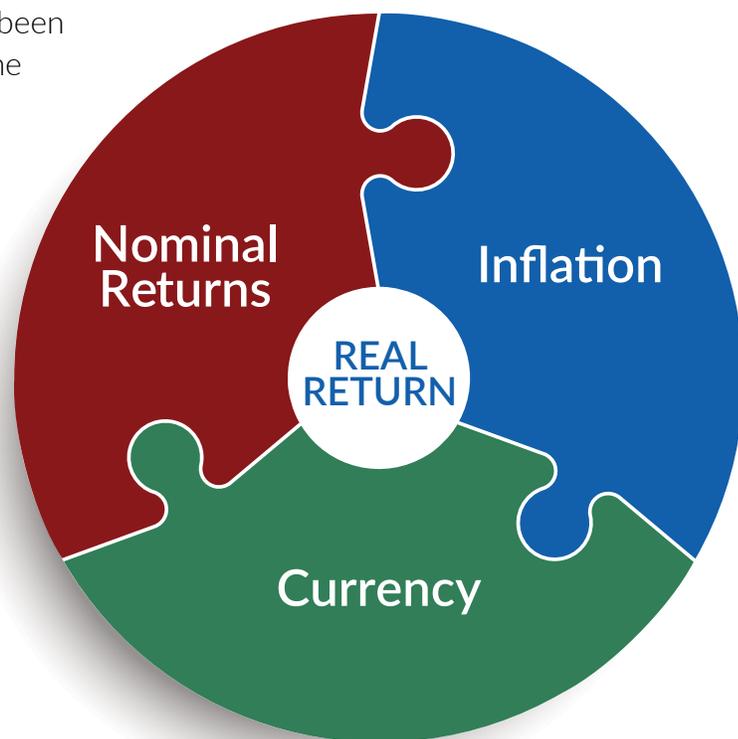


The background of the entire page is a blurred image of a person's hand holding a pen over a tablet displaying a bar chart. Overlaid on this is a semi-transparent grid with several data series: a white line graph with a peak and a dip, a blue line graph, and a bar chart with vertical bars of varying heights. Some data points are marked with small triangles.

INVESTMENT RETURNS IN THE US, INDIA, BRAZIL, AND EUROPE: 20-YEAR COMPARISON

With recent volatility in US stocks there has been a good deal of negative attention placed on the performance of the US equity markets. At LCR Wealth Management, we see this as a good time to review the real returns of the US equity markets from a global perspective. We find the real returns by adjusting the nominal returns for inflation and currency. We will compare the US to 3 other major markets to evaluate their real returns over the last 22 years.



In speaking with clients about this evaluation we have noted that Indian investors often express how well the Indian equity markets have done. Between this perception and the LRS limits, we have seen a trend of Indian investors sticking to Indian investments. On that note, we are aware that dollar deposits and investments in overseas property, equity, or debt remain less than 10% of the total annual LRS outgo today.¹ We see this as a missed opportunity for investors to benefit from remitted capital, which we will explore in this evaluation. The US is home to the largest and most liquid equity markets, so we analyzed the performance of the US and compared it to India, Brazil, and the Eurozone.

As previously mentioned, we need to consider nominal returns, inflation, and exchange rates to compare US investments to non-US investments. These factors can greatly impact the real returns.

To start, we have identified the major indices to compare the performance of the markets in various geographies. Table 1 below lists four indices chosen to represent the comparable equity market of the country or region being evaluated as well as the currency used to price each index.

Table 1. Four International Equity Indices, with Relevant Currencies

Country or Region	Equity Index	Currency
United States	S&P 500	US dollar
India	Nifty 50	Indian rupee
Brazil	Ibovespa	Brazilian real
Eurozone	Euro Stoxx 50	European euro

We base our analysis over a 22-year period, from Dec 31, 1999 through the end of 2021. The period begins at the peak of the dot-com era, which crashed in March 2000.

To evaluate the performance of these indices, we looked at the annual gross return, also called the “nominal return,” of each index. Figure 1 below shows these nominal returns over the 22-year period from the start of 2000 through the end of 2021 for an investment of 100,000 units of the local currency. The figure displays the percentage change in the value of a 100,000 unit investment in that index with dividends reinvested and no other fees or adjustments.

Nominal Growth of Investment of 100,000 Units of Local Currency

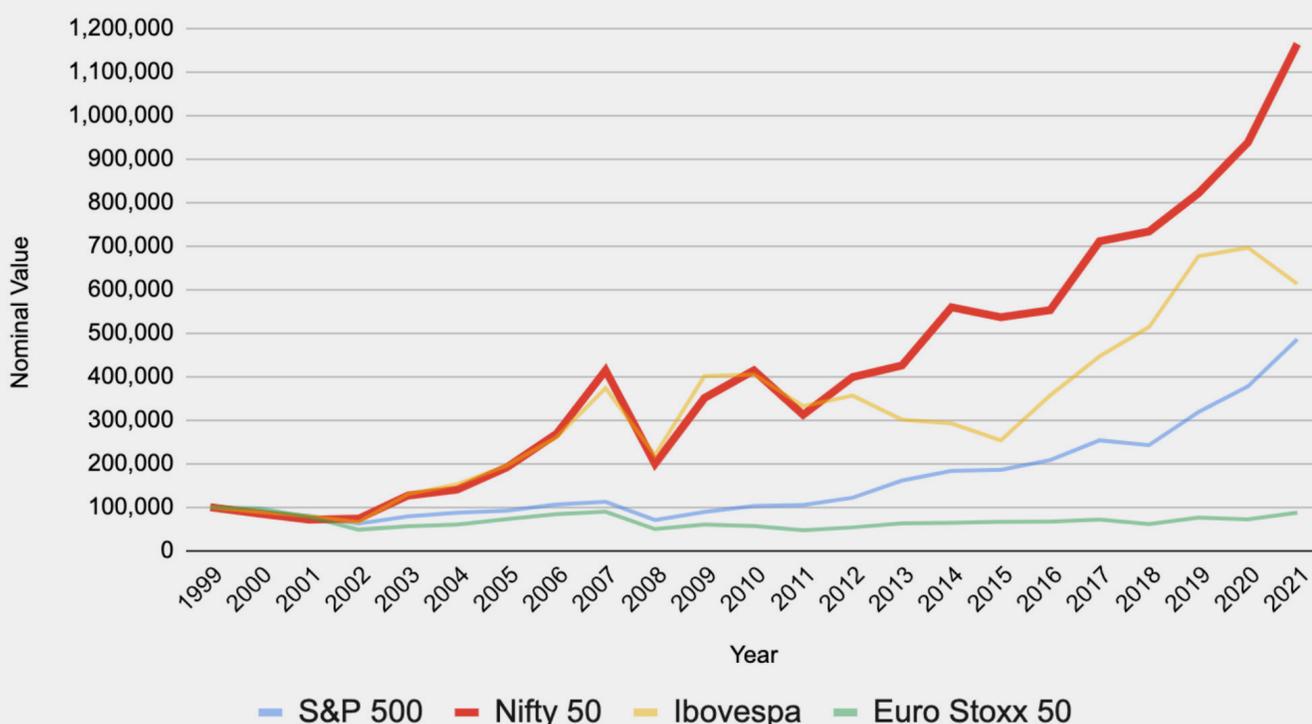


Figure 1. Comparison of the nominal returns on 100,000 units of the local currency invested over the 22-year period in the **S&P 500** (United States, the dollar), **Nifty 50** (India, the rupee), **Ibovespa** (Brazil, the real), and **Euro Stoxx 50** (European Union, the euro) indices.

The Indian **Nifty 50** dominated the other indices with its nominal return of 1065%, compared with the 386% return of the **S&P 500**, the 513% return of the **Ibovespa**, and the -12.5% return of the **Euro Stoxx 50**.

The outperformance of the **Nifty 50** is dramatic and could easily convince an investor to favor the Indian equity markets. However, it would be an error to use nominal returns as the only metric of investment performance. Inflation is a key input missing in nominal returns. Its significance is that inflation lowers the

purchasing power of an investment's value. For example, if inflation is 1% and the index has a nominal return of 1%, the inflation-adjusted return of the investment would be 0%.

In this hypothetical example, the local purchasing power of the currency decreased at the same rate as the index increased, resulting in no change. We can apply this same adjustment for inflation to the nominal returns using actual annual inflation data for the four currencies identified in the table above.

Adjusting the nominal returns for the annual inflation rate of each currency, we arrive at the following data shown in Figure 2.

Inflation-Adjusted Growth of Investment of 100,000 Units of Local Currency

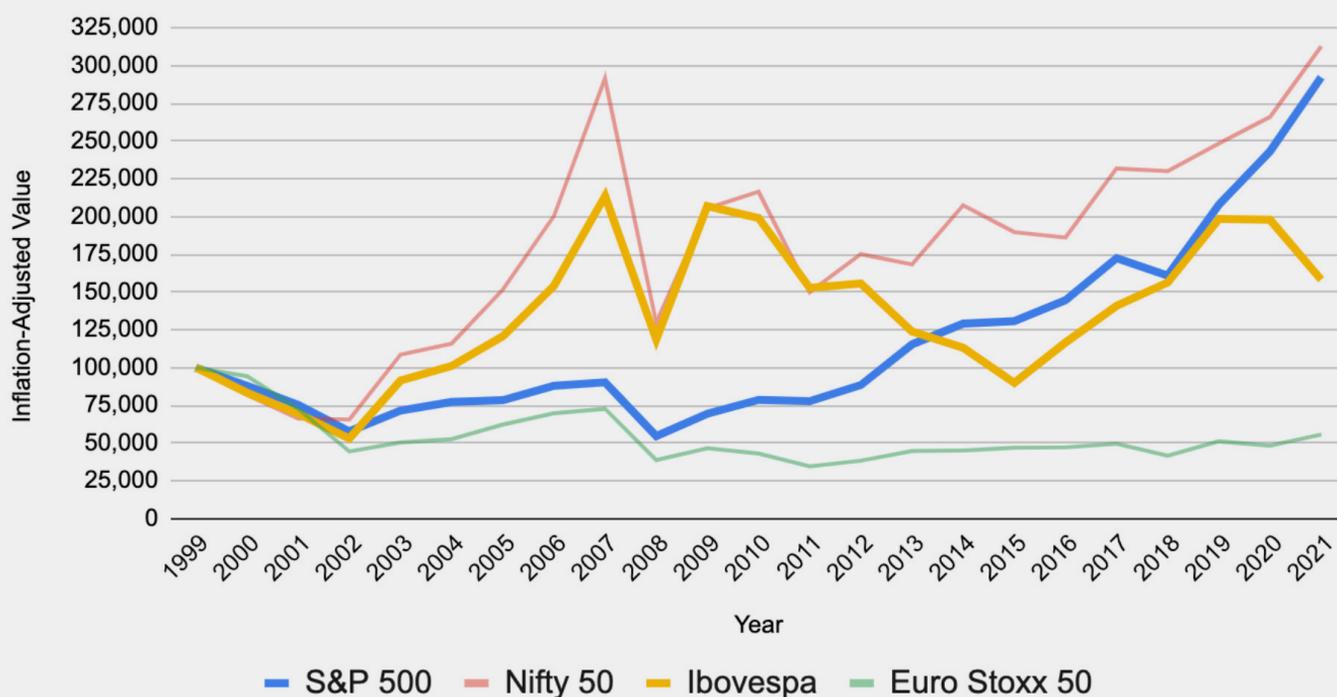


Figure 2. Comparison of inflation-adjusted returns on 100,000 units of the local currency invested over the 22-year period in the **S&P 500** (United States, the dollar), the **Nifty 50** (India, the rupee), the **Ibovespa** (Brazil, the real), and the **Euro Stoxx 50** (European Union, the euro) indices.

The adjustment for inflation significantly affects the returns over the 22-year period. The **Nifty 50** is still the top performer, with an inflation-adjusted return of 213%. The effects of inflation become more pronounced when we compare the **Ibovespa** with the **S&P 500**. The **S&P 500** still returned 192% after the adjustment for inflation, but the **Ibovespa** returned only 58%. This is in stark contrast with the nominal-return-only analysis, in which the Ibovespa outperformed the **S&P 500** by more than 100%.

Graphing the annual inflation rate of the four currencies, as shown below in Figure 3, can clarify one’s understanding of the changes seen between our observations above in Figures 1 and 2.

Annual Inflation Rate

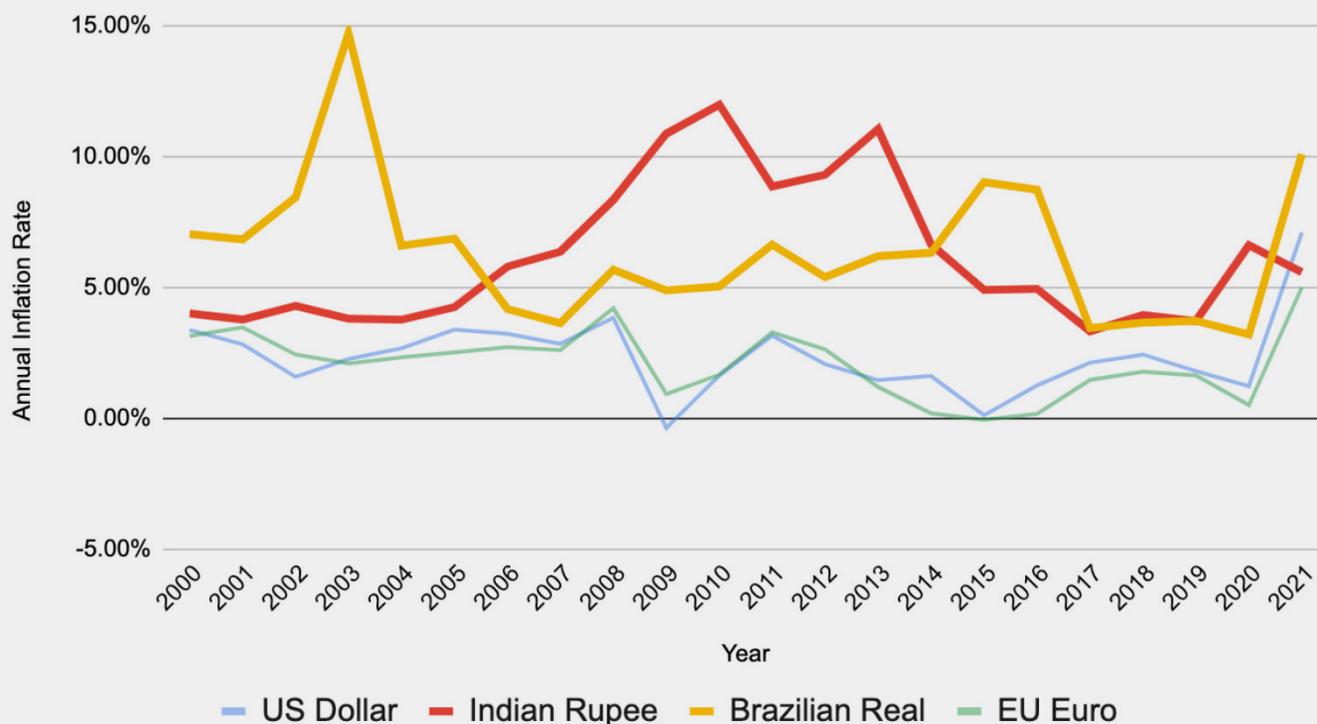


Figure 3. Comparison of the annual inflation rate of the four currencies over the 22-year period from 2000 to 2021.

You may notice that all of the currencies, with the exception of the Indian rupee, saw an increase in the inflation rate from 2020 to 2021. As the world continues to emerge from the COVID-19 pandemic, supply constraints and tightening monetary policy across the globe have brought inflation to the forefront of global investment concerns.

Both the Indian rupee and the Brazilian real saw annual inflation of over 10% in certain years and have average inflation rates higher than 5%, consistently much higher than those of the US dollar and the euro. This helps explain why the downward adjustments to the nominal returns of the **Nifty 50** and the **Ibovespa** are much greater than those of the **S&P 500** and the **Euro Stoxx 50**.



Another major factor to consider when comparing investment returns is the effect of currency and exchange rates. Changes in exchange rates affect the return of an investment as evaluated in terms of “purchasing power parity” or (PPP). To show the value of the investments in PPP terms, we have to value all of the investments in the same currency.

Figure 4 below displays the performance of a US \$100,000 investment in each index.

Real Growth of US \$100,000 Investment

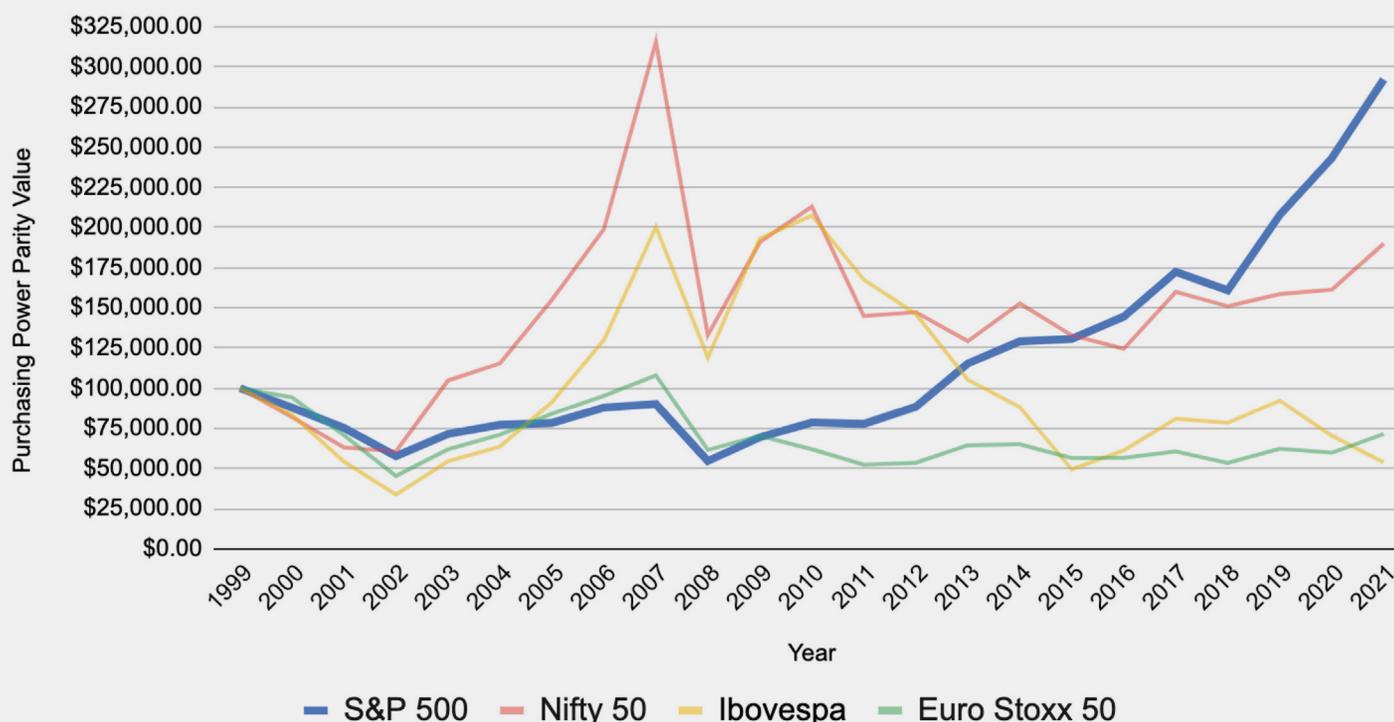


Figure 4. The purchasing power parity (PPP) of US \$100,000 invested into four equity indices over 22 years.

This process is the same as taking US \$100,000, converting it into the local currency, investing in the local index, adjusting for inflation, and then exchanging the year-end value back into US dollars. Since we are using US dollars as the constant, there is no adjustment to the 192% return of the **S&P 500** that was shown in Figure 2.

Figure 4 above highlights the strengthening of the US dollar versus the Indian rupee and the Brazilian real over the last 22 years. Even though the **Nifty 50** had a higher inflation-adjusted return than the **S&P 500**, the rupee did not gain as much value as the US dollar did between 2000 and 2021. As a result, an investment of US \$100,000 in the **Nifty 50** would have grown only to a value of \$190,019, a return of 90%, whereas the same investment in the **S&P 500** would have grown 192% to \$292,237.

LCR client families are global in nature and, according to Avendus, “nearly 40% of all expenses borne by wealthy Indians are dollar dependent.”³ This means that changes in the value of the US dollar can have an immense impact on overall net worth as well as investment performance. One of the best ways for wealthy Indians to hedge against the rupee is to make investments in dollar-denominated assets, such as the US equity markets. This has the double effect of reducing exposure to the rupee as well as providing diversification, both of which lower overall portfolio risk. This is not to say that Indian investors should invest in the US instead of Indian markets, but rather that they should invest in the US as well as Indian markets.



When the correlation between investments is low (that is, when the price movements of one’s investments have no effect on each other), the stabilizing effects of diversification are higher. Diversification and low volatility are important aspects of building a safe portfolio, instead of aiming for high returns at all costs. This becomes especially important when you need access to your capital. In a volatile portfolio you may need to lock in losses in order to fulfill your capital needs. In a stable portfolio this is far less of an issue.

We can see the effects of diversification by looking at the risk and return metrics of two portfolios: a diversified portfolio consisting of two uncorrelated assets and a non diversified portfolio consisting of only one asset.



Volatility is a measure of portfolio risk, expressed as a percentage. The higher the percentage volatility, the higher the risk. The volatility of a 100% **Nifty 50** portfolio over the 22-year period is 29.92% with an annualized return of 3.10%. But adding a 20% allocation to the **S&P 500** lowers volatility by 2.49%, to 27.43%, while raising the annualized return by 0.51%, to 3.61%.

These adjustments for inflation and exchange rates are complex, but they are important considerations for today’s global investor. As inflation, monetary policy, and exchange rates fill the markets with uncertainty, it is essential to make prudent decisions about the whole range of investment opportunities.

Over the 22-year period, the **S&P 500** outperformed the other major indices by 100% or more in PPP terms. This outperformance would remain the same even if we ran the evaluation using any of the other three currencies (instead of the US dollar) as the constant.

The US market, as measured by the **S&P 500**, has measurably outperformed the Indian market, the Brazilian market, and the European market over the last 22 years. This outperformance extends through black swan events that caused major declines in the **S&P 500** index, including the Dot-Com Crash, the Global Financial Crisis, and the COVID-19 Pandemic.

Even though past performance is not a guarantee of future results, it is certainly a tool that can be used in decision-making. Adjusting for inflation and exchange rates allows us to look beyond nominal returns and to see the strength of the **S&P 500** over the last 22 years. The low correlation between the US and the Indian equity markets presents an immense opportunity for wealthy Indian investors to [use excess LRS funds](#) to hedge their exposure to the rupee, lower their portfolio risk, and increase expected returns through an allocation to the US equity market.

¹ Using Your LRS Limits for Effective Global Portfolio Diversification - LCR Capital Partners

² Is the Correlation Between Indian and US Stock Market Low - Financial Express

³ Why Indian Families Must Allocate Capital to Global Assets - Avendus

