Sensex & BSE500

About

Breaking the Stigma and showcasing how index investment is very reliable.

why Index?

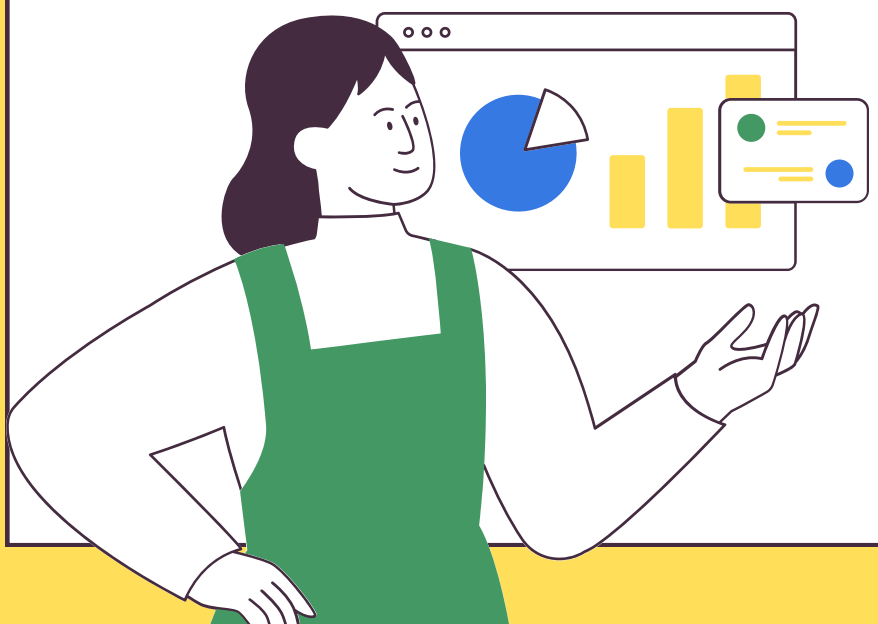
70% of active funds do not beat the Index over 5 year periods. So it’s better to stick to Index funds.

Note

Market does not mimic historical performances but helps us make better informed decisions.

Tactics

Used Pandas and Matplotlib to derive meaninful insights.



BOHOT UNPREDICTABLE HAI

PAISA DOOB JAYEGA

STOCK MARKET

ISSE ACHHA TOH FD/ULIP KRLETE HAI

CAPITAL INTENSIVE

4 Mistakes to avoid
while choosing any fund

High AUM & Returns

Everyone wants to make quick and easy money. But before getting tempted, look at other metrics to safeguard your money.

Sharpe, Std dev and Turnover ratio

What is the risk adjusted returns of that fund? how volatile is it? How frequently are changes made in the fund's portfolio? These are important aspects to look at before investing.

Total expense ratio

It is the cost that the AMC charges for managing your money. Make sure you are comfortable with that value.

Not diversifying

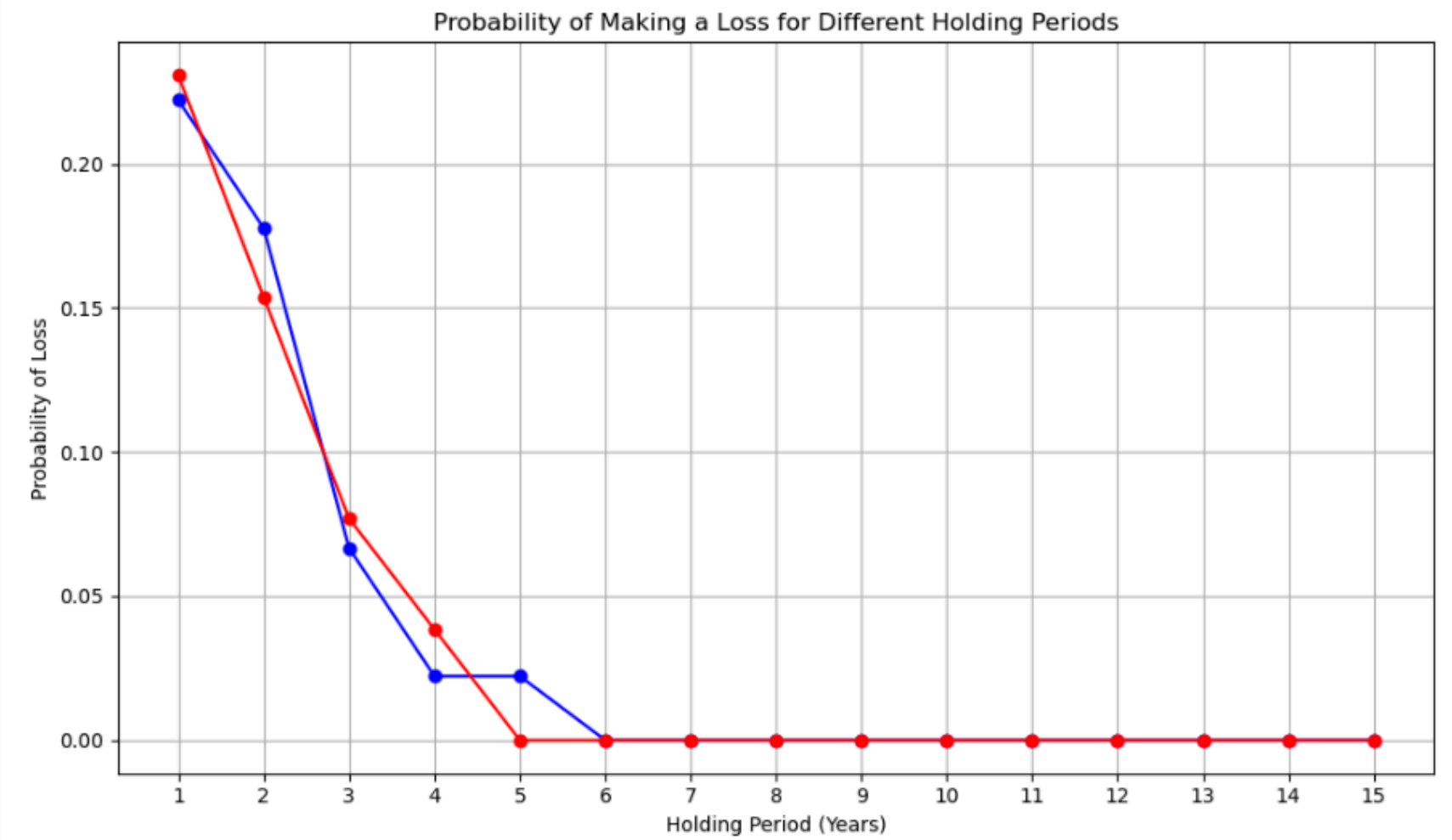
Investing in sectoral or thematic funds thinking you are gonna time the market can prove quite fatal. Instead invest in well diversified portfolio.

Probability of making a loss

In [100…

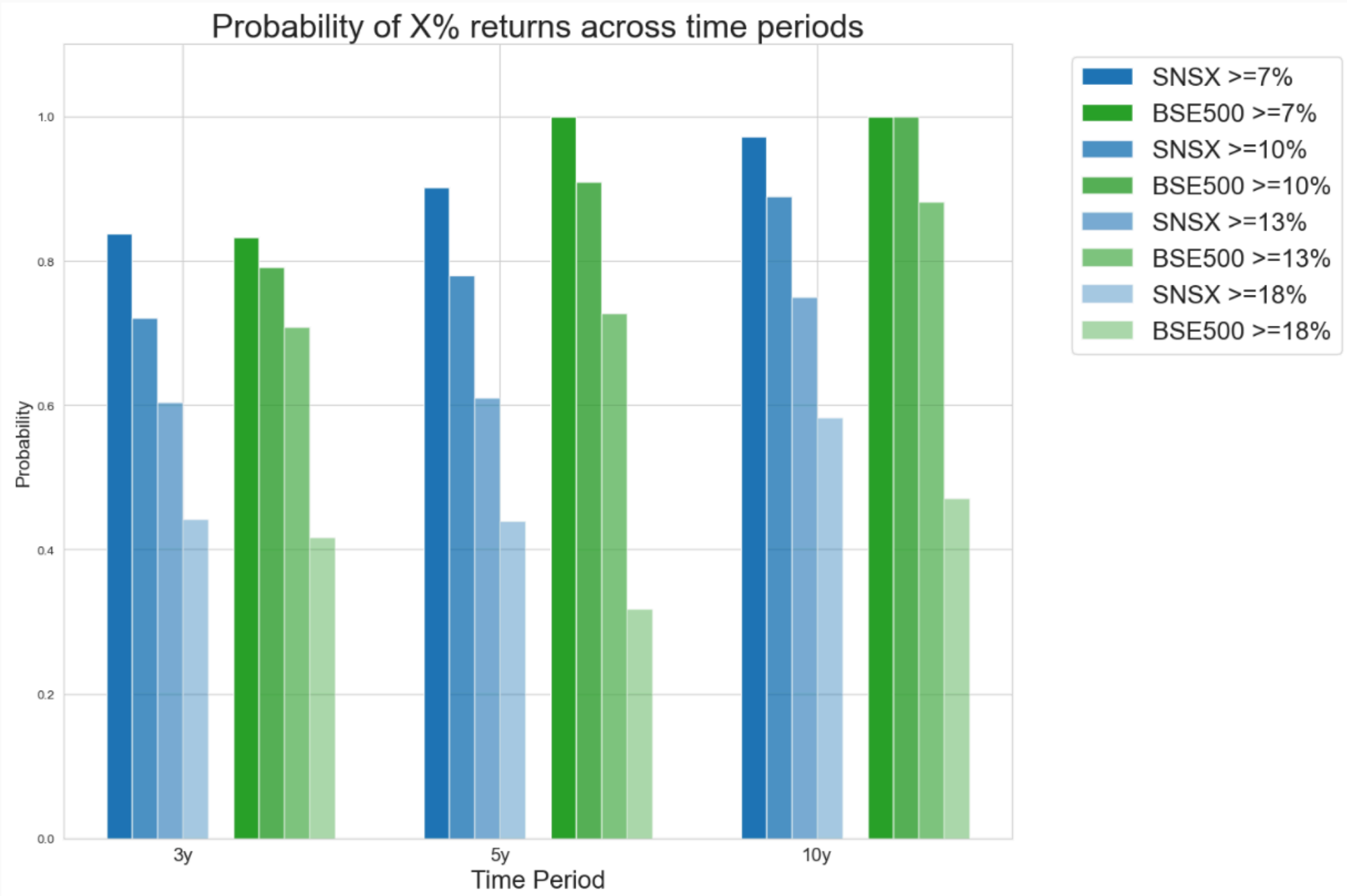
```python
# Calculate the probability of making a loss for different holding periods
holding_periods = range(1, 16)
snsx_probabilities = []
bse500_probabilities = []

for period in holding_periods:
    # Calculate rolling returns
    snsx_rolling_returns = snsx['returns'].rolling(window=period).mean()
    bse500_rolling_returns = bse500['returns'].rolling(window=period).mean()

    # Count number of negative rolling returns
    snsx_num_losses = (snsx_rolling_returns < 0).sum()
    bse500_num_losses = (bse500_rolling_returns < 0).sum()

    # Calculate probability of loss
    snsx_probability = snsx_num_losses / len(snsx_rolling_returns)
    bse500_probability = bse500_num_losses / len(bse500_rolling_returns)

    snsx_probabilities.append(snsx_probability)
    bse500_probabilities.append(bse500_probability)

# Plotting the probabilities
plt.figure(figsize=(10, 6))
plt.plot(holding_periods, snsx_probabilities, marker='o', linestyle='-', color='b')
plt.plot(holding_periods, bse500_probabilities, marker='o', linestyle='-', color='r')

# Adding title and labels
plt.title('Probability of Making a Loss for Different Holding Periods')
plt.xlabel('Holding Period (Years)')
plt.ylabel('Probability of Loss')
plt.xticks(holding_periods)
plt.grid(True)
plt.tight_layout()
plt.show()
```

Probability of making a loss



The historical data of over 44 years for sensex and 25 years of BSE 500 suggests that any retail investor who held on to their investments for more than 6 years, **NEVER** incurred a loss.

Probability of X% returns

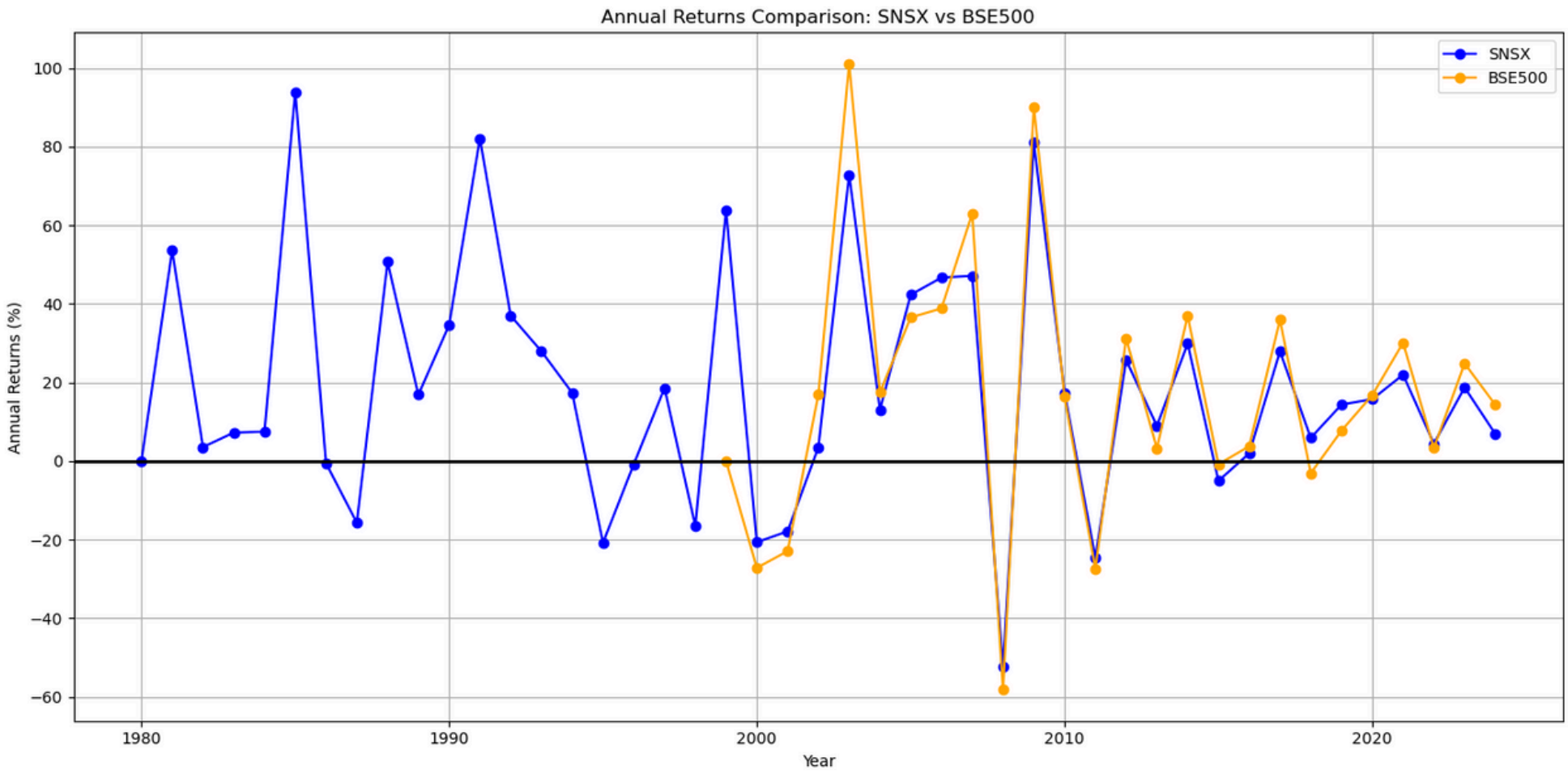


Making a return of atleast 12% seems almost guaranteed when investments are held for more than 5 years.

Annual Returns

- If we look at annual returns then yes, it’s in turmoil and continuously face ups and downs.
- BSE 500 correlates with SENSEX by 0.89.

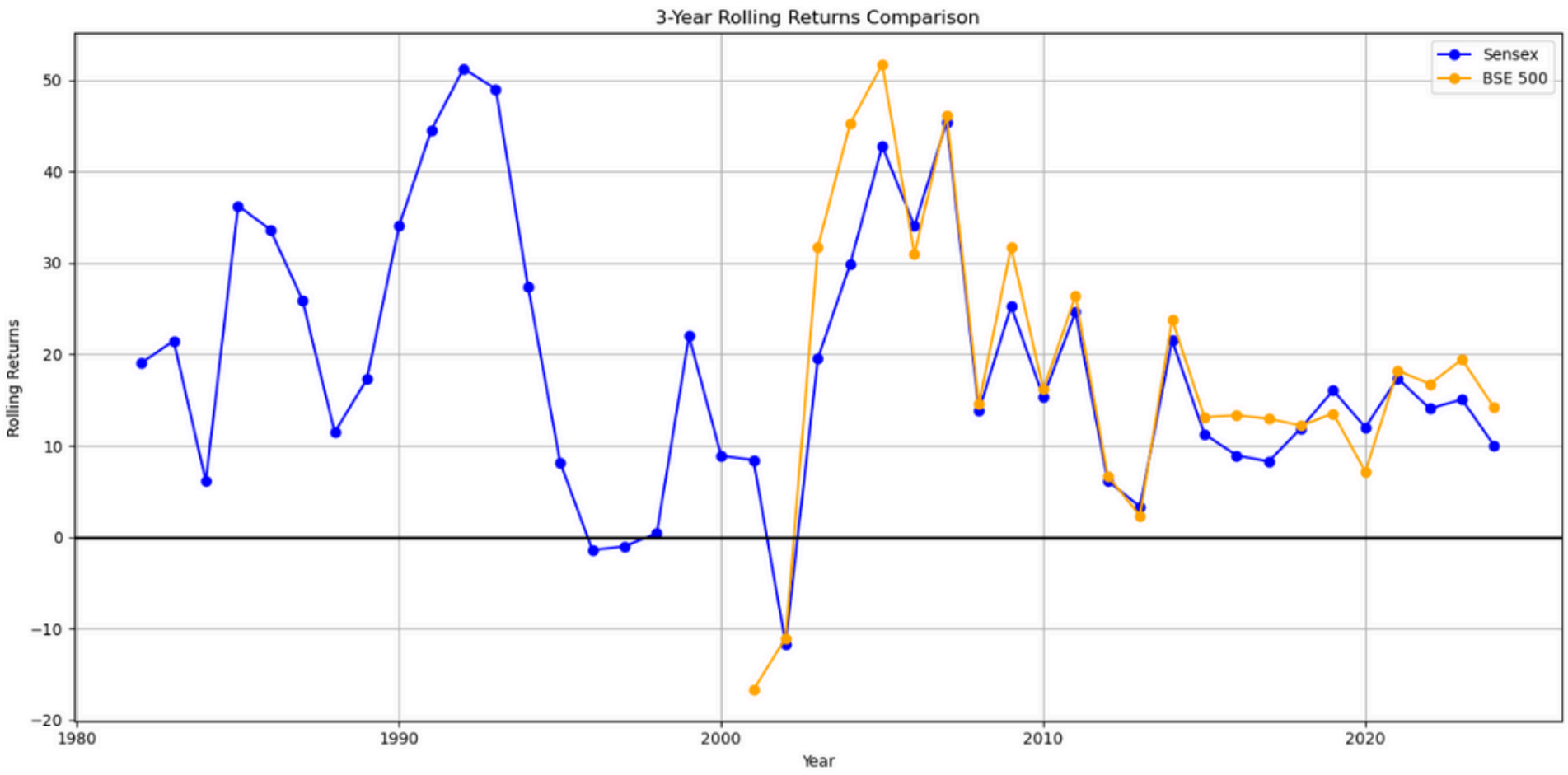
In [87]:
```
# Plotting annual returns
plt.figure(figsize=(14, 7))

plt.plot(snsx.index, snsx['returns'], marker='o', linestyle='-', color='blue', label='SNSX')
plt.plot(bse500.index, bse500['returns'], marker='o', linestyle='-', color='orange', label='BSE500')
plt.axhline(y=0, color='black', linestyle='-', linewidth=2)

# Adding labels and title
plt.title('Annual Returns Comparison: SNSX vs BSE500')
plt.xlabel('Year')
plt.ylabel('Annual Returns (%)')
plt.legend()
plt.grid(True)
plt.tight_layout()
plt.show()
```



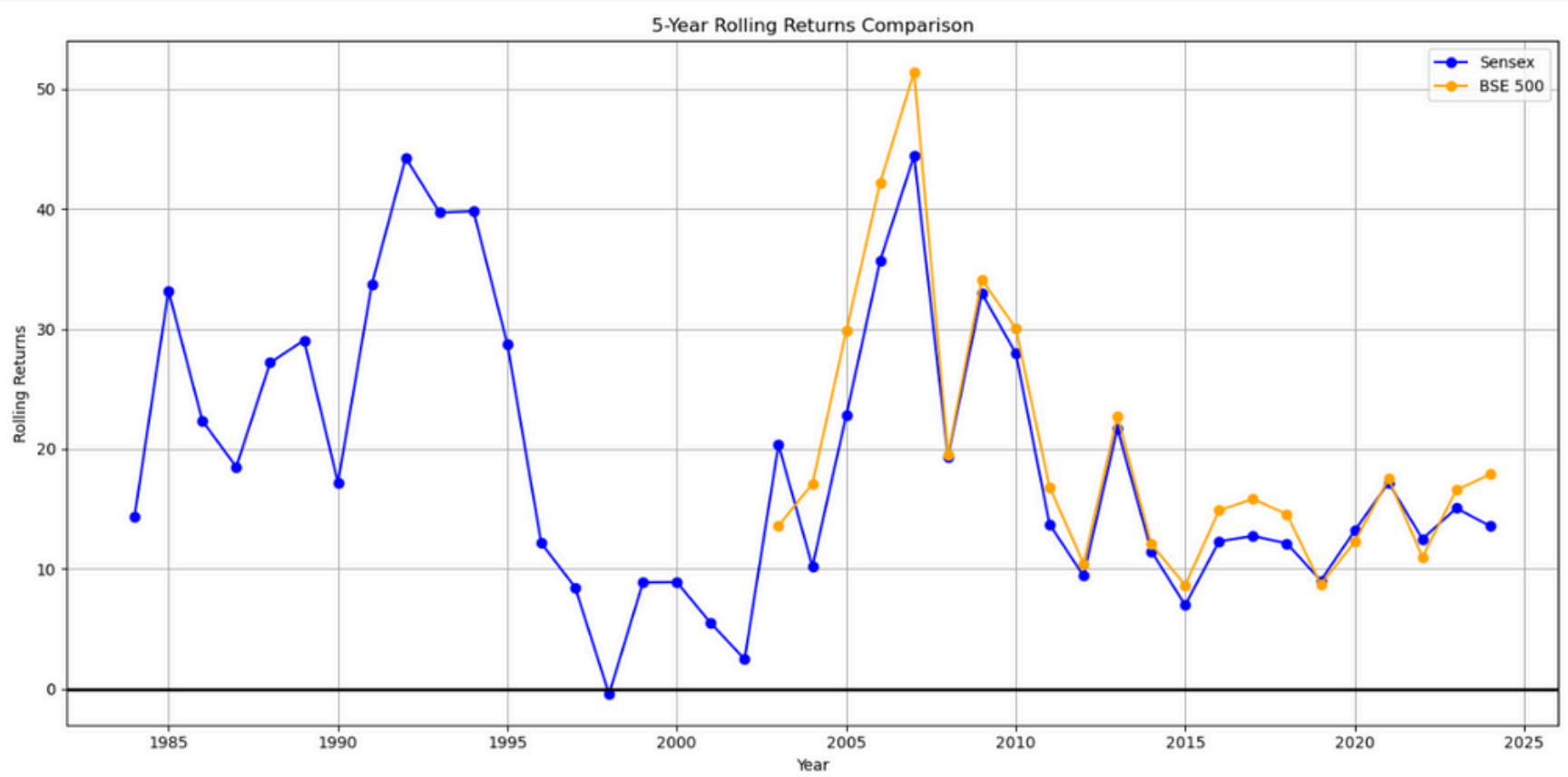
3-Year Rolling

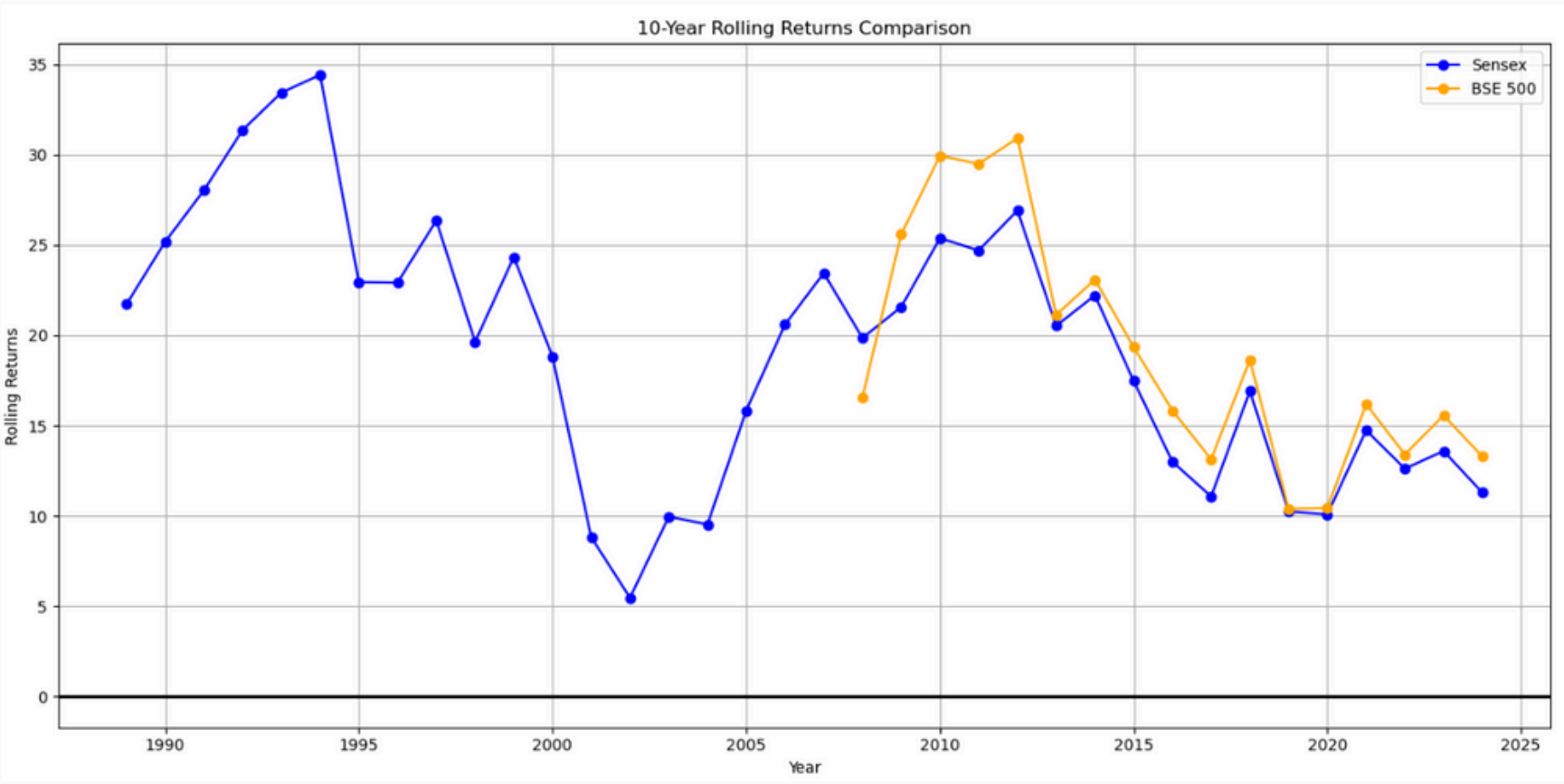
Throughout the rich 44 years of sensex's history, almost all 3 year windows generated positive returns. BSE 500 was introduced in 1999 and had a rough start but then on, always gave a +ve return throughout it's 25 year history.

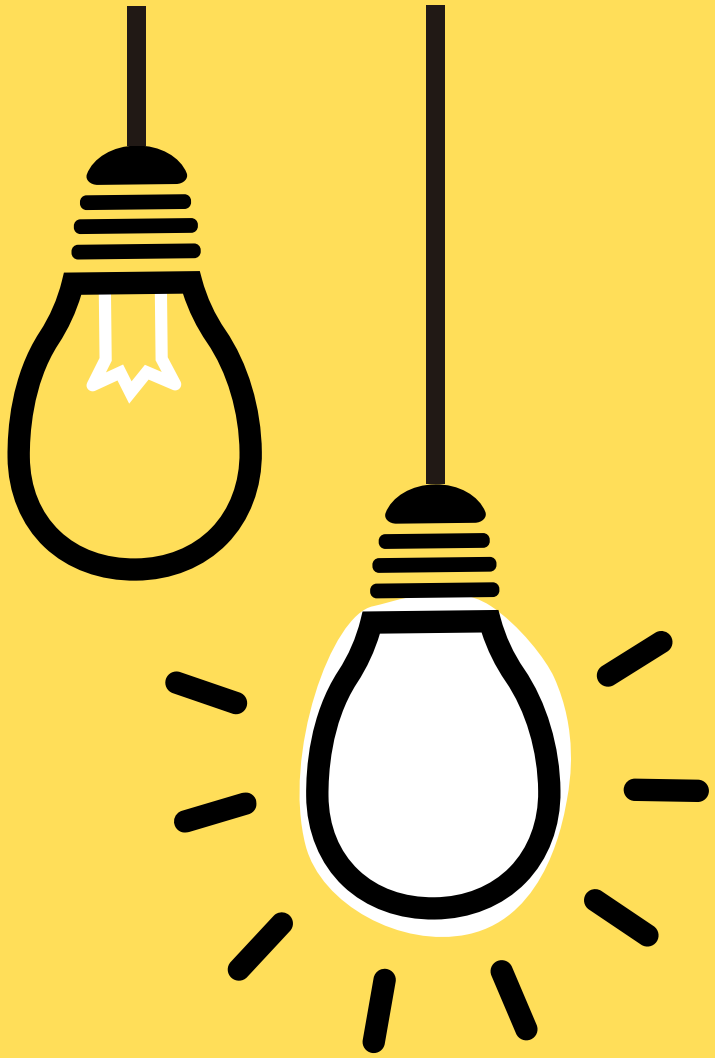
In [96]:
```
# Calculate the rolling returns
snsx_rolling_3y = snsx['returns'].rolling(window=3).mean()
bse500_rolling_3y = bse500['returns'].rolling(window=3).mean()

# Plot the rolling returns
plt.figure(figsize=(14, 7))
plt.plot(snsx.index, snsx_rolling_3y, marker='o', color = "blue", label='Sensex')
plt.plot(bse500.index, bse500_rolling_3y, marker='o', color='orange', label='BSE 500')

plt.axhline(y=0, color='black', linestyle='-', linewidth=2)

# Adding title and labels
plt.title('3-Year Rolling Returns Comparison')
plt.xlabel('Year')
plt.ylabel('Rolling Returns')
plt.legend()
plt.grid(True)
plt.tight_layout()
plt.show()
```



5 and 10 Year Rolling returns







Key takeaway

12% average historical return is very good, don’t get tempted into trading, stock picking or timing the market. Focus on increasing your income. Live your life with passion and discipline. Do financial planning. This 12% compounding will take you to the moon and beyond...