

# The value for money of structured products

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Structured products have gained popularity among investors seeking to diversify their portfolios and manage risk. They offer a unique investment opportunity that combines traditional investments with derivative components, allowing investors to gain exposure to a range of underlying assets while providing downside protection. This has become increasingly important in today's volatile and uncertain market conditions.

Despite their popularity, structured products have faced criticism for being expensive and complex, with some arguing that the additional fees and commissions associated with these products can erode their returns and make them less attractive to investors. However, proponents of structured products argue that the additional cost is justified by the benefits they offer, including downside protection, enhanced returns, and access to a broader range of assets.

Structured products have evolved over the years, with new types and structures being introduced to meet the changing needs of investors. Today, structured products come in a variety of forms, including equity-linked notes, index-linked notes, and commodity-linked notes, to name a few. These products have become an important part of many investors' portfolios, allowing them to manage risk and diversify their investments.

In this white paper, we will delve into the value for money of structured products and analyze their performance compared to traditional investments. We will also evaluate the fees and commissions associated with these products to help readers make more informed decisions about their investment portfolios. By the end of this white paper, readers will have a better understanding of structured products and be able to make more informed decisions about whether they are a suitable investment for their portfolio.

# Methodology

Structured products are often difficult to analyse as they do not have a normal distribution of returns due to their unique payoff profile and bespoke nature. In this study, we addressed this challenge by examining the daily indicative price from issuers as well as all the coupons paid during the life of the products, which helped to solve the problem of the returns distribution.

To further analyse structured products, we categorized them into three types: capital protected, growth, and income. By doing so, we were able to group together products with similar levels of risk and create indices for each category to analyse their value. We used the indicative prices of 17 issuers of products distributed in the US market between July 2020 and November 2022 to calculate the indices. Any product that had at least 100% capital guaranteed, we categorise those as capital protected products, while we split the remaining products as Income if they had regular payments (fixed or contingent), while the remaining products were considered growth.

There are some limitations and potential biases in this approach. For example, the categorization of products is subjective and may not fully capture the complexity of each product. The researchers also relied on indicative prices provided by issuers, which may not accurately reflect the market value of the products. Additionally, the analysis was limited to products distributed in the US market between a specific period, and the results may not be generalizable to other markets or time periods.

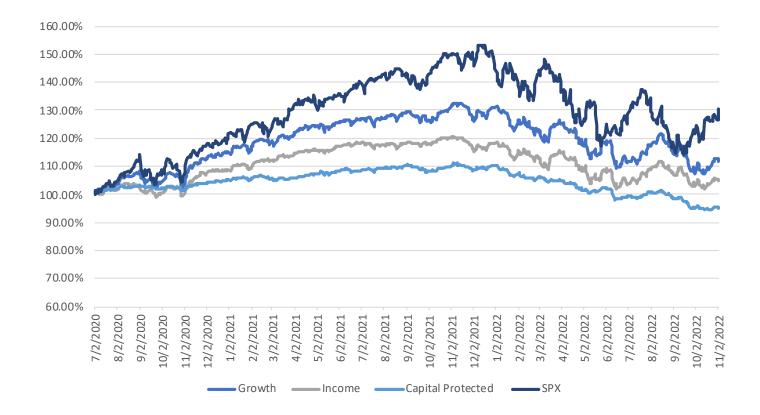
# Product and performance analysis

Although with only 2.5 years the data shows very interesting results. Specially as 2021 was a rally year for the S&P500 followed by a bear market in 2022, with a recent recovery.

Looking at a high level, S&P 500 was the best performance, with 30% return in this period, against 11.69% of growth structured products, followed by 4.61% return of Income structured products and a negative performance of 4.85% of capital protected products.



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Three indices that measure the performance of structured products are the Growth SPs, Income SPs, and Capital Protected SPs. Between 2nd July 2020 and 2nd November 2022, the S&P 500 index outperformed the other three indices, delivering a return of 30.35%, while the Capital Protected SPs index recorded a negative return of -4.85%, indicating a decline in the value of the underlying assets. The volatility of the Growth SPs index was 5.36%, the Income SPs index was 3.78%, and the Capital Protected SPs index was 2.00%. The Sharpe ratio, which measures risk-adjusted returns, was the highest for the Growth SPs index at 2.18, followed by the S&P 500 index at 1.31.

## For the total period between 2nd July 2020 and 2nd November 2022

	S&P 500	Growth SPs	Income SPs	Capital Protected SPs
Return	30.35%	11.69%	4.61%	-4.85%
Volatility	23.21%	5.36%	3.78%	2.00%
Sharpe ratio	1.31	2.18	1.22	-2.43

In 2021, a bullish market drove the performance of all four indices higher. The S&P 500 index delivered a return of 24.82%, while the Growth SPs index recorded the highest return of 15.77%. The Income SPs index and Capital Protected SPs index delivered returns of 9.51% and 5.12%, respectively. The volatility of the Growth SPs index was the lowest at 4.53%, followed by the Income SPs index at 2.50%, and the Capital Protected SPs index at 1.61%. The Sharpe ratio was highest for the Income SPs index at 3.81, followed by growth SPs. indicating higher risk-adjusted returns then S&P500, which explains the added value of capital at risk products as products that decrease the volatility compared with an only equity-linked portfolio.



### 2021 Performance- bullish market

	S&P 500	Growth SPs	Income SPs	Capital Protected SPs
Return	24.82%	15.77%	9.51%	5.12%
Volatility	14.86%	4.53%	2.50%	1.61%
Sharpe ratio	1.67	3.48	3.81	3.18

However, in 2022, a bear market and increasing interest rates led to a decline in the performance of all four indices. The S&P 500 index delivered a negative return of -14.47%, while the Growth SPs index recorded the lowest return of -19.16%. The Income SPs index and Capital Protected SPs index recorded negative returns of -13.50% and -15.23%, respectively. The volatility of the Growth SPs index was the highest at 7.46%, followed by the Income SPs index at 5.76%, and the Capital Protected SPs index at 2.76%. The Sharpe ratio was negative for all three indices except the S&P 500 index, with the Capital Protected SPs index recording the lowest Sharpe ratio of -5.52, indicating poor risk-adjusted returns.

## 2022 Performance - bear market and interest rase increase

	S&P 500	Growth SPs	Income SPs	Capital Protected SPs
Return	-14.47%	-19.16%	-13.50%	-15.23%
Volatility	18.05%	7.46%	5.76%	2.76%
Sharpe ratio	-0.80	-2.57	-2.34	-5.52

# Conclusion

In conclusion, structured products offer a unique investment opportunity that combines traditional investments with derivative components, allowing investors to gain exposure to a range of underlying assets while providing downside protection. Despite criticism for being expensive and complex, structured products have become an important part of many investors' portfolios, allowing them to manage risk and diversify their investments.

This white paper analysed the value for money of structured products and compared their performance to traditional investments. The study used the indicative prices of 17 issuers of products distributed in the US market between July 2020 and November 2022, categorizing them into three types: capital protected, growth, and income. The data showed that while the S&P 500 outperformed the other three indices for the total period between July 2020 and November 2022, the Growth SPs index had the highest Sharpe ratio, indicating higher risk-adjusted returns. In 2021, a bullish market drove the performance of all four indices higher, with the Income SPs index having the highest Sharpe ratio, indicating that structured products can decrease volatility and offer better risk-adjusted returns compared to an only equity-linked portfolio.



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