

A Study on Hedging Strategies with Derivatives Trading in Apple Inc.

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Abstract: This paper explores the hedging strategy in Apple (Apple Inc.) derivatives trading. First, this paper analyzes Apple's motives for hedge derivatives transactions, which mainly stem from the company's pursuit of market risk prevention and financial stability. Next, this paper elaborates on the derivatives trading process of Apple company, including strategy formulation, transaction execution, market monitoring and strategy adjustment, demonstrating its rigorous and flexible risk management framework. In terms of trading characteristics, this paper points out that Apple's derivatives trading strategy has a high degree of flexibility, strict risk control, long-term value orientation and a comprehensive risk management framework. Together, these features constitute an important guarantee for Apple to successfully manage market risk, optimize its capital structure and stabilize its financial performance. The research in this paper not only enriches the theoretical system of hedging strategies of corporate derivatives trading but also provides a useful reference for other enterprises to use derivatives for risk management in practice. Looking ahead, with the continuous development of the financial market and the increasing demand for corporate risk management, Apple's derivatives trading hedging strategy will continue to play an important role and create greater value for enterprises.

Keywords: Apple Inc., Derivatives, Risk management, Hedging strategy.

1. Introduction

As one of the most valuable technology businesses in the world, Apple's financial standing and market performance have a big influence on the world economy in the current globalization and technological setting. As the capital market's reliance on technology companies grows, Apple's derivatives trading activities—particularly its hedging strategies—have an impact not only on the efficiency of its own risk management but also on investor interests, financial market stability, and even global economic dynamics. Therefore, a thorough analysis of Apple's derivatives trading hedging strategy can not only shed light on how big tech companies manage market volatility, lock in returns, and optimize their capital structure through financial instruments, but it can also serve as a valuable resource for financial theory research, enterprise risk management procedures, and investor decision-making. Such research is increasingly crucial and essential in the current uncertain economic situation.

Bartram noted evidence of speculation in individual countries or different types of derivatives, except for higher net commodity price risk exposure for companies using commodity price

derivatives. Companies, independent of access to derivatives or corporate governance at the national level, both use derivatives to hedge. Most businesses use derivatives to hedge, rather than speculation [1]. Aline Muller and Willem F. C. Verschoor used a statistical regression model to combine the collected corporate derivatives data and foreign exchange risk exposure data to analyze the relationship between corporate derivatives use and Fx risk exposure. They believe using corporate derivatives can effectively reduce their foreign exchange risk exposure [2]. Hentschel and Kothari explored whether the company is reducing risk or taking risk in derivatives trading. It studies the risk level of corporate derivatives trading for American-listed companies in different periods. Overall, companies tend to reduce risk rather than increase risk in derivatives trading. However, the study also found that larger companies were more likely to increase their exposure through derivatives trading, while smaller companies were more likely to reduce their risk [3]. Chiang et al. focused on Apple's stock options. The study used the Black-Scholes model for option pricing and hedging strategy construction. The results show that the hedging method has potential success for risk reduction [4]. Abdulameer, H. H., & Abbas, H. adopted Apple's mobile phone and communication technology as the research object to study the impact of Delta purchase options on the original underlying profitability by analyzing Apple's trading data on the financial derivatives market. The study concluded that the Delta option purchase had a positive impact on the profitability of the original base, and there was a correlation between the reward of the purchase option and the original base price [5]. For Microsoft, which is also a multinational technology company, Cao et al. the financial situation and design binary options of Microsoft. By analyzing Microsoft's financial data, its financial performance, stock price movements and S & P constants are predicted and evaluated. Meanwhile, a special option-binary option is introduced, and the effect of sensitivity analysis on price and volatility is introduced. The results showed a positive impact of market prices on the call option value [6]. Lassance and Vrin explored the mismatch between the pricing and hedging performance of derivative models, that is, the pricing/hedging problem. The ability of various models to Delta hedges a set of calls in the S&P 500 and Apple stock is analyzed. The hedging performance of the model depends on the dynamics of the underlying asset. BS and PBS models perform better for assets close to the Gaussian distribution (e.g., the S & P500 index), while for assets with significant non-Gaussian properties (such as Apple stock), HN and Heston models may perform better in certain circumstances (such as OTM / DOTM long-term options) [7]. Lansink, L. H. J. analyzed the impact of corporate factors on the use of derivatives by studying 141 high-tech and low-tech companies in the UK. The study found that companies in low-tech industries used derivatives more than those in high-tech industries, possibly as a result of the negative effects of the ownership concentration. In addition, the study found that companies in the high-tech industry were positively correlated with the use of derivatives in general in international operations [8]. Shaowen, S. pointed out that with the rapid development of social economy and science and technology, the original derivative financial instruments have been unable to meet the needs and development of enterprises. Due to the influence of economic globalization, the financial market environment is becoming more and more complex, and the competition between commodities is becoming more and more fierce. Therefore, it is necessary to strengthen the financial management of enterprises, constantly update the derivative financial instruments, effectively apply them to the actual financial management of enterprises and promote the long-term and stable development of enterprises [9].

The use of derivatives plays an important role in reducing the standard deviation and systemic risk of stock returns, especially for companies with foreign exchange or interest rate derivatives. Companies use derivatives more for risk management than for trading purposes [10].

Based on the aforementioned research status, this paper aims to delve into the hedging strategies employed by Apple Inc. in its derivatives trading. Specifically, this paper will analyze the motivations behind Apple's derivatives trading hedging, elucidate its transaction process and characteristics, and

through the study of actual cases, reveal how Apple effectively manages market risks, optimizes its capital structure, and stabilizes its financial performance through derivatives trading. Furthermore, this paper will explore the impacts of Apple's derivatives trading hedging strategies on the company itself, as well as on investors, financial market stability, and even global economic dynamics. It is intended to provide valuable insights into financial theory research, corporate risk management procedures, and investor decision-making.

2. Company Introduction and Motivation

2.1. Company Introduction

Apple (Apple Inc.) is one of the most influential technology companies in the world, based in Cupertino, California. Since its foundation in 1976 by Steve Jobs, Steve Wozniak and Ronald Wayne, Apple has grown from a computer manufacturer to a combination of hardware, software, services and solutions. Apple's product line covers iPhone smartphones, iPad tablets, Mac PCs, and Apple Watch wearable devices, each of which has won widespread acclaim from consumers around the world for its excellent performance, innovative design, and excellent user experience. At the same time, Apple also provides a wealth of online services, such as iCloud, iTunes Store and App Store, to bring a convenient digital life experience to users. As one of the most valuable tech companies, Apple continues to lead the global tech industry. Apple's success is reflected not only in its excellent product design and market influence but also in its efficient financial management and risk management strategies.

2.2. Motivation

Apple's motivation for derivatives trading, especially its hedging strategy, mainly comes from the following aspects:

Risk management needs: As a global company, Apple faces many risks from the market, exchange rates, interest rates, and commodity prices. Derivatives trading has become an important means of managing these risks. Through a reasonable hedging strategy, Apple can reduce the impact of market fluctuations on the company's financial position and market performance, and protect the interests of shareholders.

Stable financial performance: Apple hedges exchange rate and interest rate risks through derivatives trading, which can reduce the negative impact of exchange rate fluctuations and interest rate changes on the company's costs and revenue, thus stabilizing financial performance. This is essential to maintaining the company's good image and reputation in the capital markets.

Optimizing capital structure: Derivatives trading will also help Apple optimize its capital structure. Through reasonable leverage operation and risk management strategies, Apple can more effectively use capital, improve the efficiency of capital use, and enhance the competitiveness and profitability of the company.

Meeting investors' expectations: investors have high expectations for the risk management ability of enterprises. By actively adopting the derivatives trading hedging strategy, Apple can show investors its sound risk management ability and financial transparency and enhance their confidence and support.

To sum up, the motivation for Apple's derivatives hedging strategy mainly comes from risk management needs, stabilizing financial performance, optimizing capital structure and meeting investors' expectations. Together, these drivers drive Apple's active participation and continuous innovation in the derivatives trading market. Therefore, hedging through derivatives trading allows Apple to effectively lock in future revenue or costs, reducing the uncertainty caused by market volatility, and thus ensuring its financial robustness and long-term competitiveness. At the same time,

a reasonable hedging strategy also helps to enhance investor confidence, maintain the stability of the company's stock price, and lay a solid foundation for the long-term development of the company.

3. Transaction Process and Characteristics

Apple's hedging strategy in derivatives trading is a complex and delicate process, whose core goal is to reduce market risks, optimize its capital structure and stabilize financial performance through reasonable operation of financial instruments.

3.1. Transaction Process

First, Apple's risk management team will conduct a comprehensive market risk assessment, including exchange rate risk, interest rate risk, commodity price risk, etc. A thorough study of market trends will identify key factors that may affect company performance. Based on the risk assessment results, the company will formulate corresponding derivatives trading strategies according to its own risk tolerance, business objectives, market environment and other factors. These strategies are designed to hedge against potential market risks by buying or selling different types of derivatives (such as forward contracts, options, swaps, etc.). After the strategy is formulated, the company's trading team is responsible for performing specific trading operations. They will find the best counterparties and trading conditions in the global financial markets to ensure their effectiveness and cost-effectiveness. Derivative trading is a dynamic process, and changes in the market environment may make the original strategy no longer applicable. As a result, Apple's risk management team continues to monitor market dynamics and adjust its trading strategies as needed to ensure that the hedging effect is maximized. Finally, the company will evaluate the performance effect of derivatives trading and analyze whether the trading has achieved the expected risk management objectives. At the same time, the evaluation results will be fed back to the relevant departments and personnel to provide a reference for the development of future trading strategies.

3.2. Characteristics

Highly integrated risk management: Apple's derivatives trading hedging strategy is an important part of its overall risk management framework. Through close integration with other risk management measures (such as internal control, insurance, etc.), the company is able to manage market risk more effectively.

Diversified derivatives portfolio: In order to fully hedge the risks in different markets, Apple trades in multiple types of derivatives. This diversified portfolio of derivatives helps to reduce the impact of single-market risk on the company's performance.

Flexible trading strategy: Apple's derivatives trading strategy will be flexible according to changing market conditions. This flexibility enables the company to better adapt to the complex and volatile market environment and maintain effective and forward-looking risk management strategies.

Strict risk control: In the process of derivatives trading, Apple pays attention to the rigor of risk control. By setting reasonable stop-loss points, limiting trading lines and other measures, the company can effectively control trading risks and avoid the expansion of potential losses.

Emphasis on long-term value: Apple's derivatives hedging strategy focuses not only on short-term risk management but also on the creation of long-term value. Through a reasonable hedging strategy, the company can lock in future earnings or costs and reduce the uncertain impact of market fluctuations on the long-term development of the company.

Apple's hedging strategy in derivatives trading is characterized by highly integrated integration, diversification, flexibility, strict risk control and long-term value orientation. Together, these features

constitute an important guarantee for Apple to successfully manage market risk, optimize its capital structure and stabilize its financial performance.

4. Insights

Through further research into Apple's derivatives trading hedging strategy, we can draw some important implications. First, Apple's derivatives trading strategy fully demonstrates the core position of risk management in modern enterprise operations. In the face of the complex and changeable financial market environment, enterprises need to reduce uncertainty through effective risk management means to ensure financial stability and long-term competitiveness. Apple's practice shows that through derivatives trading hedging strategies, companies can significantly reduce the impact of exchange rate and interest rate fluctuations on the company's costs and revenue, thus stabilizing financial performance. Then, Apple's derivatives trading strategy is highly flexible and adaptable. The company can adjust the trading strategy in time according to the changes in the market conditions to ensure the effectiveness and forward-looking of the risk management measures. This flexibility not only helps companies cope with market volatility but also remain competitive in different economic cycles. At the same time, Apple's derivatives hedging strategy focuses not only on short-term risk management but also on long-term value creation. Through a reasonable hedging strategy, the company can lock in future earnings or costs and reduce the uncertain impact of market fluctuations on the long-term development of the company. This long-term value orientation helps enterprises to achieve sustainable development and enhance investor confidence. Apple's derivatives trading hedging strategy is also an important part of its integrated risk management framework. By close combination with other risk management measures such as internal control and insurance, the company can manage market risks more effectively. This highly integrated risk management framework provides a comprehensive risk guarantee for enterprises and helps to improve overall operational efficiency and competitiveness. Finally, Apple's active participation and continuous innovation in the derivatives market have set a benchmark for in risk management. The company constantly adjusts and optimizes its trading strategies according to market changes to adapt to new risks and challenges. This spirit of continuous optimization not only helps enterprises to maintain their leading position but also can provide useful reference and reference for other enterprises.

5. Conclusion

This paper deeply studies the hedging strategy of Apple company derivatives trading, analyzes its motivation, trading process and characteristics, and obtains the main findings and enlightenment. Apple's derivatives trading strategy is well in risk management, flexibility, long-term value orientation, integrated risk management framework, and innovation and continuous optimization. Together, these characteristics constitute an important guarantee for Apple to successfully manage market risks, optimize its capital structure and stabilize its financial performance. Looking ahead, with the continuous development of the financial market and the increasing demand for enterprise risk management, derivatives trading will play a more important role in the operation of enterprises. The successful experience of Apple provides a useful reference and reference for other enterprises and helps to promote the continuous progress and development of the whole industry in the field of risk management.

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