

## **United Parcel Service Financial Challenges in a Developed or Developing Nations**

**Dr. Rossano V. Gerald<sup>1</sup>**

### **Abstract**

---

A strong international logistics operation will require that managers be prepared to function effectively and efficiently in a global environment. As a result, the international shipping industry must understand the complexities of the global financial system and volatility of the foreign exchange market. Therefore, multinational corporations are using derivatives to reduce exchange rate volatilities cause by foreign exchange rates currencies, interest rates fluctuations and other financial risk factors while doing business abroad. Market risk in the international shipping industry has exposed this entity to market uncertainty and local exchange rate risk when operating an international business environment. Therefore, a supply chain manager strategy plan must be able to adapt the local financial market to achieve the organization's goals and objectives and ensure that they have the resources to over come any market risks caused by the global financial market. This research paper will addresses how international logistics industry will resolve foreign exchange rate risks and interest rate risks while operating in developed or developing nations.

---

### **Introduction**

Today supply chains industries are becoming global competitors in the international shipping industry. The international trade activity is creating businesses that are transporting manufactured goods and products cross international borders.

---

<sup>1</sup> D.B.A. (International Business), Concordia Univ. San Antonio TX, U.S.A.  
E-mail: rgerald.gerald@concordia.edu, Cell Phone: 210-382-5229

Supply chain managers are implementing international logistics operation systems that can adjust to a volatile foreign currency and interest rates that provide revenue and profit for their global distribution systems. For instance, United Parcel Service is a multinational corporation that is based on integrated logistics network system, in which package products are been delivered to a global market. By implementing a unique financial strategy, it enabling them to improve service, introduced new products, and expand their market. However, "the international shipping industry has certain characteristics, which make it particularly vulnerable to exchange rate risk." (Akatuska & Leggate, 2001, p.235)

For instance, United Parcel Service (UPS) is exposed to certain market risks from changes in the foreign exchange market. These foreign risks in the international logistics business are related to its transportation structure, revenue, operating costs and financing transactions in currency other than their local currencies while operating abroad. Effective global supply chain management system depends on favorable currency fluctuation within the foreign exchange rates. Exchange rates are volatile financial instruments that rarely move in the same directions. As a result, multinational corporations' assets and liabilities denominations of foreign currencies are impacted by fluctuating exchange rates. Therefore, exchange rate fluctuations between foreign currencies and the US dollar can impact the performance of the international logistics industry in terms of operating costs and profit gains. "Market risk generated by price volatility of underlying financial assets is a major source of exposure for derivatives participants. Since many derivatives are highly leveraged, a small change in interest rates, equity prices, or exchange rates may cause major changes in interest rates, equity prices, or exchange rates may cause major changes in the values of derivatives products." (McClintock, 1996, p.24)

As a result, UPS is exposed to market risk from changes in foreign currency exchange rates and interest rates. This market risks comes from conducting business in a global environment. According to UPS's finance department, its has integrated global business model that evaluates the financial market risks primarily due to changes in the exchange rates and interest rates markets. This organization is using various financial instruments such as forward contract, options and swaps to levitate market risk in a global economy. This paper will analyses UPS's Annual Report (2004) to address how this organization can reduce foreign exchange rates and interest rates risks by using derivatives instruments that allows it to hedge against market volatility.

## Review of the Literature

### Foreign Exchange Rates Risk

United Parcel Service is exposed to currency risk from the potential changes in functional currency values of its foreign currency-denominated assets, liabilities, and cash flows. This foreign exchange exposure is related to currencies such as the Euro, the British Pound Sterling and the Canadian Dollar. By using a combination of purchased and written options and forward contracts to hedge cash flow currency exposures. These derivative instruments generally cover forecasted foreign currency exposures for period up to one year. "Derivatives possess a range of characteristics that make them desirable as assets. These instrument values are linked to the value of other assets without the holder of the derivative having to take a fully paid up position in the other assets." (McClintock, 1996, p.17)

This financial contracts is assets based on the value of commodities, foreign exchange, bonds and stocks. By taking the form of futures, options, swaps and interest. Its present value is equal to the future exchange rates within that market. Therefore, its value will change occurring to the market valuations and the contract agreement during that time period. Thus, the link between derivatives and exchange rate seems to be an important hedging instrument that explains association between translation and transaction exposures.

### Transaction vs. Translation Hedging Strategy

Which foreign exchange exposure is best suited for this international logistics entity? According to Hagelin and Pramborg (2004), "Transaction exposure to currency risk refers to potential changes in the value of future cash flows as a result of unexpected changes in exchange rates. If competently executed, transaction exposure hedges should reduce the variability of cash flows and consequently the variability of firm value. Translation exposure, on the other hand, arises as the financial accounting statements of foreign affiliates are translated into currency of the parent firm." ( p.3). For example, UPS's financial management department is translating the results of operations of their subsidiaries using average exchange rates during each period, whereas balance sheet accounts are translated using exchange rates at the end of each period.

Balance sheet currency translation adjustments are recorded in other comprehensive income (OCI). Net currency transaction gains and losses included in other operating expenses were pre-tax gains of \$44 million in 2004. Therefore, the company policy is to use derivatives financial instruments only to the extent necessary to manage exposures. While using price sensitive instruments to hedge a certain portion of their existing and anticipated transactions; any loss in value for those instruments generally would be offset by increase in the value of those hedging transactions. As a result, foreign exchange exposure is reduced when hedging translation exposure and transaction exposures are used as financial instruments. In other words, "a successful hedging program may increase shareholder value by reducing costs related to different market imperfections." (Hagelin and Pramborg, 2004, p.15)

However, developed and developing nations might require different hedging programs to reduce foreign exchange rates risks in those regions. UPS's financial analysts found that currency derivatives markets are not readily available in developing nations. For example, Latin America and Asia Pacific nations are starting to use derivatives as hedging instruments in way to reduce foreign exchange exposure and increase indirect foreign investment for their economic markets. Therefore, cross-hedging should be used, because it expands the opportunity set of hedging alternatives. As a result, multinational firms exposed to currencies of these countries are able to reduce their foreign exchange risk exposure and at the same time attract foreign investors. (Chang & Wong, 2003). Since derivatives instruments could be used to forecast foreign currency exposures in a global financial environment. Then UPS must use different options and swaps contracts to hedge cash flow currency exposures and reduce market risk.

### The Management of Derivatives Instruments

How derivatives are been use to reduce risks caused by foreign currency exchange and interest rates? "Since many derivatives involve cross-border trading, the derivatives market has led to increased international financial fragility and the attendant need for greater supranational governance of derivatives." (McClintock, 1996, p.13). As a result, UPS doe not engage in speculative trading activities; the company use valuation models to evaluate the sensitivity of the fair value of financial instruments with exposure to market risk that assume instantaneous, parallel shifts in exchange rates and interest rate yield curves.

For example, derivatives that not designated as hedges must be adjusted to fair value through income. If a derivative is designated as a hedge, depending on the nature of the hedge, changes in its fair value that are considered to be effective, as defined, either offset the change in fair value of the hedge assets, liabilities, or firm commitments through income, or are recorded in OCI until the hedge item is recorded in income. Any portion of a change in a derivative's fair value that is considered to be ineffective, or is excluded from the measurement of effectiveness, is recorded immediately in income. Therefore, UPS is using financial hedging to reduce risk associated with currency derivatives and or/ foreign denominated debt.

According to McClintock (1996), derivatives instruments take the form of futures, options, and interest and currency swaps. They are contractual agreements for future exchange of assets whose present value are equal; however, the value of the derivatives will change over the term of the contract as market valuations the value of each side of the contract." (p.15). To manage the market volatility pertaining to these contractual agreements; UPS has implemented policy and practice that allow them to manage fluctuations in earning and cash flows associated with changes of assets and liabilities exposure caused by using these derivatives. In doing so, UPS can take advantage of those financial instruments such as forward contracts and swaps. Thus, how these derivatives are used in the local market determine the success of the contractual agreement. According to UPS's financial department, they are using forward contracts, swaps and options to minimize credit market risk exposures for these instruments by limiting the counterparties to large banks and financial institutions to their established credit guidelines. This is main reason why; "bank and non-financial corporations have sought to transfer interest rate risk by arbitrage activities using derivatives either to take advantage of difference in the cost of capital between credit markets or gain from temporary divergences in prices between derivatives and their underlying assets. Banks generate fee income from derivatives trade and take uncovered positions to speculate in the hope of attaining capital gains. (McClintock, 1996, p.18)

### Interest Rate Risks

As a result, UPS are using interest rate swaps and cross-currency interest rate swaps, as financial instrument in order to manage the fixed and floating interest rate mix of their total debt and leverage cost.

Because swaps requires small amount of principal, this allows them to maintain a target ranges of floating rate debts. In return, UPS can swap their fixed interest rate loan for floating rate loan of a counterparty resulting in an interest rate swap. According to UPS's financial managers, the company floating rate debt and interest rate swaps risks are due to changes in short-term (i.e. LIBOR) market. "There is some market risks related to the interest rate used on the hedge for the floating leg of the swap. Typically the floating rate is a publicly available benchmark rate such as LIBOR, which is determined as the average of LIBOR posted on a publicly available financial news service by a number of reference banks. The identity of the banks providing the LIBOR used to compute the average is determined by industry convention, and can change from time to time." (Klein, 2004, p.49). Therefore, UPS's annual interest expense changes are resulting form a hypothetical 100 basis point change in short-term interest rates applied to their floating rate debt and swap instruments of \$29 million for this period.

#### Option, Forward contracts and Swaps Risks

As far as cross-currency swaps, the organization could swap a loan denominated in U.S. dollar for a loan denominated in British Pound Sterling to reduce interest rates and foreign exchange risk during term of their contractual agreement. For example, the organization's foreign currency exposure is due to the Euro, the British Pound Sterling, and Canadian Dollar. They use a combination of purchase and written options and forward contract to hedge currency cash flow exposure. These contract accounts are cash flow hedges that anticipate foreign currency denominated revenue in which gains and losses from these hedges are accounted on the international revenue statement for this period. "This assumption is relatively sound for short-dated forward contract, because the market maker is unable to hedge at risk-less or repo rates longer-dated maturities. This point is particularly important because most swaps have relatively long terms to maturity of between two and five years." (In, Brown & Fang, 2003, p.85)

As a result, options positions strategy is used as hedging tool were the underlying asset market is based on these derivative instruments. This dynamic hedging strategy is creating linkage between derivatives and underlying asset prices, which might change its initial price, because of its adjustment towards the written options positions. (McClintock, 1996). Therefore, UPS is maintaining their cross-currency interest rates swaps through 2009.

These derivatives instruments are allowing the organizations to account for those contracts as either hedges of the fair value of the associated debt instruments, or as hedges of the variability in expected future interest payments. Also, "It is also important to recognize that when it hedges a swap, the market maker is simultaneously hedging a series of fixed-and-floating-rate exchange that occur over the life of the swap." (Klein, 2004, p.49)

### International Package Operation Revenue

These derivatives financial instruments are benefiting the UPS's international segment by increasing export volume to 12.5 percent from 8.5 percent, operating profit each all time high of \$1 billion, and operating margins increased to 16.6 percent from 10.5 percent, which is leading all other international package industries. For example, the organization's international package revenue has increased 21.6% from last year report of 12.5% due to the currency fluctuations. This increase in operating profit was due export volume that grew by double-digit due to Asia-Pacific, China and the European Union countries. As a result, the international package revenue increase by \$231 million due to better forecasted foreign currency exposures for this time period. According to UPS's financial department, its international average daily package volume increase 7 percent and export revenue per piece increase by 9.0 percent for this period due to (3% and 6% currency adjustment) their geographical markets. There are market risks involved for exporting firms and currency inventory practices that might cause appreciation or depreciation of export revenues, if there is an increase exchange risk, and then the net effect could be negative. UPS's Financial-decision makers might be advised to remember exchange risk when considering market intervention to stimulate export revenues. (Fang & Thompson, 2004).

Hence, UPS's international financial strategy is influenced by the foreign exchange currency risk and interest rates risk of other countries such as Asia-Pacific, China, Canada, and European Union. These countries international monetary policies are influencing UPS's global small package delivery business for those geographical regions. As a result, UPS's international financial tactics are benefiting their international small package operation by increasing its revenue up to 12 percent, profitability up 58 percent, and volume up 7 percent in these underlying regions such as Europe, Asia and China. This plan should help UPS when seeking new growth opportunities in this global business environment.

Also, UPS's financial position will enable them to reinvest capital into their business, thus reduce finance cost, and offset anticipate cash inflow due to exposure from currency exchange rate and interest rate risks.

## **Summary**

This study revealed that UPS's Annual Report (2004) is providing information on their domestic, international and supply chain operations. These financial factors are crucial in the assessment of the company's international operation in how they are using financial instruments to reduce finance cost and increase shareholder wealth. As a market participants in the foreign exchange market (i.e. institutional investors or non-financial corporations), they are using derivatives instruments to reduce foreign exchange exposure and transferring interest rate risk by arbitrage activities that gives them an advantage of using the cost of capital between credit markets or gain from temporary divergences in prices between derivatives and their underlying assets. (McClintock, 1996). Thus, UPS's financial strategy is providing consistency in revenue and earning growth for this corporation and their subsidiaries.

Future research recommendation Future research needs to be conducted on how UPS's financial strategy is influence when the systemic risk factors are causing financial shocks in their international business environments. "Systemic risk refers to the vulnerability of the financial system to shock. Risk faced by individual firms may be magnified into systemic risk, the larger the firm is in relation to the size of the market and the more integrated its market relationships with other major participants. Financial markets under capitalism are periodically subject to shocks that generate the possibility of systemic failure. At the close of the century, because of the high proportion of cross-border derivatives transactions, systemic risk takes on a more international character. (McClintock, 1996, p.26)

What kind international financial strategy could be implemented by UPS to reduce systemic risk in a volatile foreign exchange market? It would be interesting to examine what geographical financial markets are designed to prevent systemic failure due to increase derivatives trading and lack of transparency associated with swaps among developed or developing nations. Because these financial factors are important in determining how international market pricing volatilities and derivatives instruments are influencing the UPS's underlying assets while operating in this global financial market.



## References

- Akatuska, K., & Leggate, H. K. (2001). Perceptions of foreign exchange rate risk in the shipping industry. *Maritime Policy & Management*, 28(3), 235-249.
- Barton, J. (2001). Does the use of Financial Derivatives affect earnings management decision?. *The Accounting Review*, 76(1), 1-26.
- Brooks, R., Edison, H., Kumar, M. S., & Slok, T. (2004). Exchange rates and Capital Flows. *European Financial Management*, 10(3), 511-533.
- Chang, E. C., & Wong, K. P. (2003). Cross-hedging with currency options and futures. *Journal of Financial and Quantitative Analysis*, 38(3), 555-568.
- Collin-Dufresne, P., & Solnik, B. (2001). On the Term Structure of Default Premia in the Swap and LIBOR. *The Journal of Finance*, LVI(3), 1095-1114.
- De Vita, G., & Abbott, A. (2004). The impact of exchange rate volatility on UK exports to EU countries. *Scottish Journal of Political Economy*, 51(1), .
- Fang, W. S., & Thompson, H. (2004). Exchange rate risk and export revenue in Taiwan. *Pacific Economic Review*, 9(2), 117-129.
- Hagelin, N., & Pramborg, B. (2004). Hedging foreign exchange exposure: risk reduction from transaction and translation hedging. *Journal of International Financial Management and Accounting*, 15:1, 1-19.
- Hatemi-j, A., & Irandoust, M. (2000). Exchange rates and interest rates: can their causality explain international capital mobility?. *International Trade Journal*, XIV(3), 299-313.
- In, F., Brown, R., & Fang, V. (2003). Links among interest rate swaps markets: U.S., U.K., and Japan. *The Journal of Fixed Income*, , .
- Klein, P. (2004). Interest rate swaps: Reconciliation of models. *The Journal of Derivatives*, , 46-59.
- McClintock, B. (1996). International financial instability and financial derivatives market. *Journal of Economic Issues*, , 14-33.
- Peterson, S., Stapleton, R. C., & Subrahmanyam, M. G. (2003). A Multifactor Spot Rate Model for the pricing of Interest Rate Derivatives. *Journal of Financial and Quantitative Analysis*, 38(4), 847-900.
- Rutkowski, M. (1999). Model of Libor and swaps. *Applied Mathematical Finance*, 6, 29-60.
- United Parcel Service (2004, December 31). UPS Annual Report 2004. Retrieved December 9, 2004, from [www.ups.com](http://www.ups.com) and interviews were conducted with the finance department personnel