**Translation Risk Exposures**

Didem B. Aykurt

Colorado State University Global

FIN575: International Financial Management

Dr. Mustafa Sayim

August 18, 2024

**Comprehensive Analysis of Foreign Currency Translation Methods and Financial Performance of Multinational Corporations**

Translation exposure, also known as accounting exposure or translation risk, refers to the risk that a company’s financial statements will be affected by changes in exchange rates. This type of exposure arises when a multinational company consolidates its financial statements, which include assets, liabilities, equities, and income from foreign subsidiaries, into its home currency. Translation exposure occurs because the financial statements of foreign subsidiaries are typically denominated in the local currency of the country where they operate. When these financial statements are consolidated into the parent company’s financial statements, they must be translated into the parent company’s reporting currency. Fluctuations in exchange rates between the local currency and the reporting currency can lead to changes in the reported value of the foreign subsidiaries’ assets, liabilities, and income. Translation exposure can result in what appears to be a financial gain or loss due to changes in exchange rates, even though the actual economic value of the assets or liabilities has not changed. There are four main methods of foreign currency translation:

Current/Noncurrent Method: Current assets and liabilities are translated at the current exchange rate. In contrast, noncurrent items are translated at historical rates or matched with the rates when they were acquired or incurred. Current Assets and Liabilities are translated at the current exchange rate. Noncurrent Assets and Liabilities translated at historical exchange rates.

Monetary/Nonmonetary Method: Monetary items are translated at the current exchange rate, while nonmonetary items are translated at historical rates. Monetary items include cash, receivables, and payables, translated at the current exchange rate. Nonmonetary items include inventory, fixed assets, and long-term investments, translated at historical exchange rates. This method distinguishes between items that represent a fixed amount of currency (monetary) and those that do not (nonmonetary), translating them accordingly.

Temporal Method: Monetary items are translated at the current exchange rate, nonmonetary items at historical rates, and revenue and expenses at the exchange rate on the date they were recognized or a weighted average rate. This method aims to reflect the current value of monetary items while maintaining the historical cost of nonmonetary items.

Current Rate Method: All assets and liabilities are translated at the current exchange rate, while equity items are translated at historical rates. Revenue and expenses are translated at the exchange rate on the date they were recognized or a weighted average rate.

Each method has its own advantages and is chosen based on the specific circumstances and accounting standards applicable to the company. Understanding these methods helps in accurately reflecting the financial performance and position of multinational corporations in their consolidated financial statements

Effective management of translation exposure is crucial for multinational companies to ensure accurate financial reporting and mitigate the impact of exchange rate fluctuations on their financial statements. Companies may use various hedging strategies, such as forward contracts and options, to manage translation risk and stabilize their financial results. Translation exposure is essential for financial analysts, accountants, and managers in multinational corporations, as it directly affects the accuracy and reliability of financial reporting and the perceived financial health of the company.

Examples:

1. To calculate General Electric’s (GE) translation exposure using four different methods based on the following financial data:

Current Assets: $401 billion

Fixed Assets: $797 billion

Current Liabilities: $323 billion

Long-term Liabilities: $0

1. Current/Noncurrent method:

In the current/noncurrent method, current assets and liabilities are translated at the current exchange rate, while noncurrent assets and liabilities are translated at historical rates. Since we don’t have historical rates, we can’t calculate the exact exposure using this method.

1. Monetary/Nonmonetary Method:

In the monetary/nonmonetary method, monetary items are translated at the current exchange rate, while nonmonetary items are translated at historical rates. Given the provided data, we can’t distinguish between monetary and nonmonetary items, so we can’t calculate the exact exposure using this method.

1. Temporal Method:

The temporal method translates monetary items at the current exchange rate and nonmonetary items at historical rates. Since we don’t have historical rates, we can’t calculate the exact exposure using this method.

1. Current Rate Method:

The current rate method translates all assets and liabilities at the current exchange rate. Since we don’t have the current exchange rate, we can’t calculate the exact exposure using this method.

**Summary**

Based on the provided information, we can’t calculate GE’s translation exposure using any of the four methods because we lack the necessary historical and current exchange rates. However, we can revisit these calculations if we have additional data or specific exchange rates.

**2)** To analyze Toyota’s translation exposure and calculate the translation gains or losses over two years based on the following scenarios:

**Year 1:**

Exposed Assets: ¥7 billion

Exposed Liabilities: ¥5 billion

Exchange Rate Change: Yen appreciates from ¥110/$ to ¥80/$

Task: Calculate Toyota’s net translation exposure in yen and dollars at the beginning of the year. Determine the translation gain or loss from the change in the yen’s value.

**Year 2:**

Additional Exposed Assets: ¥1.5 billion

Additional Exposed Liabilities: ¥2 billion

Exchange Rate Change: Yen depreciates from ¥80/$ to ¥115/$

Tasks: Calculate Toyota’s translation gain or loss for the year. Determine Toyota’s total translation gain or loss for the two years.

1. **Net Translation Exposure at the Beginning of the Year in Yen**

Net Translation Exposure = Exposed Assets – Exposed Liabilities

= ¥7 billion - ¥5 billion

= ¥2 billion

**Net Translation Exposure in Dollars**: At the beginning of the year, the exchange rate is ¥110/$.

**Net Exposure in Dollars** = ¥2 billion / ¥110/$ = $18.18 million

1. **Translation Gain or Loss from Yen Appreciation**

During the year, the yen appreciates from ¥110/$ to ¥80/$.

Net Exposure in Dollars at the End of the Year = ¥2 billion / ¥80/$ = $25 million

Translation Gain = $25 million - $18.18 million = $6.82 million

1. **Translation Gain or Loss for the Next Year**

At the start of the next year, Toyota adds exposed assets of ¥1.5 billion and exposed liabilities of ¥2 billion.

New Exposed Assets: ¥7 billion + ¥1.5 billion = ¥8.5 billion

New Exposed Liabilities: ¥5 billion + ¥2 billion = ¥7 billion

New Net Exposure in Yen = ¥8.5 billion - ¥7 billion = ¥1.5 billion

During the year, the yen depreciates from ¥80/$ to ¥115/$.

Net Exposure in Dollars at the Start of the Year:

Net Exposure in Dollars = ¥1.5 billion / ¥80/$ = $18.75 million

Net Exposure in Dollars at the End of the Year:

Net Exposure in Dollars = ¥1.5 billion / ¥115/$ = $13.04 million

**Translation Loss** = $18.75 million - $13.04 million = $5.71 million

1. **Total Translation Gain or Loss for the Two Years**

Total Gain or Loss = $6.82 million - $5.71 million = $1.11 million

**Summary**

**Net Translation Exposure at the Beginning of the Year:** ¥2 billion or $18.18 million

**Translation Gain from Yen Appreciation:** $6.82 million

**Translation Loss from Yen Depreciation:** $5.71 million

**Total Translation Gain or Loss for the Two Years:** $1.11 million net gain

1. To analyze the financial performance of Renben Corp, a US-based multinational corporation with a British subsidiary, over two years based on the following scenarios:

Year 1:

Earning in GBP: £10,000,000

Exchange Rate: $1.70/£

Task: Calculate the translated earnings in USD. Based on 10,000,000 shares outstanding and a P/E ratio of 20, determine the valuation of the firm's stock.

Year 2:

Earning in GBP: £10,000,000

Exchange Rate: $1.50/£

Task: Calculate the translated earnings in USD. Based on 10,000,000 shares outstanding and a P/E ratio of 20, determine the valuation of the firm's stock.

1. **Translated Earnings**

Year 1:

Translated Earnings in USD: £10,000,000 \* 1.70 = $17,000,000

Year 2:

Translated Earnings in USD: £10,000,000 \* 1.50 = $15,000,000

1. **Valuation of the Firm’s Stock**

**Year 1:**

Translated Earnings: $17,000,000

Shares Outstanding: 10,000,000

Earning Per Share (EPS): $17,000,000 / 10,000,0000 = $1.70

P/E Ratio: 20

Stock Valuation: $1.70 \* 20 = $34

Year 2:

Translated Earnings: $15,000,000

Shares Outstanding: 10,000,000

Earnings Per Share (EPS): $15,000,000 / 10,000,0000 = $1.50

P/E Ratio: 20

Stock Valuation: $1.50\*20 = $30

**Summary**

**Year 1:**

**Translated Earnings:** $17,000,000

**EPS:** $1.70

**Stock Valuation:** $34

**Year 2:**

**Translated Earnings:** $15,000,000

**EPS:** $1.50

**Stock Valuation:** $30

**Conclusion**

Based on the provided data, it is not possible to calculate General Electric’s (GE) translation exposure using the current/noncurrent, monetary/nonmonetary, temporal, or current rate methods due to the lack of necessary historical and current exchange rates. This highlights the importance of having comprehensive financial data, including exchange rates, to accurately assess translation exposure. Understanding and managing translation exposure is crucial for multinational corporations like GE, as it can significantly impact their financial statements and overall financial health. Effective currency risk management strategies are essential to mitigate the effects of exchange rate fluctuations on the company’s financial performance.

Toyota’s financial performance over the two years demonstrates the significant impact of currency fluctuations on its financial results. In the first year, Toyota experienced a translation gain of 6.82 million due to the appreciation of the yen from ¥110/ to ¥80/$. This gain reflects the positive effect of a stronger yen on the company’s net exposed assets. However, in the second year, Toyota faced a translation loss of 5.71 million as the yen depreciated from ¥80/ to ¥115/$. This depreciation negatively affected the value of Toyota’s net exposed assets when translated to dollars. Overall, Toyota achieved a net translation gain of $1.11 million over the two-year period. This analysis underscores the importance of managing currency risk for multinational corporations like Toyota, as exchange rate movements can significantly influence financial performance and reported earnings.

Renben Corp’s financial performance over the two years shows a notable impact from exchange rate fluctuations. In Year 1, the British subsidiary’s earnings translated to $17 million, resulting in an earnings per share (EPS) of $1.70. A prevailing P/E ratio of 20 led to a stock valuation of $34 per share. However, in Year 2, despite the subsidiary earning the same amount in GBP (£10 million), the appreciation of the USD against the GBP (from $1.70/£ to $1.50/£) resulted in lower translated earnings of $15 million. Consequently, the EPS dropped to $1.50, and the stock valuation decreased to $30 per share. This analysis highlights the significant influence of currency exchange rates on the financial performance and stock valuation of multinational corporations like Renben Corp. It underscores the importance of effective currency risk management strategies to mitigate the impact of exchange rate volatility on financial results.

**References**

Srivastav, A. (2024). Foreign Currency Translation. https://www.wallstreetmojo.com/foreign-currency-translation/

Bank, E. (2019). Foreign Currency Translation Methods. https://smallbusiness.chron.com/foreign-currency-translation-methods-65176.html

Taylor, B. (2022). Foreign Currency Translation: Definition, Process and Examples. https://softledger.com/blog/foreign-currency-translation-definition-process-and-examples

Liberto, D. (2022). Currency Translation: Accounting Methods, Risks, and Examples. https://www.investopedia.com/terms/c/currency-translation.asp

Hayes, A. (2024). What Is Translation Exposure? Risk Defined, With Example. https://www.investopedia.com/terms/t/translationexposure.asp

CFI Team (n.d.). Translation Exposure. https://corporatefinanceinstitute.com/resources/accounting/translation-exposure/