

# Long-Term Performance Of Foreign Food And Beverage Equities Traded On The New York Stock Exchange: A Look At Investment Opportunities

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## ABSTRACT

*Because of the growth of international trade and the increase in sales and profits in the food and beverage industry in recent years investors may believe there is a great opportunity to reap high returns from foreign equities. Cumulative excess returns from all newly issued foreign food and beverage equities over a 36-month period following the date listed on the New York Stock Exchange are tested for significant differences in performance to determine whether they outperform the S & P 500 returns. Although the 36-month cumulative excess returns are not significant, findings indicate that the food and beverage ADRs performed 13.55 percent lower than the S & P 500 Index which serves as a proxy for the market in general. Food and beverage seasoned equity offerings outperformed initial public offerings.*

## INTRODUCTION

*I*nternational trade occurs because the opportunity costs of producing particular goods and services differ from one country to another. Countries voluntarily trade with one another for their own self-interest. Trading partners specialize in the production of goods and services in which they have a comparative advantage (Arnold, 2005). By exchanging goods and services that each country produces at a lower cost than the other, both trading partners have more goods available in the market and at lower prices than before the trade.

With the advent of free trade agreements such as the General Agreement on Tariffs and Trade (GATT), the North American Free Trade Agreement (NAFTA), and the Asian-Pacific Economic Cooperation (APEC), countries are reaping economic benefits. Because of the benefits of global trade, the United States and other countries are considering more free trade agreements (Tucker, 2005). From 1980 to 2001 world trade more than tripled to \$12.5 trillion and at the same time, the U.S. economy doubled, 35 million jobs were created, the unemployment rate fell, and the Dow Jones Industrial Average multiplied nine-fold (Cox and Alm, 2002). Lower prices of goods produced in foreign markets create greater sales and greater revenues for the producing countries and their firms.

During the past several years, while the U.S. conventional food industry experienced a 3 percent growth rate, annual sales of organic foods has increased by up to 22 percent (Progressive Grocer, Nov., 23, 2004). Annual industry profits have grown to nearly \$27 billion (Bureau of Economic Analysis, 2005). During the same time, imports of food and beverage are steadily increasing (Monthly Statistics of International Trade, Dec., 2004). Food and beverage represent approximately 4 percent of the total U.S. imports (McEachern, 2006). The United States imports food from all over the world: bananas come from Ecuador, coconuts from the Philippines, strawberries from Poland, and tangerines from South Africa.

The growth of international trade may be an opportunity for investors in the United States to reap profits in the food and beverage industry. An increase in trade volume translates into greater sales, higher profits, and potential growth in stock prices and dividends.

To facilitate diversification into the trading of foreign equities, U.S. investors may buy and sell American Depository Receipts (ADRs). This innovation provides investors with the ease and convenience of investing in foreign securities without having to trade on foreign exchanges or in foreign currency. ADRs are created by large U.S. banks that bundle shares of foreign stock that are held in trust. The banks issue a receipt against the shares, denominated into U.S. dollars that reflects the average common share price in the U.S. equity markets. The receipts (ADRs) are traded on the over-the-counter market as well as the U.S. organized exchanges. Cash payments from the foreign firm are converted into dollars and passed on to the ADR owner by the U.S. bank holding the foreign security in trust (Schaub, 2002).

American Depository Receipts may be sponsored or un-sponsored. A sponsored issue is one which the foreign company takes steps to have their stock listed as an ADR in the U.S. equity market. Un-sponsored issues are bundled by the bank without the foreign company's involvement. As of 2000, over 1800 sponsored ADRs are traded in the United States (Johnson, 2000) and account for nearly 30% of the total market capitalization (Investor Relations Business, October 9, 2000).

Diversifying into foreign equities, however, has important disadvantages. Foreign equities traded on the New York Stock Exchange are exposed to greater risks than that of domestic equities. Because the firms are headquartered in foreign countries, there is a high degree of asymmetric information associated with the company. In addition, the price movements of ADRs reflect both the economy of the foreign country and any currency fluctuations (Liang and Mougoue 1996). The primary advantage of the ADR is that it provides the benefit of international diversification (Jiang, 1998) and (Officer and Hoffmeister, 1988).

This study examines the performance of food and beverage equities traded on the New York Stock Exchange. The findings of this study are of great importance to institutional investors and individuals who desire to diversify their investment portfolio into foreign food and beverage securities in an effort to maximize stock returns.

## **PROBLEM**

The problem of this study is to determine whether foreign food and beverage industry equities traded on the New York Stock Exchange earn returns greater than the market return during a 36 month period after the security is issued. A secondary part of the problem is to determine whether returns of foreign food and beverage initial public offerings (IPOs) differ from seasoned equity offerings (SEOs).

## **DATA**

Data are derived from all newly issued food and beverage ADRs listed on the New York Stock Exchange (NYSE) from January 1987 to December 2001. A total of 23 equities are included in the study. Of the 23 ADRs, 11 are beverage equities and 12 are food equities. The foreign equities are further described as 11 IPOs and 12 SEOs.

A limitation of the study is that no adjustments are made to the data for changes in the economic environment of the foreign countries or the U.S. during the study period. Random events that influence stock prices are risks that the investor assumes. The study attempts to observe actual gains or losses that the typical investor may earn during the 3-year holding period.

## METHODOLOGY

Commonly used IPO event study methodology is followed to calculate abnormal returns and test for significance. Cumulative excess returns are examined over a 36-month period following the date the security is listed on the New York Stock Exchange. The S&P 500 Index serves as a proxy for the United States market returns.

The following three equations describe the process for computing excess returns ( $xr$ ), average excess returns ( $AXR$ ), and cumulative excess returns ( $CXR$ ). First, the excess return for each security  $i$  on day  $t$  ( $xr_{i,t}$ ) is computed as the difference between the return of the security on day  $t$  ( $r_{i,t}$ ) and the return of the S&P 500 market index on day  $t$  ( $r_{m,t}$ ). For computing monthly excess returns,  $t$  represents the respective month.

$$(1) \quad xr_{i,t} = r_{i,t} - r_{m,t}$$

Next, the average excess return for the sample for each month  $t$  ( $AXR_t$ ) is derived from the mean of the sum of the excess returns of each of the  $n$  securities during month  $t$ .

$$(2) \quad AXR_t = \frac{1}{n} \left( \sum_{i=1}^n xr_{i,t} \right)$$

Finally, cumulative excess returns as of month  $T$  are computed as the summation of the average excess returns starting at month 1 until month  $T$ .

$$(3) \quad CXR_{1,T} = \sum_{t=1}^T AXR_t$$

P-values for monthly average excess returns ( $AXR$ ) and the cumulative average excess returns ( $CXR$ ) are calculated and tested using a Z-score to determine significance at the .10 alpha level. The respective p-values for these tests are given in the Tables 1 and 2. Cumulative abnormal returns are tested for each month to determine whether the foreign equity is yielding a greater return than S&P 500 Index. A p-value of .10 or less indicates the abnormal return or cumulative abnormal return is significantly different from 0. The p-value is derived from the Z score found in Equation 4.

$$(4) \quad Z \text{ Test} = 1 - \text{Normal Distribution} [(X-U_0)/S/\text{square root } N]$$

where:

X is the sample mean;

$U_0 = 0$  to test that the average is different from 0;

S is the sample standard deviation;

N is the number of monthly returns in the sample;

The normal distribution of the z-score tells the probability that X is not equal to zero. Therefore, a p-value of .10 indicates that there is a 90 percent probability that the foreign equity return differs from the S&P 500 Index return. Calculations are performed through Microsoft Excel.

## FINDINGS

In Table 1, data indicate that the 36-month cumulative excess returns for the food and beverage ADRs is a -13.55%. During the period, 21 months have negative cumulative returns that are significant at the 10% alpha level. Therefore, findings indicate that investments in the foreign food and beverage industry tend to perform poorer than the market as a whole. These findings are contrary to those of Callaghan, Kleiman, and Sahu, (1999), and Sundaram and Logue (1996) that report significant positive abnormal returns for ADRs during the months

after the date of issue. However, the findings of this study are consistent with those of Foerster and Karolyi (2000) and Ritter (1991) that found ADRs under-perform returns of comparable firms by 8-15% during the 36 months following the date of issue.

Looking at the food equities by themselves, the data show a -6.94% cumulative excess return over the three-year period. Of the 36 months, 20 months have relatively large negative returns significant at the 10% alpha level. Beverage equities, however, finish with a -20.77% return. From the investor's standpoint, food ADRs therefore perform relatively better than the beverage equities but both perform worse than the market. Neither the food nor the beverage cumulative excess returns are significant.

Furthermore, it is interesting to discover whether seasoned equity offerings differ from initial public offerings in the foreign food and beverage industry traded on the New York Stock Exchange. Table 2 shows that seasoned equity offerings with a .26% cumulative excess return outperform the initial public offerings with a -28.62% cumulative excess return that is significant at the 10% alpha level. Eleven of the 36 months for the seasoned equity offerings are significant at the 10% alpha level. The findings are consistent with those of Brav and Gompers (1997), Aggarwal, Leal, and Hernandez (1993), Lewis (1993), Huang (1999), Ben Naceur (2000), and Ritter (1991) that found seasoned equity offerings outperform initial public offerings. On the other hand, the findings sharply conflict with those of Dawson (1987), Jayaraman and Tandon (1993), and Martell, Rodriguez, and Webb (1999), that found positive abnormal returns in initial public offerings.

## **IMPLICATIONS AND CONCLUSIONS**

United States institutional investors and individuals trying to reap greater returns by diversifying their portfolios into foreign equities must be selective and use extreme caution. Previous studies indicate conflicting findings as to whether ADRs outperform the market and whether IPOs outperform seasoned equity offerings. Although the food and beverage industry is growing in the United States, the findings reveal that food and beverage ADRs perform poorer than the market as measured by the S&P 500 Index. Of the two items, food equities outperform beverage equities and seasoned equity offerings outperform initial public offerings. As free-trade continues to grow, creating a greater world market, further research is needed that may lead to new and more concise conclusions concerning the returns for the foreign food and beverage industry. Although there are only 23 equities in this study, they represent 100 percent of the food and beverage ADRs traded on the New York Stock Exchange during January 1987 to December 2001. Implications are that investors who wish to maximize returns within the food and beverage industry by diversifying into foreign equities may experience weaker returns than the market in general. Furthermore, investors may reap greater performance in the food industry rather than the beverage industry and purchase seasoned equities that have a proven history.

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**NOTES**