

## Translating Foreign Revenue Into Stock-Speak

The three-volume *Principia Mathematica*, written by Bertrand Russell and Alfred North Whitehead between 1910 and 1913, is regarded as one of the most influential works on logic ever written. Influential, yes, good beach reading, no: It took them well into the second volume to develop the logic needed to state  $1 + 1 = 2$ .

Needless to say this would not go over big in a business where we have to reduce everything to simple buy-or-sell decisions and need quick and plausible justifications therefor. But Russell and Whitehead were on to something: Questions apparently simple on their face can be astonishingly vexing to answer. Consider the following question posed by a RealMoney reader for this site's "Ask Our Pros" section:

When looking at a company's Annual Report, what percent of a company's sales/revenue should be from sources outside the U.S. for the company to benefit from a falling dollar?

### An Unanswerable Question

As an old saying goes, when you're a hammer, all problems look like nails. Each of us has a different skill set and predisposition we bring to this business; my preferred vantage point is to look at things from 30,000 feet as an economist, not from 3 feet as a financial analyst. So I thought here's an opportunity to learn a thing or two by poking around a few income statements just like an anthropologist observing the local customs.

But then I got to thinking about what I had to look for. It is not so much the percentage of foreign revenue, but the source of that revenue. For example, an American firm such as Kellogg, which has done considerable business in Latin America over the decades, has earned Mexican pesos or Brazilian reals. Neither currency has appreciated against the dollar in the long run despite some recent strength in the Brazilian real.

Prior to hedging gains or losses, these earnings would not translate into more dollars if repatriated, but rather fewer. More important, the local subsidiary's dollar costs would increase in local currency, and we can glean nothing from a financial statement about the operating risks, such as taxes, regulations and the purchasing power of the local citizenry. At the end of this exercise, can we arrive at the key number for valuing the firm's operations in that locality, the currency and risk-adjusted expected net operating profit? And can we repeat this exercise across a group of countries, many of whom have currencies moving in different directions from both each other and from the dollar?

Finally, many of the larger components of international trade, such as petroleum and metals, are priced in dollars. Here the currency risk can be minimal for the firm, but not minimal for the firm's customers: Consider how impoverished the South Asian customers of Caltex, the joint venture between what were then the separate companies of Chevron and Texaco, became during the 1997 Asian crisis.

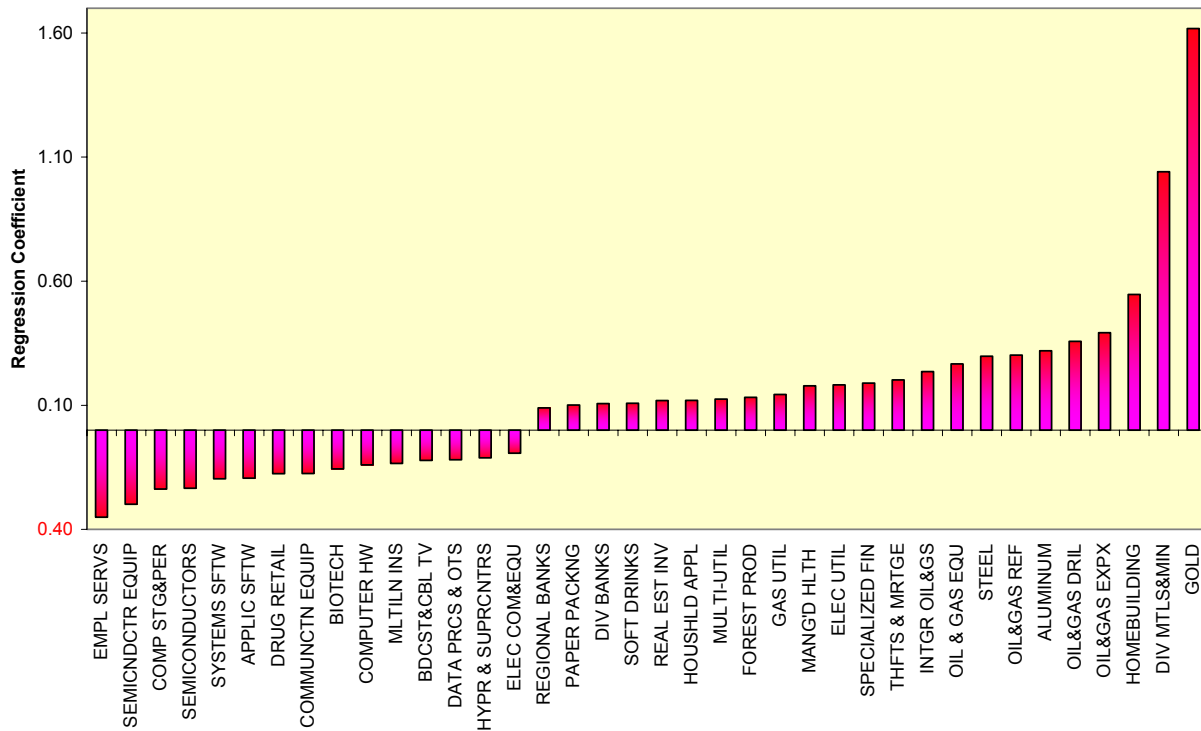
### Back To 30,000 Feet

If the question above cannot be answered except on a company-by-company, currency-by-currency and industry-by-industry basis, can we turn it around and ask which S&P industry groups' stock prices relative to the S&P 500 have benefited or been hurt most by the dollar's gyrations against the euro since the end of the fighting in Iraq at the start of May 2003?

The test is really quite simple. The performance of each of the S&P 500's 113 industry groups against the S&P 500 itself is regressed against the euro. Only 38 of these groups, or one-third, have a statistically significant relationship against the euro at the 90% confidence level, either positive or negative. The most positively correlated of these groups, unsurprisingly is Gold, a group consisting solely of Newmont Mining. The least positively correlated group is Employee Services, a group consisting of Monster Worldwide and Robert Half International.

The correlation map by sector is depicted below. Positive values mean the performance of a group relative to the broad market increased/decreased as the euro strengthened/weakened, and negative values mean the group's relative performance decreased/increased as the euro strengthened/weakened.

## The Euro And S&P Group Relative Performance



### Results

The list at the negative end contains many of the high-tech sectors such as Semiconductor Equipment, Computer Storage and Peripherals, Semiconductors, Systems Software, Application Software, Communications Equipments, Biotech and Computer Hardware. This is a fascinating clustering given the 11.3% annualized rate of return for the S&P Technology Select SPDR over this period and the heavy export business done by these firms.

The list at the positive end is dominated by the usual suspects: Gold, Diversified Metals & Mining, Homebuilding and a large smattering of various energy groups. The presence of the Homebuilders is due simply to fact that both homebuilding and the euro were benefited by low U.S. interest rates. The presence of the various energy groups is due to coincident bull markets in both the euro and in energy (this fundamental analysis stuff isn't as hard as I thought). Energy is a dollar business worldwide, and per the mention above should be more immune to currency translation effects than are other industries.

We could repeat this exercise over longer periods and over a larger set of currencies that simply the euro; this was done for demonstration purposes only. The real point, the answer to the reader's question, is there does not seem to be an income statement effect at work, but rather a set of economic conditions that either benefit or hurt both a currency and an industry concurrently.