

## Currencies And Stocks In Detail

The concept of “culture” is hard to define; most agree it is a shared, learned symbolic system of values, beliefs and attitudes that shape perception and behavior. What we call “Wall Street” certainly has a culture, one which demands a rational explanation for every two-tick move in any market.

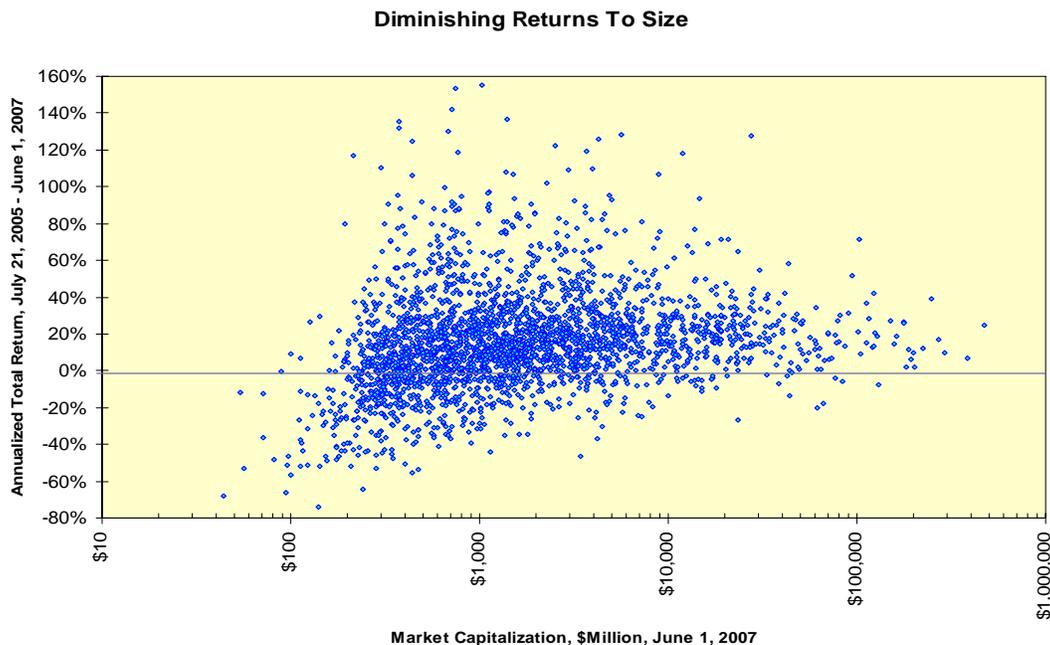
Whether these shared beliefs have any merit is beside the point. Two cases in point are perpetual concerns by Wall Street’s shaman class, those of a declining dollar and of rising energy prices. These concerns are easy to debunk with simple data analysis, but zombies perish more easily.

Other manifestations of voodoo in recent months have been that the U.S. stock market rally has been caused by merger & acquisition activity, a topic addressed here in [May](#), and that the rally has been caused by the weaker dollar somehow propelling larger and presumably more international firms’ higher.

Let’s look at this second myth carefully and in detail over the period since July 2005, the start of China allowing the yuan to revalue.

### Big Size Doesn’t Matter

First, let’s map the average annual rate of return of the Russell 3000’s members against the June 1, 2007 market capitalization to see whether performance has been a function of size over this period. The conclusion is there are diminishing returns to scale. The largest issues – and capitalization is on a logarithmic scale – have nowhere near the highest returns; those are clustered in the \$500 million - \$2 billion range. And, just in case you thought we were getting soft and sentimental in our old age, small is not beautiful: Look at the average annual returns of those stocks with under \$300 million in market capitalization.



### Currency Divisions

Too often traders equate the general state of the dollar with the dollar-euro exchange rate to the exclusion of all else, including currencies such as the Mexican peso and Canadian dollar, both of which are large trading partners with the U.S.

As there is no magic single exchange rate for the dollar, including both the Federal Reserve’s weighted trade index and the dollar index that trades on the FINEX, let’s use 53 different currencies clumped into six broad groups, European major and minor currencies, Asian major and minor currencies, Latin American currencies and African-Middle Eastern currencies. The Canadian dollar, which is really a group of one, was analyzed in this study, but will not be discussed.

And instead of using the broad Russell 3000 index as a whole, let's divide the members into the ten GICS economic sectors. These are basic materials, energy, financials, industrials, information technology, consumer staples, telecommunications, utilities, health care and consumer discretionary.

### Methodology

We can take the relative movement of each individual stock to the Russell 3000 and regress each of these relative movements against each individual currency on a return basis; as there were 2,679 active members of the Russell 3000 index at the time and 53 currencies that is more than 140,000 regressions.

The coefficients of each regression were captured and tested for a 90% significance level. This assesses whether the incremental return of each stock to the Russell 3000 was a statistically significant function of any given currency. Even with all of this work, we must remind ourselves that correlation does not imply causality.

### Results

The results are presented in two tables. The first summarizes the trend correlation of each sector against each currency group. For examples, the basic materials group outperforms the broad market when the European major currencies strengths, but consumer staples underperform the broad market when the European major currencies strengthen.

**Trend Correlation With Currency Groups**

	E-Maj	E-Min	A-Maj	A-Min	Latin	Af-ME
Basic Materials	Pos	Pos	Pos	Pos		
Energy	Pos	Pos	Pos			
Financials						
Industrials		Pos	Pos		Pos	
Information Technology	Neg		Neg			
Consumer Staples	Neg	Neg	Neg			
Telecommunications						
Utilities	Pos					
Health Care	Neg	Neg	Pos	Pos	Pos	
Consumer Discretionary	Neg	Neg	Neg	Pos		

The second table notes any size dependencies in the regression coefficients. In sectors where positive incremental returns decline against the currency group as size increases, the cell is marked 'Pos' with a downward arrow. In sectors where negative incremental returns against the currency group increase with size, the cell is marked 'Neg' with an upward arrow. In sectors where incremental returns move toward zero as size increases, both markers are used.

**Size Dependency With Currency Groups**

	E-Maj	E-Min	A-Maj	A-Min	Latin	Af-ME
Basic Materials						
Energy	Pos ↓		Pos ↓		Pos ↓, Neg ↑	Pos ↓, Neg ↑
Financials	Pos ↓, Neg ↑					
Industrials	Pos ↓	Pos ↓	Pos ↓		Pos ↓	
Information Technology	Pos ↓	Pos ↓, Neg ↑	Pos ↓	Pos ↓, Neg ↑	Pos ↓, Neg ↑	
Consumer Staples	Neg ↑	Neg ↑	Neg ↑			
Telecommunications						
Utilities						
Health Care	Pos ↓, Neg ↑					
Consumer Discretionary	Neg ↑	Neg ↑	Neg ↑			

### Conclusion

It is a market of stocks, not a stock market, and it is a market of currencies, not a currency market. Once we disaggregate both stocks and currencies and actually put some of the cultural assumptions to the test, we find neither withstands scrutiny.

We can reject with statistical confidence any assertion that American stocks have uniform reactions to currency movements, just as we can claim a diminishing return to size. The impact of currencies on stocks is dependent on the economic sector involved, the currency involved and the size of the stock.