

What's New at Arrowstreet?

As we enter the second half of November, we hope this issue of the Journal finds you in the spirit of Thanksgiving. In this edition, we highlight two topics presented at Arrowstreet's October 2006 Client Conference. The first article discusses how global equity investors can manage the currency risks inherent in foreign securities. In the second article, we explain how Arrowstreet has combined our developed and emerging markets equity forecasting models.

Q3 2006 Review:

Investment Performance: The third quarter of 2006 proved to be challenging for both our developed and emerging markets strategies, which lagged the strong performance of their respective benchmarks. Our Global Equity strategies suffered from underweights in US Consumer Discretionary and Energy combined with overweights in US Financials and Industrials. Our International Equity (ex-US) strategies were hurt by overweights in Japan Financials and Materials. In Emerging Markets, overweights in Brazil and underweights in India detracted from performance.

Business Growth:

During the third quarter assets under management grew to \$15.2 billion as we funded one new emerging markets mandate and received additional fundings from existing clients.

New Team Members:

We are pleased to announce several new additions to the Arrowstreet team. Yijie (E.J.) Zhang, Ph.D. joined in July as a Manager in our Research group. Earlier this year, E.J. received his Ph.D. in Finance from Yale University. A more detailed biography of E. J. is on page three. Alex Casale, who previously worked at Hamersley Partners in Boston, and Yasemin Kilinc, who came from Lyra Capital LLC in New York, both joined as Associates in the Business Development team.

As always, we are interested in your views and encourage your feedback. Please email your thoughts to us at:

info@arrowstreetcapital.com

Global Currency Hedging

By John Y. Campbell, Ph.D. Arrowstreet Capital, L.P

How should global equity market investors manage the currency risks implicit in their equity holdings? Investment practice varies widely; some investors hedge out their foreign currency exposure, but many others treat it as a side-effect of foreign equity investing that can safely be ignored. Despite the diversity of practice across investors, each investor normally follows a common policy for all foreign currencies, hedging each currency to the same extent.

This practice ignores an important difference among currencies. Major developed currencies can be divided into two groups. Normal currencies, such as the British pound, the Japanese yen, and the Canadian and Australian dollars, tend to appreciate when world equity markets and particularly their domestic equity markets are rising. Reserve currencies, most importantly the US dollar but recently including the Euro and the Swiss franc, tend to appreciate when world equity markets are falling. It is no coincidence that these currencies are widely held by central banks and are regarded as relatively safe stores of value; when a flight to quality occurs, stock prices fall but these currencies benefit from inward capital flows.

Since normal currencies are positively correlated while reserve currencies are negatively correlated with equities, normal currency positions increase the risk of a global equity portfolio and reserve currency positions reduce it. Global equity investors should avoid normal currencies and should hold reserve currencies, unless they believe that normal currencies will offer a higher return.

This insight implies that currency hedging strategy should depend on the home currency of an investor. An investor whose home currency is a normal currency, such as an Australian investor, should not hedge equity positions in US and euro zone stocks because currency exposures to the US dollar and euro are risk reducing. An investor whose home currency is a reserve currency, such as a US investor, should at least fully hedge positions in all foreign markets except the euro zone. In fact, it may be optimal to overhedge these positions to achieve net short positions in normal currencies.

Modeling Developed and Emerging Markets in an Integrating World

By Tuomo Vuolteenaho, Ph.D. Arrowstreet Capital, L.P.

An important part of Arrowstreet's forecasting models has always been exploiting spillover effects in forecasting the relative performance of equity baskets in the country-sector matrix.

Until recently, we have used separate basket models for developed and emerging markets equities. The separate models have closely reflected Arrowstreet's currency hedging policies in developed and emerging markets: The developed market model has forecast currency hedged local equity returns, while the emerging market model has forecast currency unhedged (i.e., USD) equity returns.

The introduction of a separate currency model has allowed us to combine the emerging and developed market equity models into a single global model that forecasts currency hedged returns. The choice to model either hedged or unhedged returns is now separate from the currency hedging policy in portfolio management. For applications that require currency unhedged returns, the currency return forecast from the separate currency model can be added back to create currency unhedged forecasts.

For a complete version of this article, please visit:
http://www.arrowstreetcapital.com/research_whitepaper.htm

September 2006 Investment Outlook

Global/International Equity Strategy

Developed Markets Performance: 3rd Quarter 2006

The third quarter of 2006 was challenging for our Global/International Equity Strategy. In general, both our active country/sector basket selection and stock selection detracted from our performance in developed markets.

In terms of country/sector baskets, our overweight position in the Norwegian Energy sector, motivated by positive intermediate term momentum, was a negative contributor to the portfolio in the third quarter. Shares of Norsk Hydro fell 15 percent during the quarter, hurt by falling oil prices and expenses related to developing an aluminum plant in the Persian Gulf that far exceeded expectations. Despite a negative contribution from the Japanese Financials sector, a sharp sell-off in the sector during September has in turn created a more attractive value opportunity. Our positions in Japanese Financials are motivated by these improved valuation characteristics and a number of attractive stock level opportunities. The portfolio received a positive contribution from the Telecommunications sector, particularly in the United Kingdom and the Netherlands. While the portfolio maintains an underweight exposure to the U.K. market, our overweight towards Telecommunications, including BT Group, was a leading contributor in the third quarter.

At the country level, our shift away from Denmark is driven by a reduction in our exposure to the Financials sector within the market, including Danske Bank. We have seen a modest shift in analyst enthusiasm towards the market and a deterioration in some of its valuation attributes that originally motivated our larger position size. Although Japan was a positive contributor for the quarter, this country provided the greatest negative contribution to the index's performance in September as worries over global consumer spending, particularly in the U.S., hurt Japanese companies. Bottom up stock opportunities within the Japanese market have resulted in a net overweight versus the benchmark.

From a global sector perspective, much of the portfolio's negative performance during the second quarter can be attributed to the Materials sector. The Japanese Materials sector was the leading detractor, due in part to JFE Holdings, whose shares fell after the company announced a first-quarter profit decrease of 23 percent in the wake of higher raw material costs and lower export prices.

Developed Markets Overview

Despite sharp declines in early July, world equity markets rallied in the third quarter to post gains of nearly 5%. Markets fell as much as 3.5% during the first weeks of July after explosions on the Mumbai railway

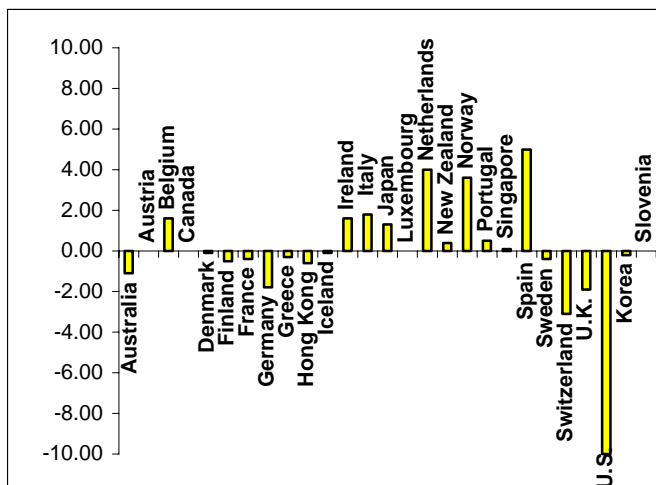
caused global markets to sell off. The Mumbai bombings were followed closely by increased turmoil in the Middle East where kidnappings of Israeli soldiers by Hezbollah militants ignited tensions and fueled cross-border conflicts. Global markets recovered in late July on the heels of positive earnings announcements from a number of major companies, including Apple, Exxon and Shell. The trend continued into August after the U.S. Federal Reserve Bank halted its pattern of interest rate hikes despite rate increases by the European Central Bank and the Bank of England. September saw a continued rally as U.S. unemployment reached a five-year low. A decline in the U.S. housing market and signals from the Fed that it may not be done with its policy of tightening rate led to the largest one day decline of the MSCI World Index during September, a 1.12% fall. Despite this news, markets rebounded on positive earnings announcements from several major banks including Goldman Sachs and Bear Stearns. Global Markets closed the month of September up 1.8% in response to falling crude oil prices and growing consumer confidence.

Specific opportunities that we believe will offer attractive return potential include:

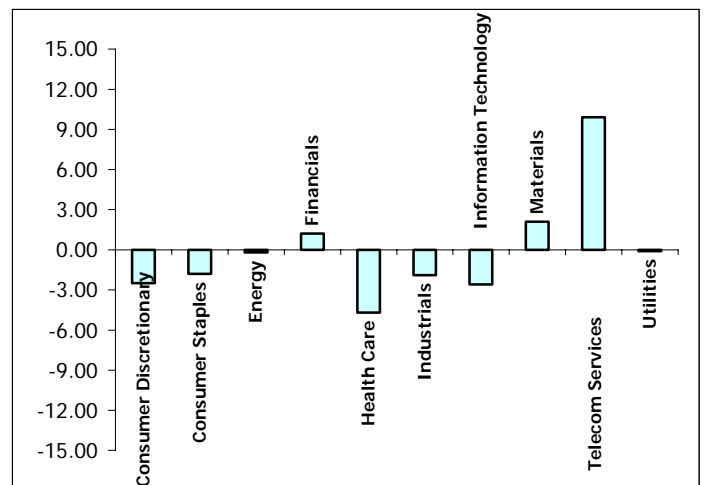
GPO Acciona (Spanish Industrials) – This diversified construction and logistics services company offers attractive stock valuation scores across multiple dimensions and is complemented by favorable revision and momentum characteristics measured at stock, basket and country levels. M&A activity in Spain, and more broadly in Europe, has contributed to an environment in which undervalued companies are being bid up even without the presence of formal takeover offers. While we are not explicitly anticipating a takeover of GPO, the market environment is favoring companies with these types of attributes.

ENI (Italian Energy) – While momentum signals, used as proxies for investors' changing attitudes, are clearly working against the Global Energy sector, the recent sell-off in ENI has produced an attractive value opportunity. When this measure of attractiveness is coupled with other positive signals, such as the investment community's recent upgrade in expected earnings, it leads us to believe the recent broad-based sell-off in the Energy sector has produced selective investment opportunities such as ENI.

September 2006 Active Country Weights (%)
(Citigroup PMI World)



September 2006 Active Sector Weights (%)
(Citigroup PMI World)



September 2006 Investment Outlook Emerging Markets Equity Strategy

Emerging Markets Performance: 3rd Quarter 2006

The third quarter was disappointing for our Emerging Markets Equity Strategy. In general, we added value from our intra-basket stock selection but lost value from our active country/sector basket selection.

Specifically, our underweight positions in India (Financials and Information Technology) and in Mexico (Telecommunication Services and Consumer Staples) detracted from performance as these country/sector baskets outperformed. In addition, our overweight positions in Brazil (Energy and Materials) and South Africa (Energy) hurt performance. On the positive side, we added value in Korea (overweight Industrials and underweight Financials) and in Indonesia (overweight Financials). At the stock level, our underweight in Russian Energy company Gazprom contributed positively to performance as investors worried about earnings after oil fell below \$60 a barrel.

Emerging Markets Overview

Emerging equities recorded a gain of +5.01% in USD terms during the third quarter, bringing their year-to-date return to +12.71%. By comparison, the MSCI World Index of developed countries rose +4.47% for the quarter and is ahead +10.79% for the year, narrowing the historical return spread between the two asset classes. Overall index volatility has risen, exceeding levels reached during the past few years. The major forces influencing emerging equity returns during the quarter were the anticipation among investors of a global economic slowdown, as well as a broad decline among commodities from highs reached earlier in the year.

Economic indicators among large, developed economies such as that of the U.S. are causing consternation among investors that the global economy is starting to lose steam. The weak housing market in America is expected to dampen spending among U.S. consumers, which would have flow-through effects to many emerging economies that rely on exports to the world's largest economy. The manufacturing and service sectors in the U.S. are also showing signs of slowing. Another major factor weighing on emerging equity returns has been the general fall in commodity prices, which has driven down related sectors (e.g. Materials and Energy).

Commodity prices retreated from highs reached earlier this year, potentially signaling a reversal to their long-standing winning streak. Evidence of the central role commodity prices continue to play is clear from the combined weight of the Energy and Materials sectors in the MSCI Emerging Market Index. These two groups accounted for just shy of 30% of the total capitalization of the index as of quarter-end, even after the recent sell-off. At a stock-level, Russian oil-giant Gazprom was the largest constituent at 5.01%, surpassing the previous leader, Samsung Electronics, which accounted for 4.09% of the index.

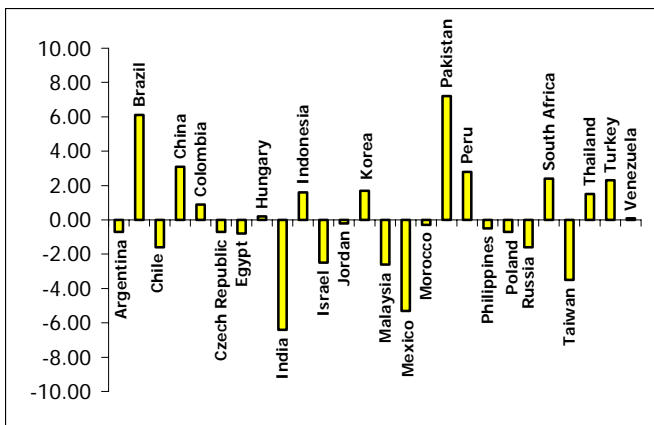
As the returns of larger emerging countries such as South Africa, Brazil and Russia lagged, investors shifted into smaller countries (e.g. Philippines, Indonesia, Colombia, and Egypt). Additionally, 'frontier' emerging markets experienced high positive returns, particularly as hedge-fund investors have moved away from more traditional investments into regions such as sub-Saharan Africa (e.g. Nigeria and Zambia).

Specific opportunities that we believe will offer attractive return potential include:

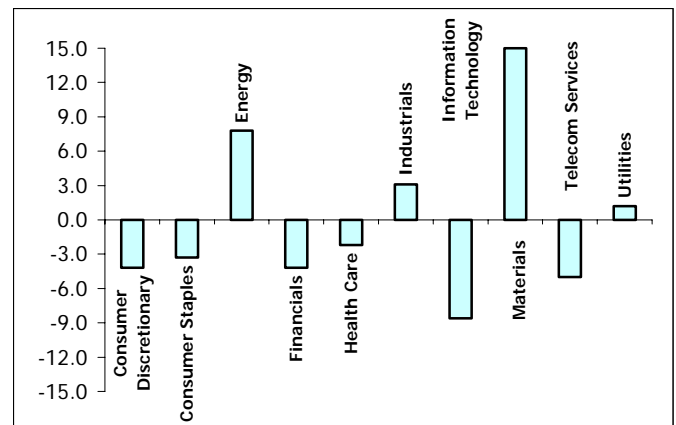
Southern Peru Copper (Peruvian Materials) – This producer of copper, zinc and other precious metals ranks favorably according to our forecasting models. If not for our reservations about the market's currency (the Peruvian Sol – poor yield for the currency "carry" trade compounded by fiscal stress indicators and downward analyst revisions for a number of the largest companies in the market) we would be even more aggressive holders of this name. That said, the stock scores exceptionally well on most other dimensions of our forecasting model. It's a great value play measured on an earnings and dividend yield basis and is supported by Starmine analysts upgrades and positive stock and country level momentum.

Usiminas PN (Brazilian Utility) – This Brazilian electric company has produced steady improvements in its underlying fundamentals, which have outpaced the stock's price to the point where it now represents a substantial value opportunity. While our model would normally prefer to see more in the way of accompanying catalyst signals (recent negative analyst downgrades), the value opportunity in this case is sufficiently pronounced that the prospects of being "early" are worth the risks.

**September 2006 Active Country Weights (%)
(MSCI EMF Index)**



**September 2006 Active Sector Weights (%)
(MSCI EMF Index)**



Employee Profiles — Yijie (E.J.) Zhang, Ph.D., Manager, Research

Yijie Zhang is involved with the implementation of Arrowstreet's research agenda. In particular, he works on developing and enhancing the firm's forecasting, risk and transaction cost models. Prior to joining Arrowstreet, Yijie obtained his Ph.D. in Finance from Yale University. During this time, Yijie served as a teaching assistant in both MBA and Ph.D. level courses. His research has focused on behavioral finance, market frictions and individual portfolio choice. Yijie also received an M.S. in Economics from Rutgers University in 2000 and a B.A. in Finance from Tsinghua (Qinghua) University in 1997. In his spare time, Yijie likes to write film reviews for an online magazine. He also enjoys reading academic research related to psychology and economics. Yijie resides in Cambridge, MA.

