

THE JOURNAL

Connor, Clark & Lunn Arrowstreet Capital Ltd.

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What's New

To start the new year, this issue of the Journal highlights two recent Arrowstreet research pieces. The first, *Understanding Momentum*, is an Arrowstreet Research Note by John Campbell explaining why and how momentum occurs in equity markets. The second, *The Case for Increasing Emerging Markets Capacity*, describes the process by which Arrowstreet measures and sets the capacity for its emerging markets strategy.

Q4/2004 Review

Investment Performance: Our investment strategies continued to do well in the fourth quarter. Both the Global/International Equity Strategy and the Emerging Markets Equity Strategy posted gains relative to their respective benchmarks for the quarter giving us a strong full year of results.

Business Growth: During the quarter, we started two new portfolios for existing clients and received additional assets from other clients. This capped an important year for Arrowstreet, where we attracted over US \$2 billion in new assets, predominately through 6 new clients. This brings total assets under management to US \$7.4 billion. With broad market strength and many managers posting poor results, we are seeing strong interest in global, international and emerging market equity strategies from institutional investors around the world.

Other

Personnel: We are delighted to announce that Tuomo Vuolteenaho and George Pararas have joined our partnership, bringing the total number of Arrowstreet partners to 12. Tuomo has been a consultant to Arrowstreet since 2003 and joined the firm full time on January 1st from Harvard University where he was an Associate Professor of Economics. George Pararas has been in our portfolio management team for over three years and in that time has made himself indispensable to the firm.

Client Conference: We are pleased to announce that our 2005 Client Conference will be held on April 27 and 28 in Cambridge, MA. We have put together an exciting agenda that features presentations from academics at Yale University and Princeton University, as well as practitioners from Arrowstreet and several of our clients. We look forward to seeing all of our clients there!

We are interested in your views and encourage your feedback. Please email your thoughts to us at: more_info@cclgroup.com.

Understanding Momentum

By John Campbell, Ph.D. Arrowstreet Capital, L.P. and
Otto Eckstein Professor of Applied Economics, Harvard University

"Momentum" refers to the tendency of stock prices to continue moving in the same direction for several months after an initial impulse. The most basic form of momentum is price momentum, where the initial impulse is simply a change in the price itself. Price momentum was noted in aggregate US stock prices in the late 1980's, in individual US stock prices in the early 1990's, and in international markets later in the 1990's. Other forms of momentum have been measured using different initial impulses. Post-earnings announcement drift is momentum following a surprise earnings announcement, while earnings momentum is momentum following a revision in analysts' earnings forecasts.

Momentum is inherently challenging to explain within a traditional asset pricing model. Such a model requires that high average returns are simply compensation for some form of risk; but stocks that have risen recently, or have had positive earnings surprises, typically seem to have lower risk, not higher risk as would be required for risk to explain momentum. Certainly the equity of a leveraged company becomes safer when good news increases the market value of the company relative to the burden of its debt.

Momentum arises more naturally within a behavioral asset pricing model. Such a model explains momentum as the result of the interaction of imperfectly rational investors, many of whom are individuals lacking professional investment expertise, with rational arbitrageurs.

In this note, we review the behavioral explanations of momentum and the pitfalls associated with momentum investing that one must consider in order to generate profits.

For a complete version of this article, please visit <http://www.arrowstreetcapital.com/doc/research.htm>

The Case For Increasing Emerging Markets Capacity

By Peter Rathjens, Ph.D. and Ezra Levine, CFA, Arrowstreet Capital, L.P.

Arrowstreet initially set its emerging market capacity limit at US \$1 billion in 2001, based on the liquidity of the local emerging markets and taking into account the restrictions on foreign investors at that time. The capacity limit should, of course, adapt to changing circumstances. Since we established our limit the environment for the asset class has changed materially. To appreciate the impact of these changes within the emerging markets one only needs to look at a recent report from the Institute of International Finance, which reports that net equity flows into the emerging markets will reach close to US \$24 billion in 2004 compared to US \$1 billion in 2002. In addition to significant changes in the asset class, we have made some enhancements to our investment process that should affect our capacity limit.

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In this note, we first review the changing environment for emerging market equities. We then describe enhancements to our investment approach and the impact they should have on our capacity limit. Next, we describe the evolution of our trading costs since the inception of the strategy. Finally, we draw conclusions for our emerging market capacity limit.

For a complete version of this article, please visit:
<http://www.arrowstreetcapital.com/doc/research.htm>

February 2005 Investment Outlook Global/International Equity Strategy

Developed Market Performance: 4th Quarter 2004

Overall, the fourth quarter proved to be a success for our Global/International Equity Strategy. While active stock selection within baskets ultimately detracted value, this shortfall was more than made up for by our active selection decisions along other dimensions of the portfolio (i.e., basket, country, and sector). In particular, we achieved our greatest successes by concentrating our holdings in smaller capitalization European markets, such as Italy, Spain, and Belgium, while deemphasizing larger markets, such as Switzerland and the United Kingdom.

For example, stocks in the Spanish Financials basket (e.g. Banco Santander, BBVA) performed particularly well for the quarter. Santander shares gained as their takeover of Abbey National will give the company 11% of the mortgage lending market in the U.K., while BBVA shares gained on record profit that was attributed to growth in their consumer banking business in Spain and Portugal and growth in their corporate banking business in the United States.

In addition, our bottom-up basket decisions within the United Kingdom market also proved successful during the quarter. Our underweight position in Resources added value due to falling oil prices, while our overweight in Utilities added value as the British government granted larger rate increases than utility companies expected.

Developed Market Outlook

During the last three months of 2004, markets were up substantially around the world. While part of this rally was driven by positive local market appreciation, the strengthening of most currencies versus both the U.S. dollar and the Canadian dollar only served to add to the returns achieved by investors.

Both European and American manufacturers achieved increased output in December, thanks in large part to lower oil prices.

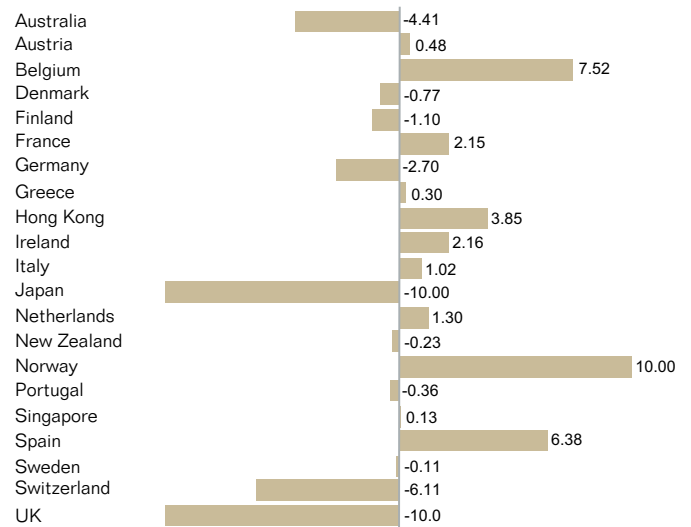
Although the strengthening Euro temporarily hurt European exporters (e.g. Cyclical Consumer Goods stocks), the 22% drop in oil prices from their October highs lowered input costs enough to offset the otherwise negative environment. In Asia, the Japanese equity market rose with other developed markets despite continued caution surrounding the country's prolonged economic recovery. The government is keeping interest rates near zero to help fight deflation and promote economic growth.

As has been the case for the better part of the year, capital market returns continue to exhibit low levels of active risk (i.e. return dispersion) compared to prior years. This environment continues to result in a reduced range of benchmark relative performance for any particular month or quarter.

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

- ◆ **Belgian Financials (e.g. Fortis, Dexia):** The attractive basket level forecast for Belgian Financials is motivated by a combination of strong momentum and valuation characteristics. The appreciation of the overall Belgian equity market over the past year has led to attractive intermediate-term and short-term momentum scores for this basket. Additionally, this basket has retained attractive valuation characteristics as measured by earnings-to-price at a country level despite the market's overall gains.
- ◆ **Siemens (German General Industries):** Siemens is an example of an underweight position we have established that is motivated by poor forecasts both at a basket and stock basis. At a stock level, Siemens exhibits poor book yield and negative earnings estimate revision from the analyst community. At a basket level, German General Industries has strong negative intermediate-term momentum that is also contributing to our overall bearish outlook on this stock.

February 2005 Active Country Weights (%)



Source: Arrowstreet Capital, L.P.

February 2005 Active Sector Weights (%)



Source: Arrowstreet Capital, L.P.

February 2005 Investment Outlook Emerging Markets Equity Strategy

Emerging Market Performance: 4th Quarter 2004

Overall, the fourth quarter proved to be successful for our Emerging Markets Equity Strategy as our investment decisions at both a bottom-up basket level and a top-down country level proved to be successful. For example, our overweight position in South African General Industries (e.g. Barloworld, Imperial Holdings, Reunert), driven by basket momentum and value as well as country value and earnings revisions, added value as these companies were boosted by a central bank interest rate cut. Barloworld's shares rose as second-half profits increased 6.2% due to higher demand from homebuilders.

Additionally, our overweight position in Pakistani Basic Industries (e.g. Engro Chemical Pakistan, Fauji Fertilizer) added value as shares benefited from an increase in Pakistan's estimated economic growth and an increase in the country's demand for fertilizer.

Emerging Markets Outlook

Emerging equities gained over 17% during the fourth quarter of 2004, and nearly 26% for the entire year in USD terms. A key driver of investment into emerging markets this year has been the favorable valuation of the asset class relative to developed equities. At the end of the year, the MSCI Emerging Markets Index P/E ratio stood at approximately 14 versus a multiple of about 21 for the MSCI World Developed Index. Another important factor that contributed to a stable environment for investors has been the low volatility levels in global markets relative to their historical averages.

A global economic recovery in developed regions has also contributed to growth in emerging countries, whose economies are strongly connected to those of their developed counterparts. Sensible fiscal management by countries like China and India have helped to moderate the strong growth achieved by their economies in 2004.

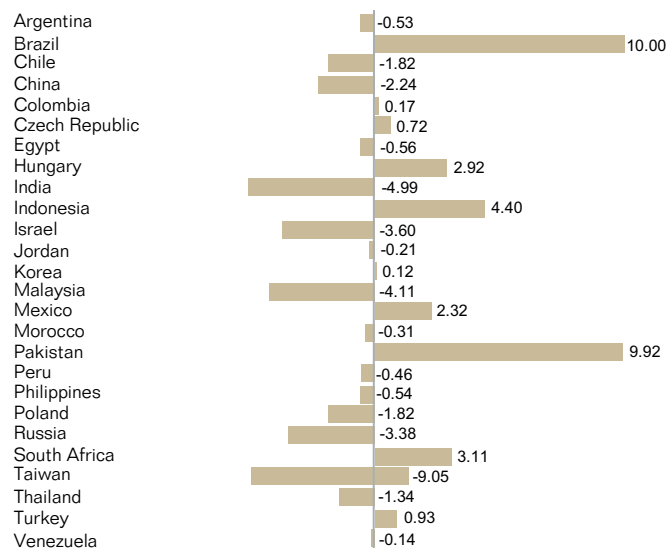
While emerging markets posted healthy returns in local currency terms (+9.2% for Q4 and +16.4% for the year), a notable portion of their total return came from the appreciation of local currencies versus the U.S. dollar. The negative effect of the dollar devaluation on emerging economies that export to the U.S. has been somewhat countered by robust commodity prices which have aided resource-oriented economies like Brazil and South Africa.

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

- ◆ **Taiwanese Non-Cyclical Services:** Although we are bearish toward the country, this basket offers an attractive dividend yield relative to other Non-Cyclical Service stocks and has experienced positive relative momentum. This position also reduces the overall portfolio risk as it offsets our large underweight to the rest of the country.

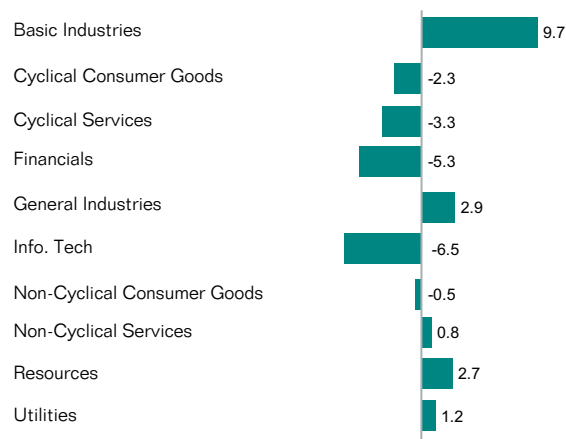
- ◆ **Korean Resources:** This basket position represents one of our largest overweight positions. The position is motivated by positive momentum at a sector and basket level as well as the country's attractive valuations and the Korean Won's excess positive momentum over the past few months.

February 2005 Active Country Weights (%)



Source: Arrowstreet Capital, L.P.

February 2005 Active Sector Weights (%)



Source: Arrowstreet Capital, L.P.

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