

What's New at Arrowstreet?

We hope that 2007 is off to a great start for you. In this edition of the Journal, we highlight two recent areas of research at Arrowstreet. In the first article, Peter Rathjens discusses Arrowstreet's newest ideas on cross-security linkages. The second article, written by Tuomo Vuolteenaho, our co-head of research, sheds new light on value investing.

Q4 2006 Review:

Investment Performance: The fourth quarter of 2006 was modestly successful for Arrowstreet's developed markets strategies. At a composite level, both our international (non-US) equity and global equity strategies added value, thanks mainly to the contribution of active country/sector basket selection and, to a lesser degree, stock selection. Our emerging markets strategy enjoyed a strong quarter. We added significant value both from country/sector basket allocation and from stock selection.

Business Growth:

During the 4th quarter, firm-wide assets under management grew to \$17.6 billion as we funded several new global/international mandates and received additional funds from existing clients. During 2006, Arrowstreet added a total of nine new clients.

New Team Members:

We are pleased to announce several new additions to the Arrowstreet team. Ken Martini joined in October as Chief Technology Officer. Ken previously worked at Investor Bank & Trust as a Systems Manager. In November, Robert Roderick started as an Associate on the Portfolio Management team. Robert relocated from New York, where he worked for SAC Capital.

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

info@arrowstreetcapital.com

**Country / Sector Baskets and Cross-Security Linkages:
The Next Generation**

By Peter Rathjens, Ph.D. Arrowstreet Capital, L.P

Probably the most important element of active management is the ability to forecast the relative returns of the assets available to the manager. The essence of this challenge is the Efficient Markets Hypothesis (EMH) in all of its various forms. The EMH (in its semi-strong form) posits that all relevant information about a stock's share price is immediately reflected in the share price of that stock, thus obviating a role for active managers.

Academics and practitioners have spent much of the last 25 years exploring, and trying to find violations of, the EMH. In particular, it is easy to identify information or signals that impact share prices contemporaneously. Practitioners, however, have tended to focus on research describing signals that are relevant to share prices **at a lag**.

While investment theory can help guide us in our investigation of these signals, a seeming paradox of active management is that, in many instances, the most useful signals are those that are relevant to prices, but not so relevant that investors respond fully and immediately. Insofar as the key is in finding signals that are meaningful but are not too rapidly built into prices, this note describes an approach to identifying relevant information that may be overlooked by market participants.

One class of signal that Arrowstreet has long focused on is what we will call "indirect" or "spillover" effects. These are signals that are directly related to one company but that may also have indirect implications for another. We illustrate this concept with an example from May, 2005. On May 4th, Kirk Kerkorian, through his Tracinda Group, announced a tender offer for an additional 5% of General Motors' shares that they did not already own. Predictably, this announcement was met with great publicity, and with an immediate and sharp increase in GM's share price. After that initial sharp increase in GM's share price, the next 19 days saw only another 97 basis points increase. How should we interpret this result? There are two related points about this example worth noting: first, there was a dramatic contemporaneous response and second, there was little, if any, lagged response. This is perhaps to be expected, and suggests, moreover, that we need to look for less conspicuous events to identify signals that will work with a lag.

**Value Investing: Alpha Without the Risk
By Tuomo Vuolteenaho, Ph.D. Arrowstreet Capital, L.P.**

Value investing is a common sense investment idea that works on average with a high degree of statistical confidence. Some value strategies can be implemented with a relatively low turnover while managing capital gains taxes.

Despite of these desirable qualities, there are periods of time during which value investing underperforms, and these periods can last for multiple years. The likelihood of value strategies underperforming is higher at times when valuation multiples are relatively compressed after value strategies have worked very well for years, such as the current environment.

An investor should think about this value risk within the context of covariances that determine portfolio level risk. Does holding cheap stocks always expose the investor to the risk of a value strategy underperforming? The answer is not necessarily. What really matters is whether the portfolio return is positively correlated with value stocks' returns, not whether the stocks are attractively priced. Among cheap stocks, only stocks with high value betas expose the investor to value risk.

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

December 2006 Investment Outlook Global/International Equity Strategy

Developed Markets Performance: 4th Quarter 2006

The fourth quarter of 2006 was slightly positive for Arrowstreet's developed markets strategies. Both our international (non-US) equity and global equity composites added value above their primary benchmarks.

Active country/sector basket selection added value to portfolios in the fourth quarter, while stock selection was less effective. During the quarter we maintained our overweight position in Canadian Materials as the sector continued to show strong momentum signals. Accordingly, we have increased our overweight in Inmet Mining, a Canadian miner of gold and zinc. Our ongoing overweight of the British Telecommunication Services basket, motivated by attractive price momentum and earnings signals, was a positive contributor to the portfolios in the fourth quarter. Shares of BT Group, the U.K.'s largest phone company, climbed as retail earnings beat analyst estimates.

Portfolios received negative contributions from the Financials sector during the quarter, largely due to our underweight stance in Japan and overweight position in Aegon NV, the second largest Dutch insurer, as the company continues to show appealing book-to-price valuations and basket-relative debt issuance.

In terms of country drivers, European markets rose 11.5% in USD terms in the fourth quarter. The rise in Europe was led by gains in Norway (+26.2%), Sweden (+19.9%), Austria (+18.8%) and Ireland (+17.5%). Underperforming countries were the Netherlands (+7.2%) and Switzerland (+7.8%). Large mergers characterized the fourth quarter, as Norwegian energy companies Norsk Hydro (0.25% of MSCI Europe index), and Statoil announced plans to merge their oil units, boosting Norsk Hydro's stock price. Many returns were driven by takeover speculation as the Materials and Utilities sectors also experienced consolidation across countries.

Asia increased 7.9% in US Dollar terms during the fourth quarter, fueled by gains in Singapore (+23.3%) and New Zealand (+21.8%). Japanese stocks were a drag on the region's performance, gaining only 5%. Japanese retail sales rose less than expected in November, disappointing hopes of consumer spending fueling growth.

From a global sector standpoint, portfolios remained overweight in the Materials sector, which was a major positive contributor to performance. Over the course of the quarter, portfolios increased their overweight in the Utilities sector based on favorable price momentum measures. This sector performed well as consolidation among European utility providers pushed up the share prices of many companies.

Developed Markets Overview

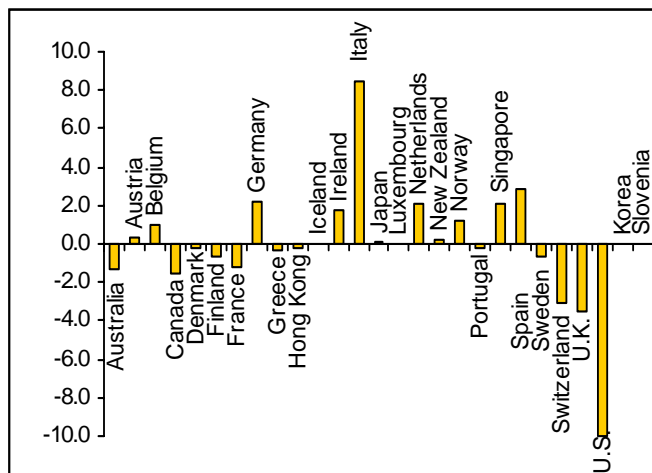
Global Markets rallied in the fourth quarter with MSCI World equity markets up over 8%. Merger and acquisition announcements as well as takeover speculation largely dominated headlines and provided positive momentum for equities. There were large deals in the European utilities sector, including Iberdrola's bid to take over Scottish Power. The fourth quarter also saw private equity firm Blackstone Group LP bid to buy real estate giant Equity Office Properties in the largest leverage buyout ever. Worldwide, the Materials (+13.5%), Utilities (+12%), and Telecom (+13%) sectors experienced the biggest gains while the Health Care (+1.6%) and Consumer Staples (+5.9%) sectors lagged the broad index. The ECB and Bank of England hiked their countries' base interest rates while the US Fed kept rates stable for the second quarter in a row. There was renewed weakness in the US Dollar as a result of these divergent interest rate policies as well as concerns about smaller central banks diversifying reserves away from US Dollars. The US Dollar fell roughly 4% versus the Euro and the British Pound.

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

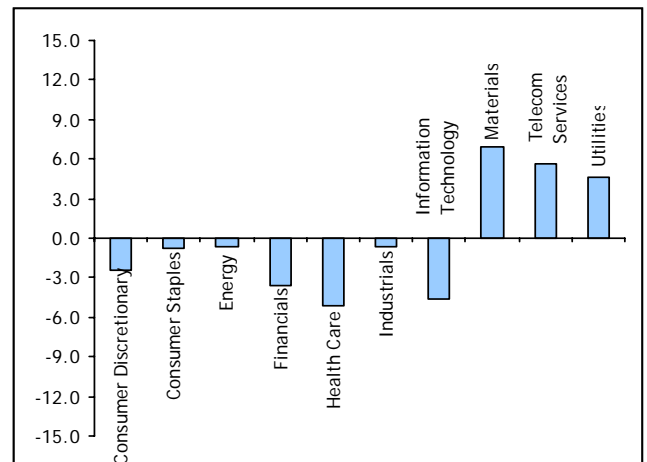
ENEL (Italian Utilities) – Despite an extended favorable run in the global Utility sector, we believe there is further upside, as the group has only recently approached fair value level. ENEL represents one of the more conservative ways we are attempting to exploit this opportunity. While it has demonstrated improvements in fundamentals similar to other global Utilities stocks, its price has unjustifiably not kept pace with that of its peers. As a result, we now see the stock as an attractive enough value play (based on dividend yield, free cash flow to enterprise value, and long-term growth estimates) to overcome the lack of other supportive signaling sources, such as favorable estimate revisions and positive momentum indications.

Thyssen Krupp (German Materials) – Along with a number of other stocks in the German market, Thyssen Krupp has demonstrated steady improvement dating back to the early summer of 2006. The company's earnings have recovered after a substantial quarterly loss reported for the third quarter of 2005. At a stock level, we believe its valuation is attractive on various levels (free cash flow to enterprise value, book value, dividend yield, and undervalued R&D spending) coupled with favorable capital market stimulants, such as Smart Analyst estimate revisions, positive intermediate-term momentum, and corporate debt buy back activity. Furthermore, we believe favorable indirect effects observed at a global sector (Materials) level and basket (German Materials) level will also contribute positively to the stock's future return. Both dimensions have displayed sufficient catalyst characteristics (mainly momentum) to lead us to believe that investors have a growing appetite for stocks like Thyssen Krupp.

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



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



December 2006 Investment Outlook

Emerging Markets Equity Strategy

Emerging Markets Performance: 4th Quarter 2006

The fourth quarter of 2006 was a strong period for Arrowstreet's emerging markets strategy. We added significant value both from country/sector basket allocation and from stock selection.

In terms of country/sector basket allocation, our overweight in the China Energy basket and our underweight in the Korea Information Technology basket were important contributors to value added. However, our overweight in the Pakistan Materials basket detracted from performance.

From a country perspective, our emerging markets portfolios demonstrated general overweight in China, up 35.87% for the quarter, and Brazil, up 24.59%, which positively affected portfolio performance. Meanwhile, our overweight in Pakistan, which returned -5.17% for the quarter, hurt relative performance. In terms of global sectors, our overweight in the Energy sector and underweight in the Information Technology sector helped relative performance.

Our stock selection within China and Korea also contributed to value added. Specifically, our overweight positions in China Life Insurance and China Petroleum & Chemical and our underweight position in Samsung Electronics (Korea) helped relative performance. In addition, our overweight in Usinas Siderurgicas de Minas Gerais (Brazil) and underweight in Gazprom (Russia) boosted relative returns. On the downside, our overweight positions in KGHM Polska Miedz (Poland) and Fauji Fertilizer (Pakistan) hurt performance since both of these names significantly underperformed the MSCI Emerging Markets index.

Emerging Markets Overview

Emerging equities posted another positive year of performance in 2006. The MSCI Emerging Markets Index rose 17.64% in USD terms during the fourth quarter, and recorded a 32.59% gain for the entire year. Overall index volatility receded to a relatively low level by year-end, with the 100-day annualized daily volatility on the MSCI Emerging Markets Index measuring just below 12%.

At a broad level, the market environment was quite favorable for most emerging countries, with economic growth rates at healthy levels, low interest rates, and generally positive investor sentiment fuelling the bullish run among the asset class. Despite the volatility and sell-off experienced

in May and June, the group continued on a steady rise throughout the remainder of the year.

A notable trend that developed last year is that emerging markets are increasingly starting to behave more like their developed counterparts, displaying stable and sustained growth. The strength of commodity prices has aided growth in resource and materials-producing markets like Russia and Brazil. Despite firm oil and metals prices countries that are net consumers of commodities, such as China and India, have not had their growth hampered by inflationary pressures. China's annual GDP growth rate was 10.4% as of late 2006, while India's was 9.2%.

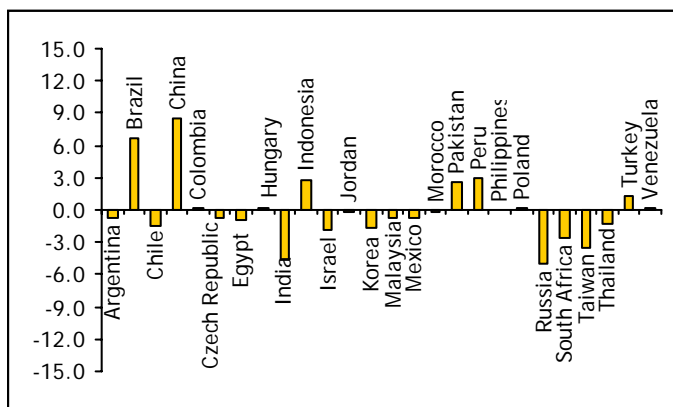
Risks to the asset class include potential contrarian concerns that emerging markets have had a strong run and may be due for a reversal. Additionally, the valuation gap between emerging and developed equities has narrowed in recent years. Emerging equities traded at a discount of approximately 15-20% to developed stocks during the fourth quarter of 2006, which is significantly less than the discount of about 60% they offered in 2002. In terms of the future outlook for the asset class, bullish indicators would highlight the fact that emerging equities comprise only about 7-8% of the total capitalization of global equities, though they account for 24% of world GDP.

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

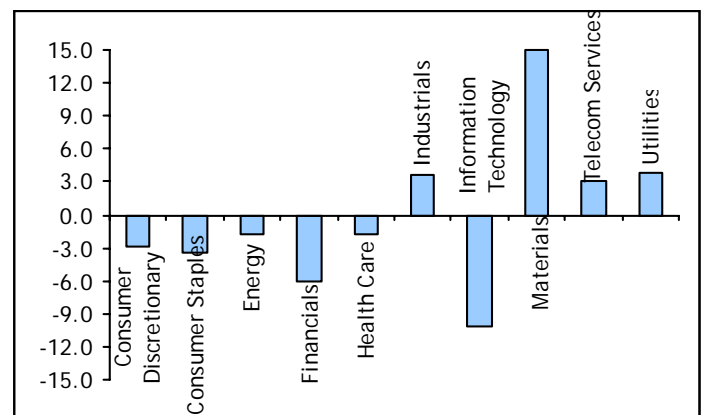
China Mobile (Chinese Telecommunication Services) – China Mobile, the largest provider of mobile phone service in China with more than 65% of the market share, was an attractive play throughout the fourth quarter and continues to display attractive characteristics into 2007. We favor China Mobile, like other Chinese Telecom stocks, based on positive country momentum and upward earnings estimate revisions. Furthermore, the stock exhibits particularly positive price momentum consistency and attractive earnings diagnostics, including return on invested capital.

Han Jin Shipping (Korean Industrials) – This Korean provider of marine transportation services represents a good value opportunity for our portfolios. Our stock-level forecast model finds this name attractive based on strong valuation characteristics, including book-to-price, dividend yield, and free cash flow metrics. The company's attractiveness as a value investment are also improved by its efforts to retire outstanding debt.

December 2006 Active Country Weights (%)
(MSCI EM Index)



December 2006 Active Sector Weights (%)
(MSCI EM Index)



Employee Profiles



Yasemin Kilinc
Associate, Business Development

Prior to joining Arrowstreet, Yasemin was a Vice President of Client Services and Marketing at Lyra Capital LLC and Crédit Agricole Structured Asset Management Advisers LLC (f/k/a Starview Capital Management LLC) in New York. Yasemin received her MBA from the University of Massachusetts Amherst in 2004 and her BA in Political Science and International Relations in 2002 from Bogazici University, Istanbul.

Alex Casale
Associate, Business Development

Prior to joining Arrowstreet, Alex was a Principal at Hamersley Partners, a third-party marketing firm that supports boutique investment managers. In this role, he marketed global/international investment products to institutional investors. Alex received an MBA from the Wharton School in 2001 and a BA from the University of Connecticut in 1994. He has passed all three levels of the CFA program.

