

What's New at Arrowstreet?

We hope that you are finding time to enjoy the summer of 2007. In this edition of the Journal, we feature an article by John Y. Campbell, Ph.D. one of Arrowstreet's founding partners. This article highlights work that John and his colleagues have done on estimating the equity risk premium. We are sure you'll find this subject interesting as well as topical.

As you may be aware, many quantitatively oriented investment strategies, including Arrowstreet's, have been negatively affected by the recent market events. Arrowstreet has sent an investment memorandum to its clients providing some detail on our interpretation of recent events, the steps we are taking, and our expectations for the future. If you have any questions regarding this memorandum, feel free to contact us.

Q2 2007 Review:**Investment Performance Attribution:**

Global sector allocation continued to be a major driver of performance during the second quarter of 2007. Arrowstreet's strategies benefitted from overweight positions in the materials and industrials sectors as well as an underweight position in the financials sector. Meanwhile, our underweight positions in the energy sector detracted from Arrowstreet's relative performance.

Business Growth:

In July, Arrowstreet celebrated its eight-year anniversary. During the 2nd quarter, firm-wide assets under management grew to \$21.3 billion as we funded three new global equity mandates on behalf of two new clients and one existing client.

Team Members:

Arrowstreet's employee base continues to grow. During the second quarter, Arrowstreet added new employees to our Systems and Compliance / Operations & Reporting groups. On page 3 of the Journal, you'll find a profile of Alex Merlis, who joined Arrowstreet's research team last year.

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

info@arrowstreetcapital.com

What Is the Equity Premium Today?

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

The equity premium is the expected excess return on a broad stock index over a safe bond market investment. It is the reward that investors can expect to receive for taking on equity risk, and thus has an important influence on asset allocation decisions.

Estimates of the equity premium depend on a number of details: the choice of stock market index (for example, US or global), safe investment (bills or long-term inflation-indexed bonds), starting point (today's market conditions or unknown future market conditions), investment horizon (one quarter, one year, or one decade), and return concept (continuously compounded log return vs. simple return, or equivalently geometric average return vs. arithmetic average return). It is tempting to neglect the distinction between geometric and arithmetic average returns, but at around 1.5% the difference is too large to ignore.

This paper compares the following four commonly used methods for estimating the equity premium:

1. Take an average of historically realized excess returns.
2. Estimate a historical relationship between realized returns and initial conditions, specifically market valuations relative to dividends or earnings.
3. Adjust historically realized excess returns for conditions that are unlikely to repeat in the future.
4. Infer the equity premium from steady-state valuation models, using current valuation ratios and historical averages for other inputs to the models.

The first method presumes that the true equity premium is a constant, independent of current market conditions; the other methods adjust their estimates to reflect the prices at which a stock market investment can be made today. None of the methods use high-frequency predictors of stock returns, so they deliver longer-run estimates for an investment horizon of 3 to 10 years, relevant for strategic but not for tactical asset allocation. These methods are illustrated using both US and global equity data.

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

June 2007 Investment Outlook Global/International Equity Strategy

Developed Markets Performance Attribution: 2nd Quarter 2007

Both active basket and stock selection added value to developed market portfolios during the second quarter. Our most successful basket allocation came in the German Materials basket. Over-weight positions in Salzgitter and ThyssenKrupp were largely based on price momentum signals and provided positive returns. Our selection of the United Kingdom Telecommunications Services basket provided positive returns. Stock selection, particularly an overweight in BT Group, proved less profitable than other basket constituents, such as Vodafone, where we held a smaller position. The Singapore Industrials basket showed positive returns from individual stock selections, largely through our overweight position in Keppel Corp. Ltd. The world's largest rig-builder gained on expectations high energy prices would increase interest in exploration, and boost demand for rigs and related equipment.

Our allocation to the United States Energy basket detracted most from performance. We had an underweight position due to poor momentum signals at the beginning of the quarter. However, the Energy sector rallied as the price of crude oil in New York reached a ten month high at the end of June.

At the country/regional level, Europe and North America outperformed Asia during the 2nd quarter. Of particular note were the more heavily laden commodity/energy markets, such as Norway and Canada. Germany also stood out as a clear market leader. The strength of this market's own economic recovery continues to surprise and impress investors. Asia's lagging performance was influenced largely by Japan, the only market to post a negative return for the quarter. Credit pressure stemming from troubles within its own financial sector and that of the U.S. have dampened investors' expectations for corporate earnings growth. In contrast, the other smaller markets in this region (e.g., Australia and New Zealand) posted rather healthy gains.

With regard to global sectors, Energy was the best performing sector in the second quarter (+15.27%). Other commodity prices remained firm during the quarter, boosting the returns of companies in the Materials sector, the best performing sector year-to-date (+22.20%). Industrials performed well during the second quarter (+9.63%) as many companies were the beneficiaries of continued global economic expansion, especially those engaged in transport/shipping and infrastructure development in Asia.

Developed Markets Overview

Overall, equity markets throughout the world performed well during the second quarter of 2007. During June, however, markets started to cool off following the torrid pace they displayed over the past several quarters. A

number of factors have contributed to the slow down, including recent up-ticks in global interest rates, the slowing of selective housing markets around the world, and the collateral effects of increased speculative volatility in China.

Merger and acquisition activity continues to set all time records both in terms of deal quantity and size. KKR has reestablished itself as the leading buy out firm in the U.S., while activity in Europe has predominantly taken place between individual companies, such as Iberdrola and Scottish Power. Such activity has propped up the performance of selective pockets of the market (e.g., Utilities) where the activity has been the greatest.

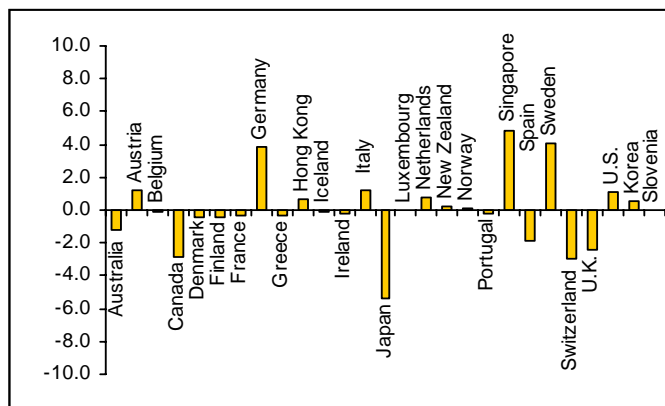
Almost without exception, valuation multiples measured at a stock, basket, country or sector level have continued to narrow over the past several years, even after the sell-offs in the Technology and Telecommunication sectors from 2000 to 2003. This valuation compression has produced an environment in which there are fewer money-making opportunities when viewed through the lens of a value-based investor. As a result, we believe other signaling sources, such as more detailed balance sheet analysis, momentum, or earnings estimate changes, will be the major drivers of returns in the current environment.

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

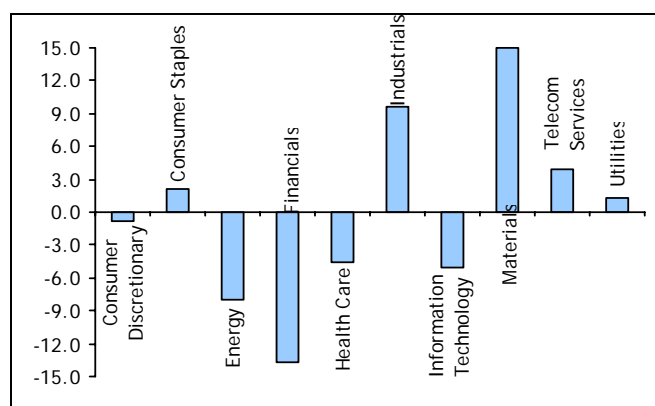
Salzgitter (German Materials) – German Materials basket continues to provide attractive investment opportunities. Our positioning in this basket is motivated by positive price momentum and earnings signals. Within this basket, Salzgitter is one of our favored stocks. We like this name in particular due to free cash flow to enterprise value yields and debt issuance terms. Estimates of global demand for steel show prices are expected to remain strong into 2008. Further, the consolidation that the steel industry has seen in recent years has produced more broad-based catalyst signals that are also attractive.

British Airways (U.K. Industrials) – We expect British Airways to outperform the broad market going forward. Our positioning in the U.K Industrials basket is motivated by favorable value terms, including a high book to price ratio on a country level. The stock itself smoothed earnings per share and free cash flow to enterprise value multiples. The airline has benefited from the strength of the British Pound, encouraging British tourists to travel aboard, as well as a recent resurgence in the broader global sector.

July 2007 Active Country Weights (%)
(Citigroup PMI World)



July 2007 Active Sector Weights (%)
(Citigroup PMI World)



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June 2007 Investment Outlook Emerging Markets Equity Strategy

Emerging Markets Performance Attribution: 2nd Quarter 2007

Country/sector basket allocation and stock selection played a major role in driving portfolio returns in the second quarter. In particular, in the Chinese Industrials basket, our large overweight positions in China Shipping Container Lines, China COSCO Holdings, and other stocks in this basket helped relative performance. Shares of Chinese shipping companies gained on expectations of rising freight rates as Chinese demand for raw materials remains strong. Another overweight position that contributed positively to performance was our overweight in the Brazilian Utilities basket. Our large position in energy producer Centrais Eletricas Brasileiras (Eletrobras) paid off as this stock benefited from the announcement of an initiative by the Brazilian government to double electricity capacity through 2030 to meet growing demand. Our underweight towards the Russian Energy basket contributed positively towards performance. Gazprom shares fell during the second quarter as the ruble strengthened to multi-year highs and the company reduced its export forecast for the year due to unseasonably warm weather throughout Europe.

Meanwhile, our underweight position in the Indian Financials basket hurt relative performance. Indian lenders underwent aggressive expansion plans during the second quarter. HDFC Bank, ICICI Bank, and the State Bank of India all announced plans to sell shares to strengthen their balance sheets and continue to expand.

From a sector perspective, Industrials were the best performing group for the quarter (+29.15%), and also on a year-to-date basis (+41.38%). As the beneficiaries of continued global economic expansion, companies engaged in transport/shipping and infrastructure development, particularly in Asia, posted high positive returns. Commodity prices remained firm during the quarter, boosting the returns of companies in the Materials sector, the second-best performing sector for the year (+32.84%).

Emerging Markets Overview

Emerging equities posted a strong gain during the second quarter of 2007, returning +15.05% in USD terms. Global economic expansion continued at a healthy pace in Q2, while investors' risk appetite increased as U.S. interest rates were held steady by the Federal Reserve. Longer-term measures of volatility persisted at the high levels witnessed towards the end of the first quarter, with the 100-day annualised daily volatility on the

MSCI Emerging Market Index measuring just below 16% as of the end of the quarter.

The correlation between emerging and developed markets remains high. During the first half of 2007, the correlation between the MSCI Emerging Markets Index and the MSCI World Developed Index measured at 0.78. This was based on 128 trading day observations between January 3 and June 29 with a t-statistic of 14.16 and a confidence level of 1%. By comparison, during the first six months of 2005 the correlation between these two indices stood at 0.57, based on 129 observations with a t-statistic of 7.84 and the same confidence level.

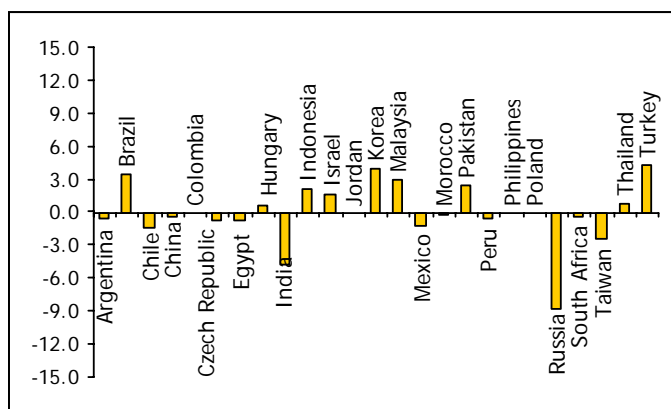
China's economy continues to expand at a double-digit rate, with GDP growth measuring at 11.10% on a year-over-year basis. Measures on the part of the Chinese government to relax controls on the Yuan and increase interest rates have helped to moderate fears of growing asset price bubbles, although many investors remained concerned that Chinese equities are too richly valued. China's stock market was one of the top performers in the MSCI Emerging Markets Index during Q2, recording a +24.45% gain.

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

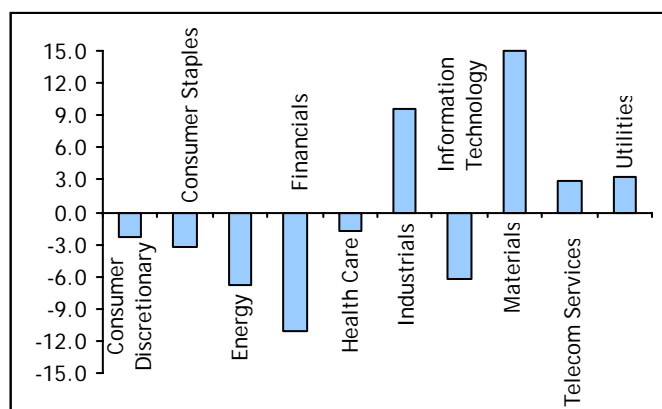
Brasil Telecom (Brazilian Telecommunications) – The positive price momentum of the basket and stock makes Brasil Telecom an attractive buy. Shares of Brazil's third largest phone company have risen on speculation that the Brazilian government supports consolidation within the industry. Favorable long term growth estimates also contribute to our outlook. The company has focused on expanding its mobile phone and internet service businesses as revenues from land-line calls declines.

Posco (Korean Materials) – The Korean Materials basket rank favorably relative to other emerging market stocks, primarily due to basket level price momentum signals. Strong economic growth in Korea has meant rising demand for steel and other raw materials from the construction and machinery industries. Posco, Asia's third largest steelmaker, has been able to improve margins for its products due to this robust demand. Positive long-term growth measures also contribute to the stocks attractiveness.

**July 2007 Active Country Weights (%)
(MSCI EM Index)**



**July 2007 Active Sector Weights (%)
(MSCI EM Index)**



Employee Profiles — Alex Merlis, CFA – Manager, Research

Alex Merlis is involved with the implementation of Arrowstreet's research agenda. In particular, he oversees the regular production of research inputs, including alpha and risk forecasts, into the investment process.

Prior to joining Arrowstreet, Alex worked as an Analyst at Citadel Investment Group in Chicago, IL, where he performed quantitative equity research for US and European strategies. Prior to joining Citadel, Alex worked as a Quantitative Analyst for StarMine Corporation, a provider of earnings momentum-based stock selection models, in San Francisco, CA.

Alex received an A.B. in Physics and a S.M. in Engineering Sciences from Harvard University in 1996 and an M.A. in Mathematical Finance from Boston University in 2006. He is a CFA charterholder. In his spare time, Alex likes to spend time with his twin daughters. He resides in Boston, MA.

