

**What's New at Arrowstreet?**

We hope this issue finds you benefiting from the year's strong start in equities. In this issue of the Journal we highlight the launch of Arrowstreet's new Global/International Small Cap Equity Strategy. The first article announces the launch and provides a high level summary of the strategy while the second article examines the timing of investing in small cap stocks.

**Q4 2005 Review:**

**Investment Performance:** Our investment strategies produced mixed results in the fourth quarter; rapid changes in leadership led to a difficult environment for adding value. For the year, global strategies posted solid gains relative to their benchmarks while international strategies posted marginally positive or marginally negative results. The emerging markets strategy posted its first negative year relative to the benchmark in four years.

**Business Growth:** During the year, we added 8 new clients with assets of nearly \$700 million. With enhancements from existing clients of over \$1.4 billion, our total assets under management rose to \$11.1 billion at year end.

**Other:** We would like to inform you about a personnel change at Arrowstreet. As our investment processes have become more complex, we have decided that we need to create a new senior level position to oversee production. This role requires a detailed understanding of every element of the research that underlies the investment processes, as well as a practical knowledge of how the PM group translates those models into portfolios. As such, John Capeci is the clear choice to fill this role. We are delighted that he has agreed to do so. Tuomo Vuolteenaho will take over the leadership of the research group.

We are interested in your views and encourage your feedback. Please e-mail your thoughts to us at:

**info@arrowstreetcapital.com**

**Arrowstreet Launches  
Global/International Small Cap Equity Strategy**

Arrowstreet is pleased to announce the introduction of its Global/International Small Cap Equity Strategy.

**Background**

We recently completed research which tested our existing global/international equity strategy on smaller cap stocks around the world. The goals of this research were to: 1) identify opportunities to enhance our existing strategy, which has been primarily built by researching price anomalies across large/mid cap stocks, and 2) understand whether we could tailor our existing strategy to small cap stocks. The results were very encouraging. By adding small cap stocks to our research universe, we reconfirmed the predictive power of our existing strategy. In addition, it allowed us to test and improve existing predictive signals across a broader universe of stocks. For example, we modified our earnings signals to reflect differences in capitalization and analyst coverage. Finally, it allowed us to introduce a new strategy dedicated to global/international small cap equities which was launched on December 1, 2005.

**Product Characteristics & Applications**

We are offering our small cap capability in three different mandates:

**1) Dedicated Global or International Small Cap:** For investors wanting dedicated small cap exposure, the strategy is offered on a stand-alone basis. Characteristics for a dedicated mandate are as follows:

- Style:** Core/Market Oriented
- Process:** Bottom-Up/Top-Down
- Targeted Excess Return:** 4%

- Targeted Excess Risk:** 6-8%
- Typical Number of Stocks:** 150 to 300
- Typical Turnover:** 80% to 120%
- Typical Minimum Investment:** \$30 million
- Typical Benchmark:** S&P/Citigroup Extended Market Index (EMI)

**2) All Cap:** For investors wanting combined exposure to the entire market cap spectrum, our strategy can be managed relative to the all cap S&P/Citigroup Broad Market Index (BMI), which is constructed to include 80% large cap stocks and 20% small cap stocks.

**3) Large Cap with Opportunistic Small Cap Exposure:** Finally, for investors who want opportunistic exposure to small cap stocks, our strategy can be managed relative to a variety of large cap indices.

**Capacity**

Consistent with our policy of maintaining capacity figures that protect our ability to add value and are responsive to the market environment, we have set capacity at 0.15% of the investable universe (as defined as the EMI universe of stocks which have institutional liquidity). As of January 1, 2006, this value was \$8.7 billion when measured on a global basis and \$4.3 billion when measured on a global ex-US basis.

**Conclusion**

We are excited about the results of our research into small cap stocks. Since the strategy was only recently funded, it is too early to report any performance. However, we are confident it will meet its risk and return targets.

For more information on this strategy, please visit:  
<http://www.arrowstreetcapital.com/products4.htm>

**Timing Investments in Small Cap Equities:  
Strategic and Tactical Considerations  
By Tuomo Vuolteenaho, Ph.D. Arrowstreet Capital, L.P.**

On December 1, 2005, Arrowstreet began offering equity strategies benchmarked against international and global small capitalization indexes. This is a culmination of a long and extended research agenda, and represents our first new offering in several years.

As we have begun to describe our product, however, one common question has been about the timing of investments into small cap names in

general, quite apart from our investment approach. In particular, investors have expressed concern that, relative to large cap names, small cap names are over-priced, and therefore should be avoided, or under-weighted. In this paper, we address these concerns by considering both the long-term (strategic) as well as the short-term (tactical) prospects for small cap stocks.

For a complete version of this article, please visit:  
[http://www.arrowstreetcapital.com/research\\_whitepaper.htm](http://www.arrowstreetcapital.com/research_whitepaper.htm)

## January 2006 Investment Outlook

### Global/International Equity Strategy

#### Developed Market Performance: 4th Quarter 2005

The fourth quarter proved to be a disappointment for our Global/International Equity Strategy. In general, many of our active decisions proved to be costly, however none greater than security selection. While over long periods, we would normally expect more of an equal contribution from stock and non-stock decisions, this period was somewhat non-representative in that our stock selection performed relatively worse than our basket selection at a time in which we were disproportionately emphasizing stock selection opportunities (i.e. active risk) in our portfolios.

For example, our decision to overweight **French Cyclical Consumer Goods** ultimately detracted from value. Much of this loss can be attributed to our bullish position in **Peugeot**. Shares of the world's second largest car maker plunged in October after the company issued a profit warning and **Toyota** announced continued encroachment on the market share of other automobile companies.

We were also unsuccessful with our decision to maintain overweight exposures to **Norway** and **Spain**. With Norway's abundant natural resources, particularly oil, its stock market was heavily influenced by changes in oil prices. When oil prices retreated from record highs in early October, the Norwegian market followed suit and lost over 10% of its value in less than half a month.

In Spain, our losses were mostly concentrated in the Financials sector, where **Metrovacesa** underperformed, and in Basic Industries, where **Acciona** and **Grupo Ferrovial** detracted from value.

#### Developed Market Outlook

When measured in their local currency, all developed country stock markets locked in gains for 2005. Along with the smaller capitalization markets of Austria and Denmark, the Japanese market appreciated over 40% for the year. Conversely, the U.S. market gained only 4%, trailing all markets except New Zealand. U.S. investors who did not hedge their foreign exposure did not experience the same outsized gains, as the dollar appreciated for the first full year in four versus the Euro and the Yen. Despite the dollar's success, however, investors are wary of the growing U.S. current account and the narrowing yield advantage.

The stronger dollar has jump-started an export-led economic recovery in most European nations. Recent government reports and consumer surveys showed consumer confidence to be at its highest levels since 2002. With exports beginning to fuel domestic spending, the European Central Bank has more flexibility to raise interest rates. In particular, the German economic outlook has improved after the unemployment rate, which reached post-World War II levels earlier this year, dropped sharply due to milder weather that boosted construction hiring.

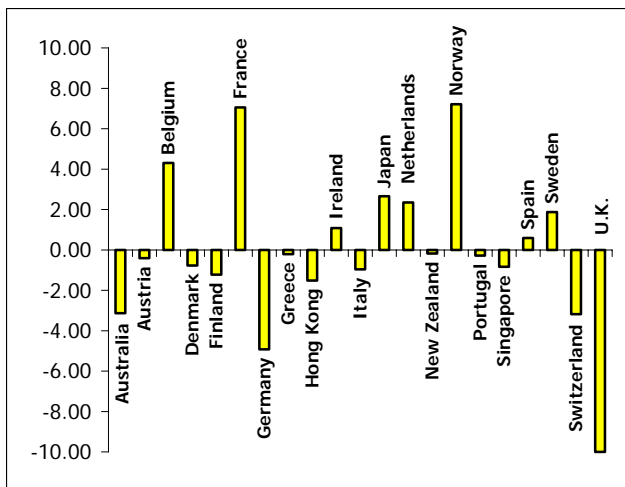
In Japan, a major theme in our 2005 country allocation decisions was a shift from an underweight to an overweight position. Although in aggregate the Japanese market continues to be expensive compared to other developed markets, it is near its own historical lows. During the past eighteen months many Japanese companies, specifically financial stocks, have experienced earnings growth that has outpaced price appreciation. As a result, the P/E ratio of the Japanese market remained basically static throughout the year even though the Nikkei realized its largest gains in two decades.

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

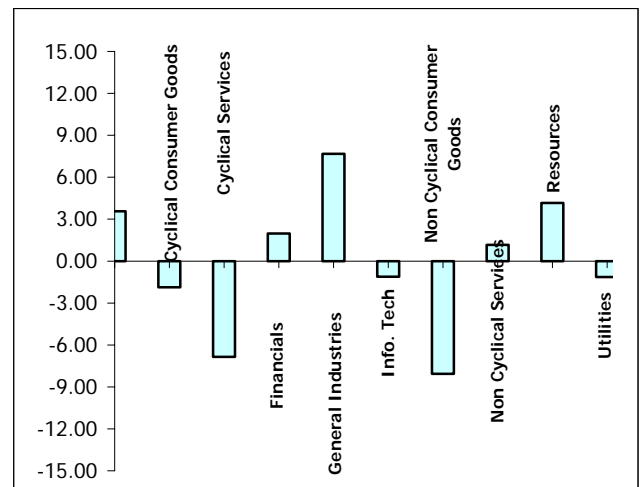
**Matsushita Electric (Japanese General Industries):** This stock ranks as one of the more bottom-up undervalued plays in the Japanese market. Not only does its R&D activity and book value appear to be undervalued by the market, but the company is also perceived to have higher growth prospects than its peers, according to the analyst community.

**AEGON (Dutch Financials):** Despite having trimmed our overweight position to the Global Financial sector, we still are able to find attractive opportunities within it. AEGON offers a well-balanced blend of favorable attributes observed at a country (i.e. valuation, momentum, estimate revisions), basket (i.e. valuation, momentum), and stock (recently oversold, valuation, momentum) level. While it is not a necessity that all positions rank favorably on so many dimensions, the fact that AEGON does indicates that it has many motivations behind it.

January 2006 Active Country Weights (%)



January 2006 Active Sector Weights (%)



## January 2006 Investment Outlook

### Emerging Markets Equity Strategy

#### Emerging Market Performance: 4th Quarter 2005

The fourth quarter proved to be a disappointment for our Emerging Market Equity Strategy. In general, our active basket selection as well as active stock selection decisions within baskets both proved ineffective.

For example, our overweight position in **China Mobile** detracted from value as its shares sagged when the company indicated it might list on mainland markets, thereby diluting the value of existing stock. Moreover, our decision to maintain an overweight position in **Korean Basic Industries** (e.g. **POSCO**, **Daelim Industrial**) proved unsuccessful. Shares of POSCO declined on reports that the company will cut prices of thirteen steel products by as much as 17% amid rising competition from Chinese companies.

#### Emerging Markets Outlook

Emerging equities recorded another strong gain in 2005, rising +34.54% in USD terms and outperforming developed equities for a fifth consecutive year. By comparison, the MSCI World Index of developed countries recorded a +9.49% return in 2005. Corporate profits among emerging market companies climbed as a result of increased exports of raw materials and tech-oriented goods to developed regions. Low inflation, steady economic growth, and historically low levels of equity market volatility contributed to a generally stable global environment that contributed to emerging market equity gains during the year.<sup>1</sup>

According to Emerging Portfolio Fund Research, emerging market stock funds experienced inflows of \$16.5 billion in 2005, quintupling the amount of inflows they saw in 2004. In spite of the recent run by asset class, emerging equity valuations remain at a discount to developed equities on a forward-looking basis. Based on forecasted earnings for the next 12 months, the price-to-earnings ratio of the MSCI Emerging Markets Index stood at 10.83 as of mid-December, 2005. By comparison, the same measure for

the MSCI World Developed Index was 14.78.<sup>2</sup>

Asian emerging markets outperformed the broad index during the fourth quarter, returning +8.74% versus the index's +7.20% climb. The Korean market recorded a +15.39% gain in Q4, and finished 2005 up +58%. Samsung Electronics jumped +49.81% during the year, and is now Asia's largest consumer electronics firm by market capitalization.<sup>3</sup>

Some investors believe China is poised to outperform other markets in 2006 based on its lackluster performance in 2005. MSCI Chinese stocks fell -0.35% in Q4, and underperformed the broad index by almost 15% for the year. It was recently reported by the OECD that China has surpassed the U.S. as the largest exporter of technology and telecom goods on the globe, selling USD\$180 billion in 2004.<sup>4</sup>

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

**Korea Electric Power Corporation (KEPCO):** This Korean electric utility is a member of a basket that offers an attractive dividend yield versus the global sector average for utility companies and, additionally, the company's yield is greater than its Korean peer, Korea Gas Corp. The stock's valuation continues to look favorable, even after accounting for its recent appreciation.

**KIA Motors:** The Korean car, bus and truck manufacturer is attractively valued as measured by its earnings and book yield relative to the other constituents in the Korean Cyclical Consumer Goods basket. Once you account for the stock's research and development expenditures, which exceed its peers, the company looks even more attractive on a basket relative basis.

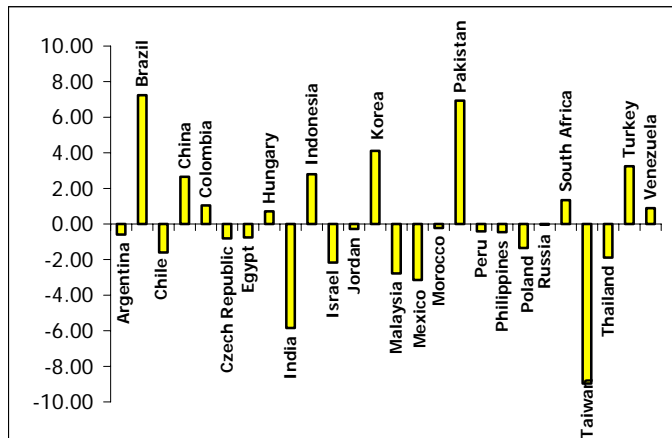
<sup>1</sup> Source: "Emerging-Market Stocks, at Records, May Extend Climb," Michael Tsang, Bloomberg, January 5, 2006.

<sup>2</sup> Source: I/B/E/S Global Aggregates – Forecast Valuation, MSCI, FactSet.

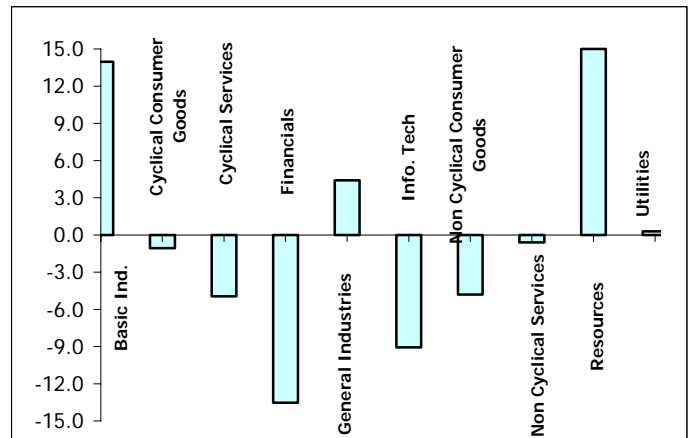
<sup>3</sup> Source: "Emerging-Market Stocks, at Records, May Extend Climb," Michael Tsang, Bloomberg, January 5, 2006.

<sup>4</sup> Source: "Digital Dragon," The Economist, December 17th-23rd 2005, page 58.

January 2006 Active Country Weights (%)



January 2006 Active Sector Weights (%)



#### Employee Profiles — Patrick Burek Associate, Portfolio Management

Patrick Burek works with Ezra Levine, Jim Thames, and George Pararas where he is responsible for many functions associated with the day-to-day implementation of the firm's investment strategies.

Prior to joining Arrowstreet, Patrick worked as an Associate Analyst for Fidelity Investments, where he was a member of the Information Security Group. Patrick graduated from Cornell University with a B.A. in Government in 2002.

In his spare time, Patrick enjoys following many sports (especially baseball), reading, and traveling. He lives in Brighton.

