ARROWSTREET CAPITAL, L.P.

ARROWSTREET JOURNAL

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Spring 2009

What's New at Arrowstreet?

We hope this issue of the Arrowstreet Journal finds you enjoying the start of spring. This edition of the Journal features a white paper by John Y. Campbell on Arrowstreet's long term view of the equity premium.

Q1 2009 Review:

Investment Performance Attribution: Global equity markets reached new multi-year lows during the first quarter of 2009, before rallying in the month of March and recovering a portion of the losses. Almost all of Arrowstreet's long-only strategies outperformed their benchmarks during the first quarter and April was a strong month for all accounts.

Business Growth: During the first quarter, Arrowstreet's firm-wide assets under management decreased to $13.1 billion due to the downturn in global equity markets. We have, however, seen tremendous interest in our emerging markets equity strategy and anticipate a number of fundings in the second quarter.

Team Members: In this edition of the Journal, we profile Derek Vance, who joined Arrowstreet's Research team last April. Please turn to page 3 of the Journal to learn more about Derek.

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

The Equity Premium: A Long Term View

John Y. Campbell, Ph.D., Partner, Co-Head of Research, Arrowstreet

Through April 2009, the MSCI World Index of global equities declined just over 47% in dollar terms from its peak in October 2007. The decline in the MSCI US index was almost as severe at 43% over the same period. In this note we consider what these large price declines imply for the equity premium. We take a long-term view rather than a tactical view; our analysis gives us a reasonable estimate of average returns over the next five to ten years, but should not be used to forecast returns over shorter periods such as a year.

Any long-term analysis of an asset return must take into account both the cash flows that the asset will deliver in the future and the price that an investor must pay for the asset. In the case of a government bond, for example, the yield to maturity is the known rate of return if the bond is purchased at today's price and held to maturity, given the known future coupons and principal payments on the bond.

In the stock market, of course, future cash flows are not known with certainty. Nevertheless, it is possible to calculate the equivalent of a yield to maturity on the market using the fact that total return equals dividend yield plus capital gains, and that over the long term capital gains must come from growth in dividends.

Recent academic work has shown that the market's yield to maturity delivers better forecasts of the equity premium than the conventional practice of averaging past historical returns to predict future returns on stocks (Campbell and Thompson, 2008). In this article, we forecast the long term equity premium, using our preferred method of calculating market's yield to maturity, for the World and US Equities.

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

Developed Markets Overview: 1st Quarter 2009

Global equity markets reached new multi-year lows during the first quarter of 2009, before rallying in the month of March and recovering a portion of the losses. Economic indicators deteriorated during the quarter as consumer confidence continued to fall and unemployment rates rose. Governments around the world took dramatic actions in efforts to prevent the world-wide recession from worsening. These included a deepening involvement of governments in many financial institutions and keeping interest rates at record low levels. Stock markets' recoveries in March were based on hopes that these efforts and the US Treasury's plan to buy toxic assets would clean up banks' balance sheets and spur an increase in lending. Announcements by major US banks that the companies were profitable in the first two months of 2009 also fueled investor optimism.

The US Dollar strengthened early in the quarter as investors fled from risky investments. The dollar then sold off sharply in March as equities rallied. Oil prices stabilized during the quarter and did not drop below their December lows despite concerns of falling demand as the global economies slow. At the end of the quarter, world leaders expressed commitments to an international effort to stimulate trade, increase liquidity, and tighten regulations on financial institutions in efforts to overcome the global recession.

Among developed countries, Norway was the best performer in local currency terms during the first quarter. The country's performance was virtually flat over the three-month period. Norwegian Financials were the best performer, up 12% on the quarter. The worst performing developed country was Finland, whose MSCI Finland Index declined by more than 17% in the month of February after an 8% drop in January. The Finnish Information Technology sector was the worst performer, down 20% in the first quarter, followed by Health Care, which saw a 10% drop.

At the sector level, Financial stocks continued their declines and underperformed for the second straight quarter. Many large financial institutions were forced to turn to their respective governments in dire need of capital injections and support. The sector bounced back sharply across the globe in March after some favorable news, highlighted by the United States and other national governments increasing their efforts to stabilize banks and the prop up lagging economies. The Information Technology sector was the only positive performer in the first quarter amongst developed countries. Stocks in this sector were less affected by unfavorable global conditions and also buoyed by it constituents' relatively strong balance sheets. The Materials sector was a slightly negative performer, suffering much less than other sectors during the continued global economic crisis.

Developed Markets Strategy Performance Attribution

Two country/sector baskets that impacted the performance of Arrowstreet's developed markets portfolios during the quarter are described here:

United States Information Technology - Western Digital Corp, maker of computer hard drives, saw its share price rise more than 68% during the first quarter. The company reduced its workforce and announced a major restructuring. It has slowly been gaining market share and has emerged a leader in notebook hard drives. Western Digital Corp also acquired Siliconsystems Inc, a maker of solid state hard drives. Our positions in the stock were based on attractive stock level valuation signals.

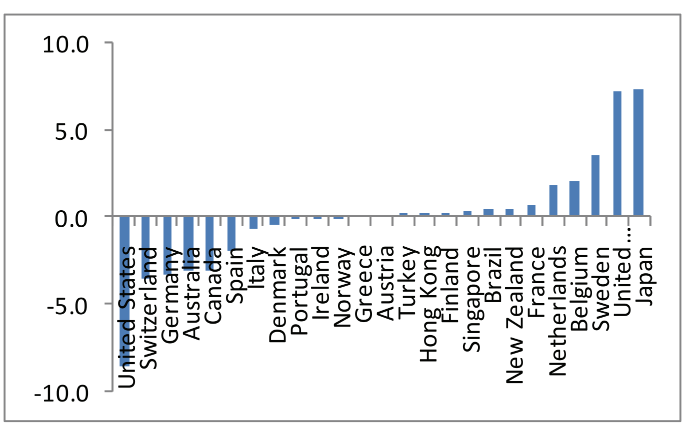
Sweden Information Technology - Wireless network company Ericsson saw its share price rise during the first quarter. The company was able to take advantage of financial difficulties at rival companies to expand its market share. Despite the slowing global economy, phone companies have continued upgrading their networks to accommodate increases in data traffic. Ericsson also took measures to reduce its expenses, cutting thousands of jobs. Our positions in the stock were based on attractive basket level price momentum.

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

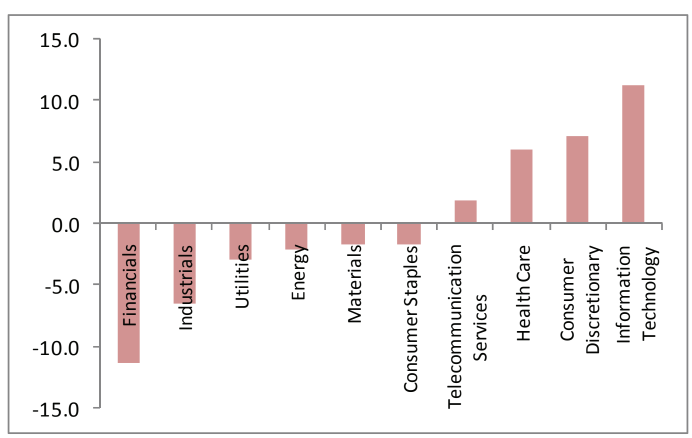
Hennes & Mauritz AB (Sweden Consumer Discretionary): European retailer Hennes & Mauritz AB operates retail clothing stores throughout the world under the H&M brand. The firm is committed to leveraging its strong brand to expand despite the global economic slowdown. The company announced plans to open 225 new stores in 2009, including at least 10 in China. The stock was driven down in late March as the company announced its first quarterly drop in profit in five years. Despite this recent setback, we view it as an attractive investment in light of related company momentum and earnings.

Seagate Technology (United States Information Technology): Disk drive maker Seagate Technologies has vowed to combat declining sales with a series of restructuring maneuvers aimed at cutting costs. By reducing its workforce significantly and cutting its dividend, Seagate hopes to attain a more competitive market position. Seagate will focus on new technology employing energy efficiency to meet the growing demand of users in this segment. Our positive outlook is motivated by a combination of attractive valuation, positive relative momentum as well as shorter-term technical indicators.

April 2009 Active Country Weights (%)
(MSCI World)



April 2009 Active Sector Weights (%)
(MSCI World)



Data provided above is for Arrowstreet's longest standing representative portfolio for the Global Equity strategy as of the end of April.

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Emerging Markets Overview: 1st Quarter 2009

The MSCI Emerging Markets price index was up nearly 36% from the lows it hit on March 2, 2009. Investors bet that the worst of the credit crisis may have passed for the troubled Financials Sector, with large banks such as Citigroup providing positive guidance on their Q1 earnings. As recently as April 13, 2009, Goldman Sachs handily beat analysts' estimates, posting a USD 1.81 billion profit for the quarter. Nevertheless, other indicators of the broad economy still remain relatively weak in many countries, in particular the housing market, unemployment, and consumer spending.

The best performing MSCI emerging market countries during the first quarter were Chile and Brazil. Both countries' indices gained as their central banks aggressively cut interest rates in response to the slowing global economy. Chile also benefitted from rising copper prices during the quarter. The worst performing emerging market country was Poland. Investors fearing that Eastern Europe would be hit especially hard in the slowing global economy drove shares of Polish companies lower. Polish employment fell for the first time since 2004 and output fell at the fastest pace in 20 years during the first quarter.

On a sector basis, the Information Technology sector was the best performer in the Emerging Markets during the first quarter. Similar to developed markets, emerging market stocks in this sector were less affected by unfavorable global conditions and also buoyed by it constituents' relatively strong balance sheets. The Materials sector was a slightly negative performer. Emerging Markets Telecommunications and Financials sectors performed poorly in the first quarter. Financial companies saw share prices fall as uncertainty over how developed countries would react to their growing banking crisis and the effect the slowing global economy would have emerging market banks.

Emerging Markets Strategy Performance Attribution

Two country/sector baskets that impacted the performance of Arrowstreet's emerging markets portfolios during the quarter are described here:

Poland Materials - Overweight positions in KGHM Polska Miedz were motivated by stock and basket-level value terms. This Polish copper and silver mining company's stock rose over 68% during the quarter as copper prices rose 29% after a collapse in demand last year. KGHM is also one of the world's largest silver miners, which outperformed over the quarter as well.

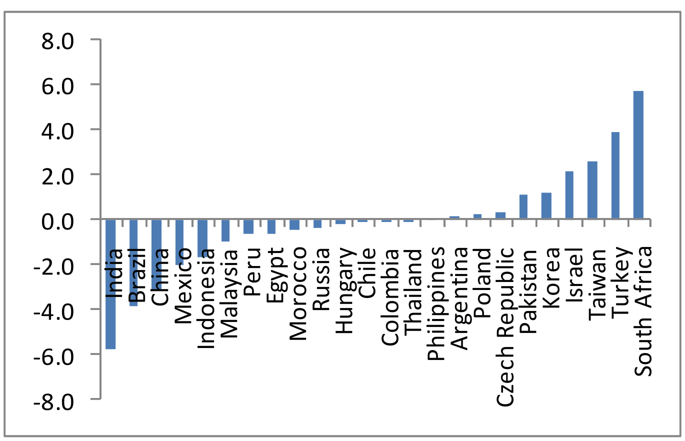
Czech Republic Financials - Our overweight positioning in Komercni Banka was established due to positive earnings and value signals. Shares of Komercni, Societe Generale's Czech unit, declined 31% over the quarter after losing 23% in the last quarter of 2008. Komercni Banka's lending business was hurt over the quarter as demand for mortgages decreased and global economies continued to contract. Komercni's expectation of decreased lending growth in 2009 contributed to the stock's price decline.

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

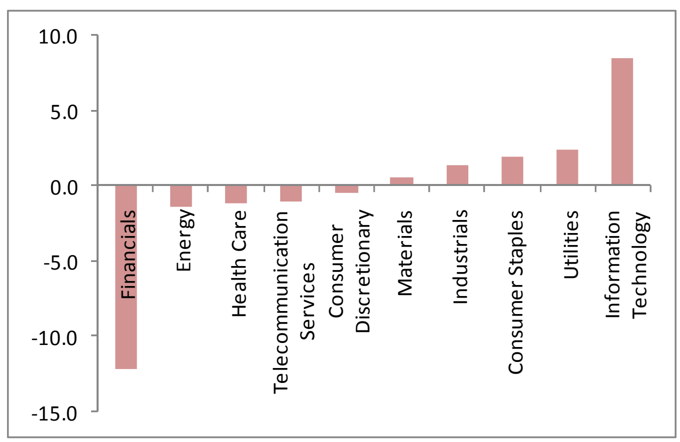
Standard Bank Group (South Africa Financials): Our overweight positioning in Standard Bank Group, Africa's largest bank by assets, is motivated by positive related company momentum and earnings signals. Shares rose during the first quarter as the company acquired a 33% stake in Russian brokerage firm Troika Dialog. Standard Bank continues to seek acquisitions in hope of expanding its international business as the current market conditions make potential targets less expensive.

United Microelectronics (Taiwan Information Technology): At the end of April, Taiwanese stocks surged on news the country would allow Chinese investments for the first time since 1949. Despite declining sales throughout the first quarter, United Micro's shares staged a strong rally, as the chip-maker reported that computer-chip orders increased and shipments may double. Our overweight position in United Microelectronics is partially motivated by stock-level lead analyst revision data as well as intermediate term momentum.

April 2009 Active Country Weights (%)
(MSCI EM Index)

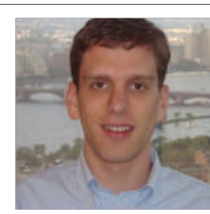


April 2009 Active Sector Weights (%)
(MSCI EM Index)



Data provided above is for Arrowstreet's longest standing representative portfolio for the Emerging Markets Equity strategy as of the end of April.

Employee Profiles — **Derek Vance** – Associate, Research



Derek assists Arrowstreet's research team in the development and enhancement of the firm's forecasting and risk models.

Derek was an intern at Arrowstreet in 2006 and joined full time in 2008 after working at Goldman Sachs for a year. He received his AB in Economics from Harvard College in 2007.