

# THE JOURNAL

Connor, Clark & Lunn Arrowstreet Capital Ltd.

Fall 2004\*

## What's New

We hope this issue finds you benefiting from the surprising strength of the world's equity markets. In this issue of the Journal, we highlight some of the recent innovations to Arrowstreet's investment process that were covered in some detail at recent client research seminars in Cambridge, MA and Portland, OR. In addition, we feature some interesting academic work done by Tuomo Vuolteenaho, Christopher Polk and Samuel Thompson on the relationship between the equity risk premium and the price of risky stocks vs. safe stocks.

## Q3/2004 Review

**Investment Performance:** Our investment strategies had a strong quarter. Both the Global/International Equity Strategy and the Emerging Markets Equity Strategy posted gains relative to their respective benchmarks.

**Business Growth:** During the quarter we added a new public fund client and received additional assets from several other clients. This helped our assets grow to \$6.4 billion by the end of the quarter, up from \$4.4 billion at the beginning of the year. We continue to see strong interest in international and emerging market equity strategies from investors around the world. In addition, there appears to be growing interest for global (including the US) strategies, especially from non-US plan sponsors. We now manage over \$1 billion in global strategies for three clients and expect this to grow significantly in the next few years.

**Other:** We are interested in your views and encourage your feedback. Please email your thoughts to us at: [more\\_info@cclgroup.com](mailto:more_info@cclgroup.com).

## Refinements of Value and Momentum Terms

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

Ongoing research, and the pursuit of alpha, is the lifeblood of any successful active management firm. We recognize that no investment approach is perfect even when initially conceived. Moreover, markets are continually evolving, both destroying opportunities and creating new ones. For all of these reasons, we are continually evaluating new ideas as well as revisiting old ones in an effort to refine our investment strategies. Underlying investment philosophies, however, should be consistent over time.

How we apply our philosophy is always subject to refinement. These refinements reflect an improvement in our understanding, rather than a shift in our philosophy. In this article, we provide illustrations of how we have adapted our models in recent years, using as specific examples some enhancements we have made to how we measure momentum and value.

For a complete version of this article, please visit the Arrowstreet Capital, L.P. website at <http://www.arrowstreetcapital.com/docs/research.htm>.

## Cross-sectional Forecasts of the Equity Risk Premium

By Christopher Polk, Ph.D., Associate Professor of Finance, Kellogg School of Management, Samuel Thompson, Ph.D., Associate Professor, Harvard University, and Tuomo Vuolteenaho, Ph.D., Associate Professor, Harvard University

Predicting the future equity premium, defined as the return on a broad, value-weight stock portfolio minus the return on short-term bills, is perhaps the most important but also the most challenging practical problem in finance. This paper proposes a new method for estimating the forward looking equity premium.

The idea behind our cross-sectional equity-premium measure is simple. When safe, low-beta stocks are expensive relative to risky, high-beta stocks, one can infer that the market is requiring a high risk premium and the subsequent equity-premium realizations should be high. In contrast, when risky stocks are abnormally expensive relative to safe stocks, one can infer that the market is not very risk averse and the stock market as a whole is fully valued to yield a low future equity premium. To implement this idea, we compute the cross-sectional correlation between the stocks' standard valuation measures (including the book-to-market equity ratio, earnings yield, etc.) and the stocks' estimated betas, and use this rank correlation as our equity-premium measure.

Historically, safe stocks were very expensive relative to risky stocks in 1932 in the middle of the Great Depression, in 1949 when Mao Zedong took control of China and the Soviets performed their first live test of the atomic bomb, and in 1973 when the Arab-Israeli war resulted in the oil crisis and gasoline rationing in the US. Examples of times during which risky stocks were abnormally expensive relative to safe stocks are in 1929 before the stock-market crash, in 1970 when the "nifty-fifty" era began, in 1982 when we suffered high interest rates and a recession, and in 2000 at the top of the TMT bubble.

\* Contents of this publication are a duplication of articles appearing in the Arrowstreet Capital, L.P. Journal, which can be found in its entirety on [www.arrowstreetcapital.com](http://www.arrowstreetcapital.com).

The historical data show two interesting patterns. First, our cross-sectional equity-premium measure is highly correlated with “the Fed model’s” ex-ante equity-premium forecast (defined by us as the dividend yield minus the ten-year nominal Treasury bond yield). Second, our cross-sectional equity-premium measure seems to forecast the future equity premium realizations. However, both our measure and the Fed model made one large wrong call, namely both of them predicted a low future equity premium in 1982 — the year that dates the beginning of the long-term bull market for equities.

For more information, download this paper at:  
<http://post.economics.harvard.edu/faculty/vuolteenaho/papers.html>.

## October 2004 Investment Outlook Global/International Equity Strategy

### Developed Market Performance — 3rd Quarter 2004

Overall, the third quarter proved to be a success for our Global/International Equity Strategy. Not only were we able to add value from our active basket selection decisions, but we were also successful in our active stock selection decisions. Additionally, we were able to preserve most of this value by minimizing the performance drag effects associated with commissions and trading costs.

We did a particularly effective job in selecting baskets and stocks within the Global Financial sector. Our overweight position in Hong Kong Financials (e.g. Cheung Kong Holdings, Sun Hung Kai Properties) translated into significant value-added as the country’s real estate market continues to demonstrate strength and resilience. Additionally, our bullish outlook for Dexia of Belgium was rewarded as it responded favorably to the stock’s relatively cheap valuation and upgrades in analyst earnings expectations.

Our decision to maintain an overweight position in Norway added value to portfolios. Despite having suffered earlier in the year due to adverse environmental rulings, Norsk Hydro’s stock price has significantly benefited from the spike in oil prices. We were initially attracted to the company based on the country’s attractive valuation and the basket’s positive earnings revision and momentum characteristics. More recently, though, our bullish outlook has been bolstered by the global sector’s steady momentum characteristics.

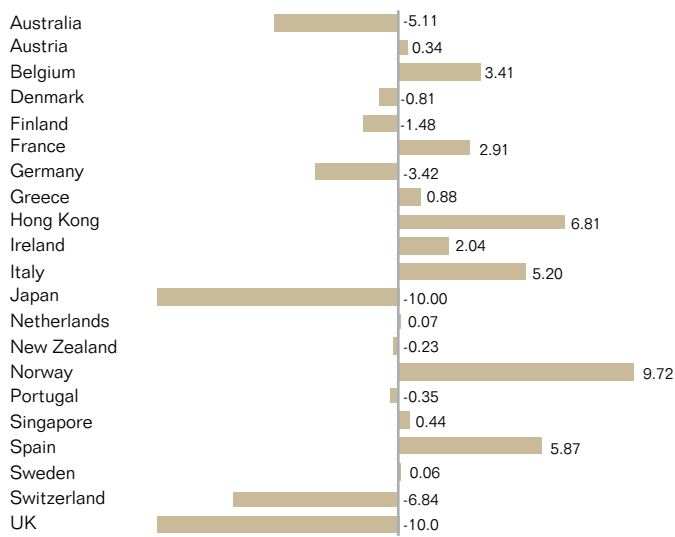
### Developed Market Outlook

World markets lost value in the third quarter as geopolitical concerns and high oil prices gave investors reason to speculate that the global economic recovery is slowing. Crude oil prices were up over 25% for the quarter on supply concerns, stemming mainly from the current situation in Iraq as well as uncertainty in Nigeria. The fallout from the increase in oil prices has been an increase in inflation, which would pose a threat to economic growth. Japan has already been negatively impacted — the government cut the second quarter growth estimate, a signal to many that the Japanese economy is faltering. The combination of the rise in oil prices and speculation about the strength the global recovery contributed to the world markets losing roughly 2% for the quarter.

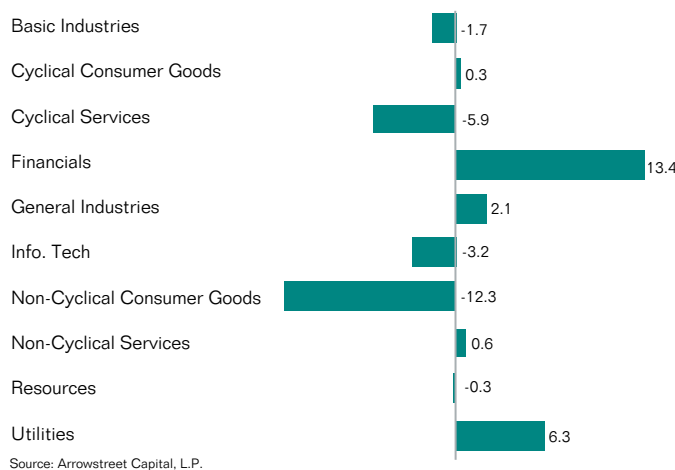
Specific opportunities that we believe will offer attractive return potential include the following:

- ◆ **Peugeot (French Cyclical Consumer Goods):** While we are modestly bullish in our outlook for the French market (positive momentum), we are even more attractive to certain stocks within the market, like Peugeot, given their bottom-up characteristics. Peugeot, in particular, has signaled the market via stock buybacks and dividends that its shares are undervalued.
- ◆ **Telefonics (Spanish Non-Cyclical Services):** As one of the more bottom-up attractive Non-Cyclical Services stocks in the world, you should expect to see this holding prominently positioned in the portfolio for months to come. Not only does the stock look relatively cheap versus its normalized level, it has also displayed both positive momentum and positive earnings revisions as of late.

### October 2004 Active Country Weights (%)



### October 2004 Active Sector Weights (%)



# October 2004 Investment Outlook Emerging Markets Equity Strategy

## Emerging Market Performance — 3rd Quarter 2004

Overall, the third quarter proved to be successful for our Emerging Markets Equity Strategy as our investment decisions at both a bottom-up basket level and intra-basket stock level proved to be successful. For example, our overweight position in Brazilian Resources (e.g. Petrobras, Cia Vale Rio Doce), motivated by favorable country valuations and strong sector momentum, positively contributed to performance during the quarter. Shares of Petrobras and other global resource companies benefited from strong oil prices, easily outperforming the broad market.

Additionally, our underweight position in Taiwanese Information Technology (e.g. Advanced Semiconductor, Compal Electric) added value as Global Information Technology stocks lagged the market towards the end of the quarter. Given that higher oil prices increase the uncertainty of a sustained global economic recovery, many companies opted to reign in their spending on technology.

## Emerging Markets Outlook

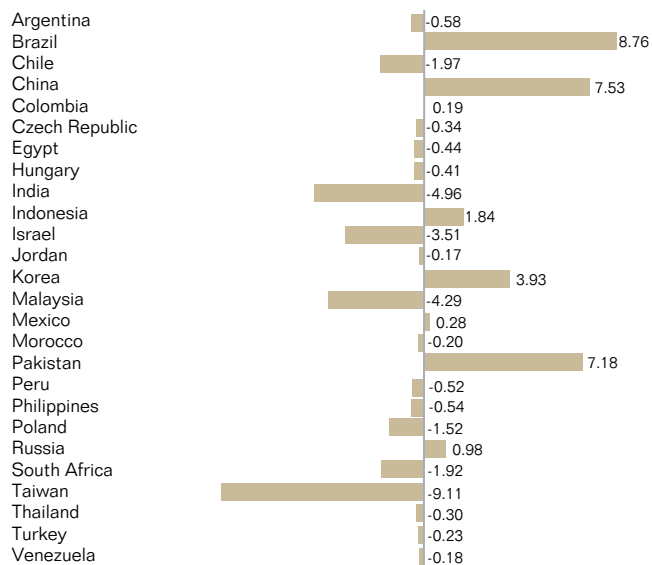
Although the quarter began on a sour note, as weaker than expected global economic data signaled the end of the robust global economic recovery, markets recovered in September as rising corporate earnings continued to surprise on the upside, exceeding analysts' expectations worldwide. Furthermore, stronger economic reports in the United States (e.g. lower unemployment), industrial output increases in Germany, and Japan's export growth led to a rise in investor interest. These positive developments, however, have been curbed by volatility in oil prices. Political instability in oil-producing regions coupled with strong worldwide demand boosted prices, creating inflationary concerns that could weigh on economic growth in both emerging and developed markets.

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

- ◆ **Taiwan:** Taiwan is presently trading at a value premium relative to the broader universe and has experienced poor relative momentum. Additionally, analysts have downgraded their earnings expectations for stocks within the country. We are mainly expressing this view through large underweights to Information Technology and Financial stocks, as these baskets carry the largest weights within the country and serve as good sources for funding more attractive opportunities.
- ◆ **Resources:** We have increased our weight to Resource stocks as the sector has experienced positive relative momentum and moreover has very attractive baskets (e.g. Brazil and China). The shift to Resources was funded by a reduction to our exposure in Information Technology stocks due to the sector's poor momentum and also to bottom up factors in the Korean, Taiwanese, and Chinese Information Technology baskets.

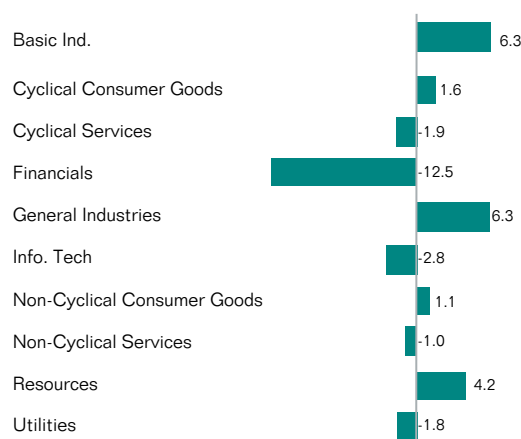
- ◆ **China:** This country continues to trade at attractive valuations while exhibiting positive momentum. There are numerous baskets within the country (e.g. Resources, Basic Industries, and Cyclical Services) that have outpaced the universe and in the case of Chinese Resources and Cyclical, trade at a discount to their peers.

## October 2004 Active Country Weights (%)



Source: Arrowstreet Capital, L.P.

## October 2004 Active Sector Weights (%)



Source: Arrowstreet Capital, L.P.

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