

## MARKET MONITOR NOVEMBER 20, 2006

**BRETT HAMMOND**  
CHIEF INVESTMENT  
STRATEGIST

**LEO KAMP**  
CHIEF ECONOMIST

**DOUGLAS FORE**  
DIRECTOR OF PORTFOLIO  
ANALYTICS

### Top-Down Versus Bottom-Up Investing

In a world market where there are tens of thousands of stocks and hundreds of thousands of corporate bonds and other fixed-income securities, it is next to impossible for individual investors who have other things to do to figure out what to buy and what to sell. Instead, we buy accounts and funds managed by investment professionals. How do professional investment managers form portfolios of securities and then manage them on our behalf? Two major approaches to portfolio construction and management are top-down and bottom-up investing.

In this issue, we will address the following:

- What is top-down versus bottom-up investing?
- How do the differences affect modern portfolio construction?
- What is the approach TIAA-CREF takes in its investment management?

When investment professionals refer to top-down investing, they generally mean the use of macroeconomic or overall market factors as the primary metrics to drive portfolio construction. Bottom-up investing, by contrast, starts from the micro end by looking at key items related to individual firms.



One sort of top-down investment strategy might start with a manager's views on relative growth rates in geographic regions or countries. Are economic and market conditions better in Asia than in Europe? Will profit growth be better in China than in France? If so, then a manager might allocate assets to securities in Asia and/or China. Or, a manager might begin by identifying particular sectors or industries where valuations are relatively attractive. Is the average price/earnings ratio in the telecommunications industry more attractive than in the auto industry? If so, then buy telecommunications companies. Still another top-down approach would be to exploit expected movements in exchange rates and interest rates between two or more currencies. If the Chinese yuan is undervalued relative to the dollar, perhaps it would be attractive to invest in Chinese companies and hope the yuan's value rises over the next few years.

In any of these top-down approaches the idea is to try to compare broad macro measures and then shift investments in regions, countries, industries, or currencies accordingly. In each case, the idea is to make money by shifting assets rather than by evaluating or selecting individual companies. Examples of funds that would take a top-down, macro approach would be global tactical asset allocation funds and macro strategy fixed-income hedge funds.

In general, however, the asset management industry is not dominated by top-down investment strategies. This is because the informational efficiency of global financial markets is such that large-scale, macroeconomic mispricing doesn't exist, or they don't exist for very long before investors figure them out and exploit them away.

At TIAA-CREF, investment management professionals utilize a bottom-up focus on individual security selection, which begins with detailed knowledge of companies and industries within a particular global sector. In equities, TIAA-CREF was among the first to organize its research analysts in pan-regional and global teams to cover particular sectors.

Now, most analysts are assigned to a sector, such as autos, pharmaceuticals, or consumer goods, and their job is to research and compare the attractiveness of companies in those sectors no matter where in the world they are located. This is the case for the equity, fixed-income, real estate and alternative investments groups.

TIAA-CREF investment analysts and portfolio managers leverage detailed knowledge of individual firms—knowledge gained via years of experience covering a particular industrial group or sector—with visits to firms, suppliers, competitors, and one-on-one and small-group meetings with senior management. Analysts and portfolio managers integrate this information with detailed analysis of financial statements to make their own estimates of current value and expected future stock or bond prices (also called price targets) for firms within an industry. Each firm's estimated value and expected price target are then compared to similar firms in the same group in order to spot the firms that are relatively attractive or unattractive. The entire process is repeated regularly in order to keep the research and TIAA-CREF's portfolios up to date.

Analysts covering different industrial groups favor different valuation metrics. For example, analysts covering pharmaceutical firms focus on estimating the revenues that each new and existing drug may generate. They have to separate these estimates because for existing drugs the end of a patent protection period could mean the loss of market share to generic product manufacturers. These revenue estimates, together with detailed estimates on the cost of the firm's sales efforts, research and development costs, and other factors, are all incorporated to generate estimates of expected profits and of the total value of the firm.

In contrast, different measures are needed for a large bank holding company with commercial and investment banking subsidiaries where much of the financial activity would take place off the bank's balance sheet. In addition, the bank would likely have significant positions in derivatives that

would have to be valued. For this type of firm a typical metric used is its price in the market relative to its net asset value. This metric is used because the net asset value takes into account all of the financing activities of the bank.

Using appropriate metrics, TIAA-CREF analysts and portfolio managers select individual companies to own or avoid, and determine how much to own relative to the weight of those companies in the benchmark used for a particular portfolio. The resulting portfolio is then monitored on a daily basis and positions are adjusted on the basis of new information, additional analysis and considered judgment.

So, we can see that the two basic approaches to fund and portfolio management—the top-down and bottom-up strategies—are quite different in their focus on macroeconomic and financial forces, individual company information and the research process. Note that many

bottom-up managers will let macro, top-down bets sneak into their portfolios. Along with their stock picks, they may hold cash, tilt the portfolio towards growth or value, or favor large-cap stocks. All of these are examples of macro factors that could enter a bottom-up portfolio. TIAA-CREF seeks to avoid such activities to stay purely focused on a disciplined, bottom-up approach where portfolios are based primarily on analysis of individual securities in the U.S. and abroad.

TIAA-CREF is a national financial services organization and the leading provider of retirement services in the academic, research, medical and cultural fields with more than \$390 billion in combined assets under management (9/30/06). Further information can be found at [www.tiaa-cref.org](http://www.tiaa-cref.org).

Market Monitor is prepared by TIAA-CREF Asset Management and represents the views of TIAA-CREF's Investment Strategy and Client Solutions Group as of November 20, 2006. These views may change in response to changing economic and market conditions. Past performance is not indicative of future results. The material is for informational purposes only and should not be regarded as a recommendation or an offer to buy or sell any product or service to which this information may relate. Investors should be aware that there are special risks associated with international investing.

TIAA-CREF Asset Management is a division of Teachers Advisors, Inc., a registered investment advisor and wholly owned subsidiary of Teachers Insurance and Annuity Association (TIAA). TIAA-CREF® personnel in its investment management area provide investment advice and portfolio management services through the following entities: Teachers Advisors, Inc., TIAA-CREF Investment Management, LLC, and Teachers Insurance and Annuity Association® (TIAA®). TIAA-CREF Individual & Institutional Services, LLC, distributes securities, member NASD/SIPC. TIAA, TIAA-CREF, Teachers Insurance and Annuity Association, TIAA-CREF Asset Management and FINANCIAL SERVICES FOR THE GREATER GOOD are registered trademarks of Teachers Insurance and Annuity Association.

Brett Hammond, Leo Kamp and Douglas Fore are available to comment on economic data. If you wish to speak with them, please contact Chad Peterson, Media Relations, 212-916-4808 or email [cpeterson@tiaa-cref.org](mailto:cpeterson@tiaa-cref.org).

C37245