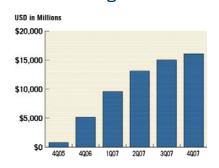
<u>rafi</u> fundamentals

RAFI® Managed Assets*



*Includes RAFI assets managed or sub-advised by Research Affiliates® or RAFI licensees.

research® affiliates

155 n. lake avenue, suite 900 pasadena, ca 91101 usa phone +1 (626) 584-2100 fax +1 (626) 584-2111 info@rallc.com www.rallc.com

MEDIA CONTACT
Tucker Hewes
Hewes Communications
+1 (212) 207-9451
tucker@hewescomm.com

AN EASIER PATH TO REAL RETURNS

Most investors turn to equities for long-term growth and inflation protection. In so doing, they also take on higher levels of risk. As a result, these investors end up with portfolios that are extremely vulnerable to negative returns in the stock market. Other asset classes—many of which have a more direct link with inflation—offer risk premiums consistent with "growth" assets and diversification benefits that can protect investments from negative returns in any one asset class. In this issue we examine the efficacy of stocks in real return space and discover their inflation hedging promise is a bit overstated.

Over extended periods of time, equities have provided returns in excess of inflation, but they have done so with higher levels of risk (or volatility) than safer, less risky assets like bonds and cash. The annual volatility (as measured by standard deviation) of the S&P 500 Index has consistently averaged around 16%, more than twice that of long-term bonds. Combine this extra risk with a lower place on the bankruptcy food chain and you've got an asset class where investors should demand (and have historically received) more return. Furthermore, equities tend to participate in the real growth of the economy, passing along price increases to consumers and maintaining their long-term earnings streams. For these reasons, equities tend to receive a large allocation—50% or higher in endowments, pensions, and 401(k) accounts-in nearly every long-term oriented portfolio. Indeed, "stocks for the long run" is a near universal mantra in our industry.1

Of course, equities aren't the only asset class to offer protection against rising prices over time. Other asset categories can effectively serve this purpose as well. An obvious choice is Treasury Inflation-Protected Securities (or "TIPS"). In fact, their prices adjust annually with the national CPI-U inflation rate guaranteed by the U.S. Treasury. Unfortunately, TIPS have a limited history in the United States, with their 1997 inception making an extended comparison to equities difficult.

Commodities and real estate also offer an economic rationale for providing long-term excess returns. These asset classes can be accessed relatively easily through commodity futures and real estate investment trusts (REITs). In the case of commodity futures, buyers provide hedgers (like the farmer wanting to lock in his wheat profits) price protection for which they expect to garner an insurance premium.² Investors in REITs expect to earn outsized returns for accepting the uncertainty surrounding property depreciation and rental income related to swings in the broad economy. In addition, both categories feature very direct links to inflation as commodity futures rise in price with the cost of raw materials while REITs can pass along price increases in the form of higher rents. Indexes tracking commodity futures and REITs have data that extend back to the early 1970s.

Combining multiple asset classes into one portfolio provides a more robust approach to inflation protection than a single-asset portfolio such as equities. To illustrate, we create a Four Asset Portfolio comprising equal weights of REITs, commodities, stocks, and bonds.³ In **Figure 1**, we show the rolling five-year returns of this Four Asset Portfolio versus the S&P 500. The five-year window was used given its closeness to the average business cycle and its prevalence as a "long-term" benchmark for institutional portfolios. Given that we are looking for inflation protection, we also show the five-year rolling average of inflationplus 5%—a standard objective for endowments, pensions, and 401(k) advisers.

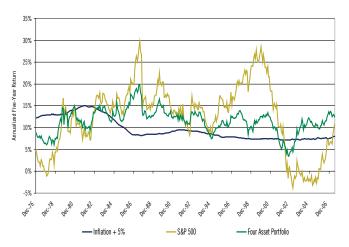
We find that both the Four Asset Portfolio and the S&P 500 achieve inflation plus 5% in most periods. In fact, the Four Asset portfolio beats this bogey in 73% of the rolling five-year windows, whereas the S&P 500 achieves this bogey 67% of the time. But while the frequency of achieving the CPI + 5% bogey is similar, the magnitude of

¹ Stocks for the Long Run by Jeremy J. Siegel, 2008, New York: McGraw-Hill.

²For a fuller discussion on commodity futures return drivers, see "The Nature of Commodity Index Returns" by Robert Greer, *The Journal of Alternative Investments*, Summer (2000): 46–47.

³Four Asset Portfolio consists of 25% S&P 500, 25% 10-Year Bond Total Return, 25% S&P GSCI Commodity Index, and 25% FTSE NAREIT Index.

Figure 1. Four Asset Portfolio vs. S&P 500, 1972-2007



shortfalls is not. When the S&P 500 falls short, it really falls short—trailing on average by 6.8% including several instances where equities trailed CPI + 5% by over 1,000 basis points! The power of negative compounding makes these equity shortfalls particularly damaging to real wealth creation. Meanwhile, the Four Asset Portfolio incurs a much milder deficit of 3% when it fails to meet CPI + 5% over five-year periods. Indeed, the worst shortfall over the entire 35-year period was 6.8%, virtually matching the average shortfall for the S&P 500.

Of course, equities can produce huge premiums to CPI + 5% during the good times, well above that of a more diversified inflation-protected portfolio like our simple Four Asset mix. Seemingly, these massive stock market runs would propel the S&P 500 to a greater cumulative return over the entire 35 years. But it doesn't, as **Table 1** shows. The Four Asset Portfolio and the S&P 500 finish in a virtual dead heat, compounding at an impressive 11.2% over three and a half decades.

Table 1. Risk and Return Statistics, 1972-2007

	Annualized Return	Standard Deviation		
Four Asset Portfolio	11.16%	8.50%		
S&P 500	11.19%	14.98%		
Inflation + 5%	9.67%			

The real story relates to the risk reduction achievable through a multi-asset portfolio. In the case of the simple Four Asset Portfolio, annual volatility is 45% less using the combination of REITs, commodities, bonds, and stocks versus stocks alone.

Stocks may still be the best way for investors to achieve growth and inflation protection over the very long term. This discussion clearly illustrates, however, that these goals can also be met with greater consistency and less risk, particularly over more measurable intermediate horizons by combining multiple assets, each with its own unique real return driver.

Performance Update*

TOTAL RETURN AS OF 2/29/08	BLOOMBERG TICKER	YTD	12 MONTH	ANNUALIZED 3 YEAR	ANNUALIZED 5 YEAR	ANNUALIZED 10 YEAR	ANNUALIZED 10 YEAR VOLATILITY
FTSE RAFI® 1000 Index ^A	FR10XTR	-8.09%	-5.85%	6.34%	14.52%	7.89%	14.02%
S&P 500 ⁸	SPTR	-9.05%	-3.60%	5.37%	11.64%	4.07%	14.76%
Russell 1000 ^c	RU10INTR	-8.87%	-3.77%	5.87%	12.24%	4.42%	14.92%
FTSE RAFI® US 1500 Index ⁰	FR15USTR	-8.31%	-10.57%	5.88%	18.97%	10.55%	18.17%
Russell 2000 ^E	RU20INTR	-10.27%	-12.44%	3.90%	15.10%	5.34%	19.90%
FTSE RAFI® Developed ex US 1000 Index ^F	FRX1XTR	-7.61%	3.64%	15.29%	24.14%	10.90%	14.69%
MSCI EAFE [©]	GDDUEAFE	-7.90%	1.28%	13.23%	21.68%	6.99%	14.71%
FTSE All World Series Developed ex US ^H	FTS5DXUS	-7.50%	4.00%	14.57%	22.56%	7.87%	14.84%

Definition of Indices: (A) The FTSE RAFI® 1000 comprises the 1000 largest companies selected and weighted using our Fundamental Index methodology; (B) The S&P 500 Index is an unmanaged market index that focuses on the large-cap segment of the U.S. equities market; (C) The Russell 1000 Index is a market-capitalization-weighted benchmark index made up of the 1,000 highest-ranking U.S. stocks in the Russell 3000; (D) The FTSE RAFI® 1500 comprises the 1001st to 1500th largest companies selected and weighted using our Fundamental Index methodology; (E) The Russell 2000 is a market-capitalization weighted benchmark index made up of the 2,000 smallest U.S. companies in the Russell 3000; (F) The FTSE RAFI® Developed ex US 1000 Index comprises the largest 1000 non US-listed companies by fundamental value, selected from the constituents of the FTSE Developed ex US Index; (G) MSCI EAFE (Morgan Stanley Capital International Europe Australasia, Far East) is an unmanaged index of issuers in countries of Europe, Australia, and the Far East persesented in U.S. dollars; and (H) The FTSE All World ex-US Index comprises Large and Mid-Cap stocks providing coverage of Developed and Emerging Markets excluding the United States. It is not possible to invest directly in any of the indexes above.

*In November 2008 performance returns for all prior periods were restated to reflect a change in calculation methodology from using a 365 day period to annualize returns to a return calculation based on using monthly returns as of the last business day of each month to create a geometric return for each period.

Source: Based on price data from Bloomberg.



©2008 Research Affiliates, LLC. The material contained in this document is for general information purposes only. It relates only to a hypothetical model of past performance of the Fundamental Index® strategy itself, and not to any asset management products based on this index. No allowance has been made for trading costs or management fees which would reduce investment performance. Actual results may differ. This material is not intended as an offer or a solicitation for the purchase and/or sale of any security of niancial instrument, nor is diduce or a recommendation to enter into any transaction. This material is based on information that is considered to be reliable, but Research Affiliates/9 and its related entities (collectively RA) make this information available on an "as is" basis and make no warranties, express or implied regarding the accuracy of the information contained herein, for any particular purpose. RA is not responsible for any errors or omissions or for results obtained from the use of this information. Nothing contained in this material is intended to constitute legal, tax, securities, financial or investment advice, nor an opinion regarding the appropriateness of any investment. The general information contained in this material should not be acted upon without obtaining specific legal, tax or investment advice from a licensed professional. Indexes are not managed investment products, and, as such cannot be invested in directivents represent back-tested performance based on rules used in the creation of the index, are not a guarantee of future performance has do not used used in the creation of the index, are not a guarantee of future performance has do not used used in the creation of the index, are not a guarantee of future performance has do not used used in the creation of the index, are not a guarantee of future performance has do not used used in the creation of the index, are not a guarantee of future performance has do not used used in the creation of the index, are not a guarante

Act of 1940 with the U.S. Securities and Exchange Commission (SEC).

Russell Investment Group is the source and owner of the Russell Index data contained or reflected in this material and all trademarks and copyrights related thereto. The presentation may contain confidential information and unauthorized use, disclosure, copying, dissemination, or redistribution is strictly prohibited. This is a presentation of Research Affiliates, LLC. Russell Investment Group is not responsible for the formatting or configuration of this material or for any inaccuracy in Research Affiliates' presentation thereof.

ment Group is not responsible for the formatting or configuration of this material or for any inaccuracy in Research Affiliates' presentation thereof.

The trade names Fundamental Index®, RAFI®, the RAFI logo, and the Research Affiliates © corporate name and logo are the exclusive intellectual property of Research Affiliates, LLC. Pay use of these trade names and logos without the prior written permission of Research Affiliates, LLC are severes the right to take any and all necessary action to preserve all of its rights, title and interest in and to these terms and logos. Fundamental Index, the non-capitalization method for creating and weighting of an index of securities, is the patent-pending proprietary intellectual property of Research Affiliates, LLC. (Patent Pending Publication Numbers: US-2005-0171884-A1, US-2006-015433-A1, US-2006-0149645-A1, US-2007-0055598-A1, WO 2005/076812, WO 2007/078399 A2, EPN 1733352, and HKI 099110).