Asset Class Investing **FYI**

Why We Overweight Small Cap and Value Securities

Asset Class Investing FYI

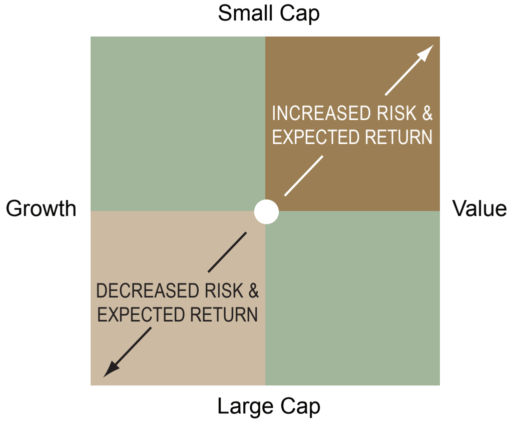
In 1990, the Nobel Memorial Prize in Economic Sciences was awarded to Professor William Forsyth Sharpe for his groundbreaking research on the relationship between risk and return. One of the originators of the Capital Asset Pricing Model (CAPM), Sharpe taught that "the risk that is rewarded with higher expected return is generally risk associated with doing badly in bad times." In other words, the higher the risk, the higher the expected returns should be.

In 1992, Professors Eugene Fama Sr. and Ken French published a groundbreaking academic paper on "The Cross Section of Expected Stock Returns" that expanded the CAPM into a "Three Factor Model."

Fama and French concluded that there are three risk factor premiums that have historically rewarded investors with higher returns: stocks over bonds (CAPM), small stocks over large, and value stocks over growth.

Data Source: Eugene F. Fama and Kenneth R. French, "Size and Book-to-Market Factors in Earnings and Returns," Journal of Finance 50 (1995). Notes: Chart for illustrative purposes only. Past performance is no guarantee of future results.

Dimensions of Risk and Return



Reasons for Small and Value Return Premiums

Small Companies	Value Companies
Higher risk of failure	Often financially distressed
Unproven product or market	Management uncertainty or turnover
Higher borrowing costs	Increased competition

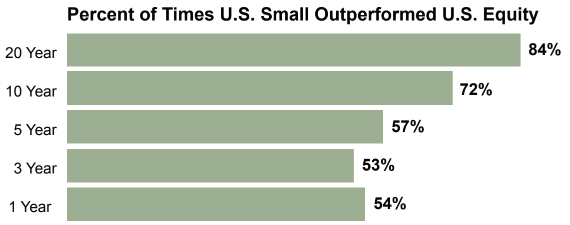
Both small and value securities have several distinct factors for which investors demand a higher risk premium. For example, smaller companies are riskier than large companies, and distressed companies (value) are riskier than non-distressed (growth) companies. Over long periods of time, the risk premiums of small and value have proven to more than compensate investors for taking these additional risks.

Consider two companies, both of which make lightbulbs. One company is very successful and dominant, the other is struggling. Which company would you rather lend money to? The successful company is the safer choice and is going to be able to borrow at a much lower rate. Its rosy prospects are likely fully reflected in its stock price. For the struggling lightbulb company, many worries remain, and would tend to be reflected in its stock price. If it is able to overcome these hurdles, its stock price has much more upside to grow.

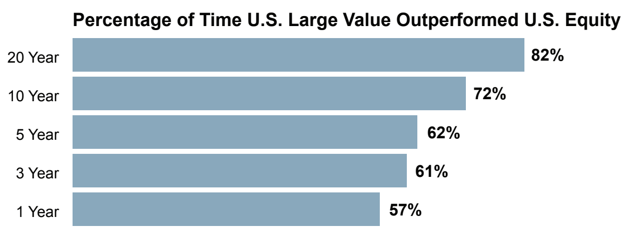
Small and Value have Outperformed

Looking over longer periods it is striking the percentage of time that the small and value risk premiums have paid off. While past performance is no guarantee of future results, since 1927 we have seen a significantly higher portion of time when both small cap stocks and value stocks beat the broad stock market.

Comparison of U.S. Small and U.S. Equity Returns[1]
January 1927 – December 2014



Comparison of U.S. Large Value and U.S. Equity Returns[2]
January 1927 – December 2014



[1]Periods based on rolling annualized returns. 817 total 20-year periods. 937 total 10-year periods. 1021 total 5-year periods. 1033 total 3-year periods. 1045 total 1-year periods. Source: DFA Returns. The Center for Research in Security Prices (CRSP) ranks all NYSE companies by market capitalization and divides them into 10 equally-populated portfolios. AMEX and NASDAQ National Market stocks are then placed into deciles according to their respective capitalizations, determined by the NYSE breakpoints. CRSP 1-5 Index represents large caps and 6-10 Index represents small caps.

[2]Periods based on rolling annualized returns. 817 total 20-year periods. 937 total 10-year periods. 1021 total 5-year periods. 1033 total 3-year periods. 1045 total 1-year periods. Source: DFA Returns. CRSP is the Center for Research in Security Prices. CRSP ranks all NYSE companies by market capitalization and divides them into 10 equally-populated portfolios. AMEX and NASDAQ National Market stocks are then placed into deciles according to their respective capitalizations, determined by the NYSE breakpoints. Value is represented by companies with a book-to-market ratio in the top 30% of all companies. Growth is represented by companies with a book-to-market ratio in the bottom 30% of all companies. The CRSP Value and Growth divisions within the CRSP 1-5 Portfolios are employed to formulate the Fama/French U.S Large Value Index and Fama/French U.S Large Growth Index. Fama/French Total U.S. Market Index provided by Fama/French from Center for Research in Security Prices (CRSP) data. Includes all NYSE securities (plus Amex equivalents since July 1962 and NASDAQ equivalents since 1973), including utilities. Fama/French U.S. Large Growth Index provided by Fama/French from Center for Research in Security Prices (CRSP) data. Includes the upper-half range in market cap and the lower 30% in book-to-market of NYSE securities (plus Amex equivalents since July 1962 and NASDAQ equivalents since 1973), excluding utilities. Fama/French U.S. Large Value Index provided by Fama/French from CRSP data. Includes the upper-half range in market cap and the higher 30% in book-to-market of NYSE securities (plus Amex equivalents since July 1962 and NASDAQ equivalents since 1973), excluding utilities.

The risks associated with investing in value stocks potentially include increased volatility (up and down movement in the value of your assets) and loss of principal. Small company stocks may be subject to a higher degree of market risk than the securities of more established companies because they may be more volatile and less liquid.

Indexes are unmanaged baskets of securities that investors cannot directly invest in. Past performance is no guarantee of future results. Assumes reinvestment of income and no transaction costs or taxes. This is for illustrative purposes only and not indicative of any investment. An investment cannot be made directly in an index.

Small and Value Risk Premiums Have Delivered Worldwide

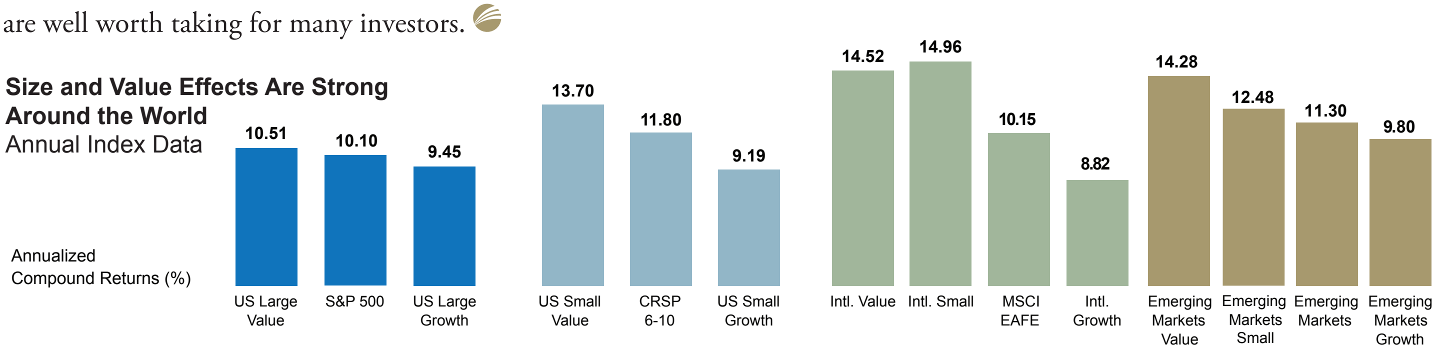
The small and value premium do not just hold in the U.S., but also in developed and emerging markets as well, resulting in significantly higher returns over long time frames.

However, to increase potential returns, you must also increase risk, and that can mean higher volatility. As you can see from the chart below, small and value — domestically and internationally — have higher standard deviations (meaning greater volatility) than their large cap and growth counterparts. If risk and reward are related, this is exactly what you would expect.

But, as you'd expect, their historical returns were also greater.

This is why, when constructing a well-diversified portfolio, we believe that emphasizing small and value stocks are two risks that are well worth taking for many investors.

Size and Value Effects Are Strong Around the World
Annual Index Data



	US Large Capitalization Stocks 1927-2014			US Small Capitalization Stocks 1927-2014			Non-US Developed Markets Stocks 1975-2014				Emerging Markets Stocks 1989-2014			
Average Return (%)	14.05	12.07	11.68	18.88	15.97	14.02	17.14	18.13	12.31	10.94	20.57	18.71	16.47	14.72
Standard Deviation (%)	26.87	20.18	21.65	34.59	30.51	33.52	24.21	27.10	21.64	21.54	40.36	38.67	34.55	32.77

Disclosure: In US dollars. Indices are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results. US value and growth index data (ex utilities) provided by Fama/French. The S&P data are provided by Standard & Poor's Index Services Group. CRSP data provided by the Center for Research in Security Prices, University of Chicago. International Value data provided by Fama/French from Bloomberg and MSCI securities data. International Small data compiled by Dimensional from Bloomberg, StyleResearch, London Business School, and Nomura Securities data. MSCI EAFE Index is net of foreign withholding taxes on dividends; copyright MSCI 2015, all rights reserved. Emerging markets index data simulated by Fama/French from countries in the IFC Investable Universe; simulations are free-float weighted both within each country and across all countries.

The risks associated with investing in stocks and overweighting small company and value stocks potentially include increased volatility (up and down movement in the value of your assets) and loss of principal. Emerging markets involve additional risks, including, but not limited to, currency fluctuation, political instability, foreign taxes, and different methods of accounting and financial reporting. As a result, they may not be suitable investment options for everyone. Emerging Markets represents securities in countries with developing economies and provide potentially high returns. Many Latin American, Eastern European and Asian countries are considered emerging markets. International markets involve additional risks, including, but not limited to, currency fluctuation, political instability, foreign taxes, and different methods of accounting and financial reporting. As a result, they may not be suitable investment options for everyone.

Diversification neither assures a profit nor guarantees against loss in a declining market. Past performance does not guarantee future results.