



Free-Cash-Flow Investing: A Value Strategy

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EXECUTIVE SUMMARY

Free-cash-flow investors follow the same process as value investors. Using a valuation metric (free-cash-flow yield) to narrow the investable universe down to a manageable list of candidates, free-cash-flow investors uncover value by determining which companies are efficient allocators of capital. This focus on the capital allocation decisions of the firm instead of on traditional accounting-based financial metrics can be interpreted as what we term “passive style drift” under unusual and highly volatile market conditions. We believe an alternative systematic risk framework, grounded in the capital budgeting decisions of the firm, better encapsulates the systematic risks faced by the free-cash-flow investor.

INTRODUCTION

What differentiates you from the competition? What is your edge? These are two of the most important questions asked of any money management firm. After all, the investment business is an odd one: there are really only a few styles of investing, and differentiating yourself often comes down to just “outperformance” or, as it is commonly referred to in investment circles, “active return.” Active return results from being different from the benchmark. It comprises both alpha and beta. In most cases, beta is expected to be 1.0, with the majority of active return coming from alpha. This edge is usually attributed to the experience and stock-picking prowess of portfolio managers and analysts, or the sophistication of a quantitative model. The quandary is that without decades of historical performance data, it is very difficult to prove these assertions either true or false. More often than not, one is left with faith: faith in the people who manage a strategy and faith in the process they follow.

At Epoch Investment Partners, we have experienced people, sophisticated models and a demonstrated record of outperformance; but what sets us apart from the rest of the investing world is our focus on the generation of free cash flow and the allocation of capital. While most traditional value and growth managers use accounting measures like earnings or book value to underpin their process, we believe that the true value

proposition of a company lies within its sources and uses of free cash flow. In this way, we approach the investment problem in much the same way as the managers of the very firms in which we invest. It is akin to a capital budgeting decision.

There is, however, a downside to our differentiation. Although asset allocators want their managers to have an edge, they become nervous when this edge results in a significant deviation from factor characteristics of the assigned benchmark. The job of an asset allocator is to manage their own or their clients’ exposure to systematic risk factors, which means that they feel most comfortable when beta and other benchmark characteristics trend with the benchmark while alpha exceeds it. This goal is easiest to achieve when the investment manager retained by the asset allocator fits nicely into a particular style box.

This focus on investment styles has its roots in Fama and French’s series of papers¹ from the early 1990s, which separate systematic risk along three dimensions: market exposure, size, and value/growth (where value and growth are defined by accounting metrics). At Epoch, we eschew the accounting metrics that underpin the traditional notions of value and growth. Our style can, therefore, under extraordinary market conditions, appear to be different from our stated value style: a phenomenon that, over time, manifests itself as style drift. As previously noted, style drift is anathema to the asset allocator. When managers game their style box by actively changing their systematic risk exposures, it confounds the style expectations at the asset allocation level.

There is another, more benign type of style drift which we term “passive” style drift. Passive style drift occurs when the systematic biases of an investment process combine with extreme events to cause the appearance of style drift when viewed through the classic accounting-based nine-box model. An example is the drift from value to growth and back again experienced by the Epoch U.S. Large Cap Value portfolio during the financial crisis of 2007/8 through the market recovery of

¹ Fama, Eugene F., and Kenneth R. French, 1992, “The Cross-Section of Expected Stock Returns,” *Journal of Finance* 47, 427-465, Fama, Eugene F., and Kenneth R. French, 1996, “Multifactor Explanations of Asset-Pricing Anomalies,” *Journal of Finance* 51, 55-84, and others.

2009/10. Our process of investing in companies with robust free cash flow, efficient allocation of capital, and transparent business models gives us a natural bias against owning the equities of banks and certain other financial entities that largely drove returns in the value benchmarks during the crisis and recovery. These value stocks became value traps, ensnaring many a manager and making those who did not own them look less like value and more like growth.

Interestingly, an alternative systematic risk framework² has recently been proposed that decomposes risk more along the lines of the capital allocation framework that we use at Epoch. This production or supply-side model posits the use of market, investment, and return-on-assets factors as an attractive alternative to the classic Fama-French model. In this framework, this is akin to changing coordinate systems in risk space, our U.S. Large Cap Value portfolio as an example has consistent systematic risk exposures that very closely match our investment philosophy.

ANATOMY OF A VALUE INVESTING PROCESS

Although there are many styles of investing, all share two characteristics. First, an investor must decide upon which systematic risk factors they wish to emphasize and second, they must earn their keep by adding alpha or returns in addition to the systematic factor bets they have assumed. The Epoch style of investing is to invest in companies that are efficient allocators of capital. We refine the process by seeking those superior allocators of capital who have large free cash flows relative to their market capitalizations. Such companies are commonly said to have a high Free-Cash-Flow Yield. The more opportunities good allocators have to allocate capital, the more valuable they are to those who invest in them.

The traditional value investor generates value by his or her ability to separate “good” productive book assets from “garbage” book assets. Similarly, the free-cash-flow investor must be able to discriminate between managements that are good stewards/allocators of capital and those that misallocate capital. Value is created by investing in the business via internal projects or acquisitions if and only if this results in a return in excess of the cost of capital. When this is not the case, value is created by returning free cash flow to shareholders.

In the same way a traditional high B/M (Book Value to Market Value) investor wants to buy a dollar of book value as cheaply as possible, the free-cash-flow investor looks to buy a dollar of free cash flow as cheaply as possible. Thus, the free-cash-flow

investor’s process is exactly analogous to the traditional value manager’s process. First, find stocks that are attractive based on a valuation metric – FCF yield vs. P/B or P/E – then add alpha by discriminating among inexpensively priced stocks that are likely to be valuable rather than those that are merely cheap.

Value benchmarks used for style analysis can more accurately be described as inexpensive benchmarks. Like the bargain bin at a discount store, they contain a grab bag of gems and garbage mixed together. Just because something is cheap doesn’t mean it is a value. Many traditional value managers learned this lesson the hard way in 2008 when banks and other financials looked enticingly cheap. Our free-cash-flow discipline, accompanied by the transparency inherent within finance data relative to accounting assumptions, provide the insight and discipline that have allowed us to avoid these companies and their equity securities.³

Our application of free-cash-flow investing focuses on our ability to follow a dollar of revenue, or an incremental dollar of new capital, through the business. What are the claims on these dollars as time passes and products are made or services rendered? In terms of understanding how a business actually works, the lens of free-cash-flow analysis is superior to the lens of the accountant with its myriad accruals and assumptions of useful asset lives.⁴ Our process allows us to more fully understand the drivers of the business and to invest as if we intended to purchase the entire firm. This process makes us inherently biased against opaque and arcane business models, and it leaves us with a consistent aversion to owning complex companies that are characterized by extensive accruals, off-balance sheet items, and policies that obfuscate the measurement of cash flows (e.g. financial entities with many lines of business and immeasurable elements of leverage.) It also means we do not own companies that can “blow up” financially such as what happened to many firms in 2008-2009, particularly in the financial sector.

PASSIVE VS. ACTIVE STYLE DRIFT

At Epoch, we have a consistently applied, value-based investment process that does not rely on the accounting metrics that have come to define many “style” indices. As a result, our strategy may appear to drift from time to time simply because of extraordinary dynamics within the index.

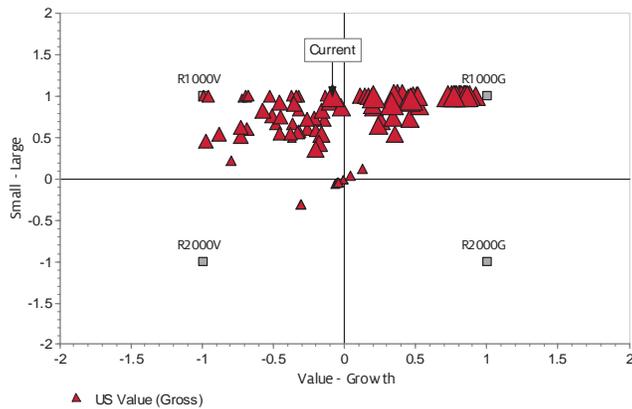
For example, we consider the emergence of a massive weight in financials as an extraordinary event in the history of “value” indices. This event induced what appeared to be a style drift in one of our portfolio strategies when viewed through the prism of

² Chen, Long, Novy-Marx, Robert and Zhang, Lu, An Alternative Three-Factor Model (April 1, 2010). Available at SSRN: <http://ssrn.com/abstract=1418117>.

³ See our series of white papers: *Financial Services Stocks: The Wheels are Coming Off* (August 2005), *Financial Services Stocks: The Storm Clouds Gather* (November 2006), *The Canary in the Coal Mine: Subprime Mortgages, Mortgage-Backed Securities, and the US Housing Bust* (April 2007), *A Roller Coaster Called Credit* (September 2007). http://www.eipny.com/php/white_papers.php

⁴ See our white paper *Mixing Financial Principles with Accounting Standards – A Slippery Slope* (August 2005), <http://www.eipny.com/pdfAccountingAnd8082005.pdf>.

a classic nine-box style analysis. Consider the trailing 12-month exposures of our U.S. Large Cap Value portfolio for the period 2001-2010. Figure 1 shows that, using a traditional rolling manager-style analysis, the portfolio's exposure drifted from value to growth and back towards value.



Russell 4 style indices. Rolling 12 month windows.

FIGURE 1: ROLLING MANAGER STYLE 8/2001-9/2010

Source: Factset

Style drift poses a concern for many investors because it implies active drift, in which an institutional money manager switches investment styles to capture returns from whatever style happens to be working at the moment. This type of active drift obfuscates systematic risk exposures at the asset allocation/plan sponsor level. By contrast, passive drift – as evidenced in the recent performance of our U.S. Large Cap Value portfolio – is much more benign and does not reflect a change to the manager's systematic risk exposures.

To further elaborate the distinction between active and passive drift, let's take a look at Figure 2. This graph allows for a finer decomposition of style exposures by separating the Russell 1000 Value and Growth indices into financials and non-financials. In this figure it can be seen that our portfolio's exposures have been fairly stable over time with only modest fluctuations. The difference between what we see in Figure 1 versus Figure 2 is the result of differences in market capitalization and volatility of the sub-components. At the beginning of 2007, financials made up approximately 40% of the market value of the Russell 1000 Value index. Our very low exposure to financials combined with the extraordinary volatility of the financial sector, therefore, made us appear "non-value" (i.e. growth) in the eyes of any historical analysis that aggregated the value and growth indices instead of separating them.

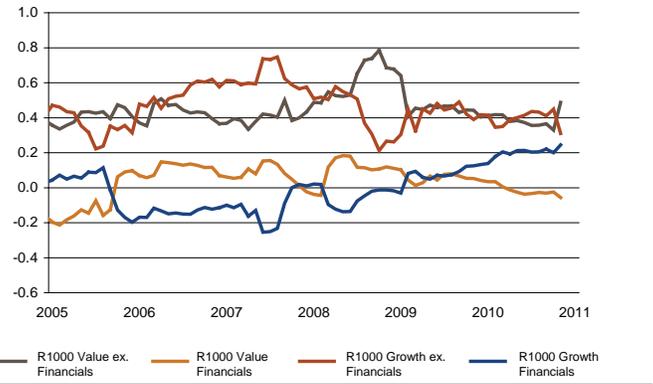


FIGURE 2: EPOCH LARGE CAP VALUE ROLLING 24-MONTH EXPOSURES TO THE RUSSELL 1000 VALUE AND GROWTH FINANCIALS AND EX-FINANCIAL INDICES

SYSTEMATIC RISK AND THE CAPITAL BUDGETING DECISION: A NEW PARADIGM

Systematic or style risk is encapsulated nicely in a theoretical sense by the Arbitrage Pricing Theory (APT)⁵. At an abstract level, APT says that a limited and perhaps small number of systematic factors can explain and account for the majority of cross-sectional equity risk.

The shortcoming of APT is that it doesn't provide much insight into what these common factors might be. A large body of research has been generated in an attempt to address this issue by proposing both fundamental and purely statistical factors. The Fama-French three-factor model that uses the difference in the returns of small-cap stocks vs. large-cap ones, high book-to-market (value) vs. low book-to-market (growth) stocks, and the market return (beta) is one of the more famous and useful iterations of APT. The attraction of the Fama-French model is that the factors it uses to describe/explain equity returns – Value/Growth and Small/Large – operate in alignment with the investing universe's traditional segmentations. This made it a very popular model and helped pave the way for the nine-style-box model, which segments the market into large, mid, and small cap on the one hand, and value, core, and growth on the other. Allocation among boxes in the nine-box model covers an investor's systematic risks (beta), while the choice of the manager within each box provides the alpha.

While the Fama-French model has been satisfactory in some respects, there are many anomalies it is unable to explain. And since APT does not specify which factors explain the market, it leaves the door open for other factor models to explain returns. Examples include outcomes associated with short-term prior returns, failure probability, earnings surprises, accruals, net stock issues, and stock valuation ratios.

⁵ Ross, Stephen A., 1976, "The Arbitrage Theory of Capital Asset Pricing," *Journal of Economic Theory* 13, 341-360.

At Epoch we believe there is an equally enlightening way of looking at systematic risk: one that frames the problem in the same way firms face their own capital allocation decisions. This investment-based model was proposed by Chen, Novy-Marx, and Zhang in a 2010 working paper titled “An Alternative Three-Factor Model”.⁶

Their alternative workhorse model uses the returns from the market portfolio (Beta) and factors based on the returns from a portfolio of low-investment stocks minus the return of a portfolio of high-investment stocks (INV) and the returns from a portfolio of high-ROA stocks minus the return on a portfolio of low-ROA stocks (ROA). Their INV and ROA factors earn significant average returns of 0.28% and 0.76% per month, which persist after adjusting for their exposures to the Fama-French factors. They show that their new model outperforms traditional asset pricing models in explaining anomalies such as earnings surprises, total accruals, net stock issues, and asset growth. One interpretation of their success in explaining anomalies is that their model captures more of the systematic risk in the equity market than the Fama-French model.

In the elaboration of their model, Chen, Novy-Marx, and Zhang (CNZ) note that investment should predict returns because given expected cash flows, a high cost of capital implies a low net present value of new capital and therefore lower investment, whereas a low cost of capital implies a high net present value of new capital and therefore higher investment. Similarly, return on assets (ROA) predicts returns because high (low) expected ROA relative to low (high) investment implies high (low) discount rates. This is because high (low) discount rates are necessary to offset the high (low) expected ROA and induce low (high) net present values of new capital and therefore low (high) investment. If the discount rate was not high (low) enough to offset the high (low) expected ROA, firms would observe high (low) net present values of new capital and invest more (less).

To demonstrate this, CNZ consider a simple model in which a firm makes investment choices over two periods in order to maximize its present value. In this simple two-period model, the firm starts with initial assets, A_0 , and makes a choice of how much to invest, I_0 . The firm then produces during the two periods and exits the market at the end of the second period by liquidating all of its assets. The terminal value of the firm is $TV=A_1*(1-d)$ where d is the rate of depreciation. The firm’s free cash flow in the initial period is given by $FCF_0=(ROA_0*A_0)-I_0-C_0$, where C_0 represents the costs and frictions associated with deploying the investment. The firm’s level of assets in the second period is given by $A_1=I_0+ A_0*(1-d)$ and the free cash flow in that period is $FCF_1=ROA_1*A_1$. To find the market value

at the beginning of the initial period, the free cash flows and the terminal value of the firm in the second period are discounted back to the initial period at a firm specific discount rate r . Thus, the present value of the firm can be written as:

$$PV = FCF_0 + FCF_1 / r + TV/r.$$

Following Cochrane⁷, CNZ show that in maximizing the firm’s initial market value, the tradeoff for the firm is that of forgoing the initial free cash flow in exchange for higher free cash flow in the second period. Solving the maximization problem with respect to A_1 yields the optimality condition:

$$r = (\text{Expected profitability} + 1) / (\text{Marginal cost of investment}).$$

This says that the investment return, defined as the ratio of the marginal benefit of investment in date one divided by the marginal cost of investment in date zero, should equal the firm’s discount rate. The implications for systematic returns across stocks are that, given an expected ROA, firms that invest more should have lower expected returns. Additionally, given a level of investment normalized by assets, firms with higher expected ROA’s should have higher expected returns.

The Fama-French and nine-box models approach stock returns from the point of view of an investor allocating risk capital. CNZ’s investment-based model approaches stock returns from the perspective of the firm itself in the form of its capital allocation problem.

To elucidate this difference, Figure 3 shows the risk factor exposures to both the Fama-French and CMZ 3-factor models for the Epoch U.S. Large Cap Value portfolio, the Russell 1000 Value ex-financials, and the Russell 1000, core, value, and growth benchmarks. In the traditional Fama-French framework, our portfolio looks very similar to the core Russell 1000. However, when viewed through the lens of the CMZ investment based 3-factor model that more closely resembles our investment process, our portfolio looks much more like the Russell 1000 Value ex-Financials.

⁶ Chen, Long, Novy-Marx, Robert and Zhang, Lu, *An Alternative Three-Factor Model* (April 1, 2010). Available at SSRN: <http://ssrn.com/abstract=1418117>.

⁷ Cochrane, John H., 1991, “Production-based asset pricing and the link between stock returns and economic fluctuations”, *Journal of Finance* 46, 572-621.

RISK FACTOR EXPOSURES: 10/2002-11/2010

	Epoch U.S. Large Cap Value		R1000V .xFin		R1000		R1000V		R1000G	
	Coefficients	P-value	Coefficients	P-value	Coefficients	P-value	Coefficients	P-value	Coefficients	P-value
Intercept	0.21	0.09	0.25	0.04	-0.06	0.10	-0.05	0.49	-0.07	0.30
Mkt-RF	0.90	0.00	0.90	0.00	0.98	0.00	0.96	0.00	1.00	0.00
SMB	-0.09	0.11	-0.13	0.01	-0.09	0.00	-0.16	0.00	-0.01	0.71
HML	-0.01	0.86	0.09	0.07	0.00	0.91	0.29	0.00	-0.29	0.00
Adjusted R Square	0.93		0.93		0.99		0.98		0.98	

The p-value is the probability that the associated coefficient is zero. Bold numbers represent p-values that are less than 10%.

FIGURE 3A: FAMA-FRENCH 3-FACTOR MODEL

	Epoch U.S. Large Cap Value		R1000V .xFin		R1000		R1000V		R1000G	
	Coefficients	P-value	Coefficients	P-value	Coefficients	P-value	Coefficients	P-value	Coefficients	P-value
Intercept	0.12	0.25	0.18	0.13	-0.08	0.04	-0.04	0.68	-0.12	0.17
Mkt-RF	0.95	0.00	0.94	0.00	0.96	0.00	0.91	0.00	1.01	0.00
I/A LMH	-0.10	0.10	-0.17	0.01	-0.06	0.01	-0.10	0.04	-0.01	0.91
ROA HML	0.18	0.00	0.06	0.24	-0.04	0.02	-0.25	0.00	0.17	0.00
Adjusted R Square	0.94		0.93		0.99		0.96		0.97	

FIGURE 3B: INVESTMENT-ROA 3-FACTOR MODEL

Figures 4 and 5 expand on this theme and show the similarity of the exposure dynamics of our U.S. Large Cap Value portfolio and the Russell 1000 Value ex-Financials through the recent financial crisis.

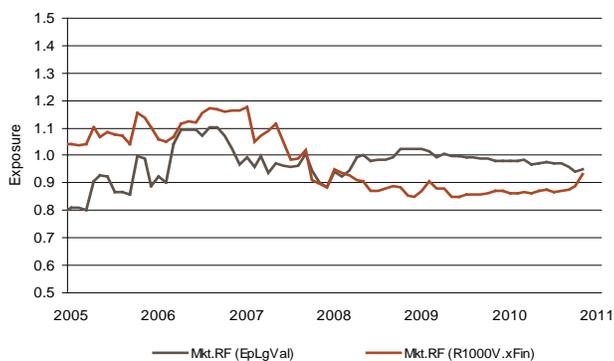


FIGURE 4A: FAMA-FRENCH ROLLING 24-MONTH MARKET EXPOSURE

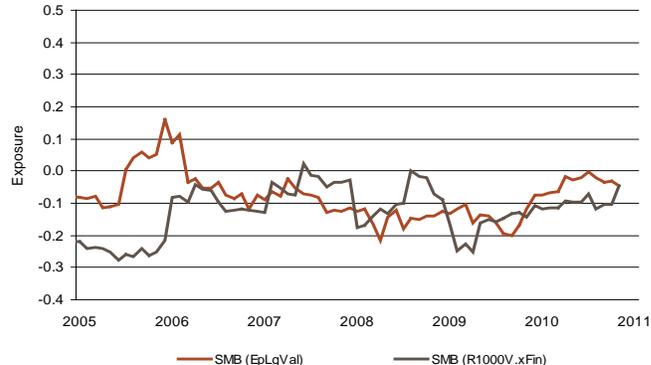


FIGURE 4B: FAMA-FRENCH ROLLING 24-MONTH SIZE (SMB) EXPOSURE

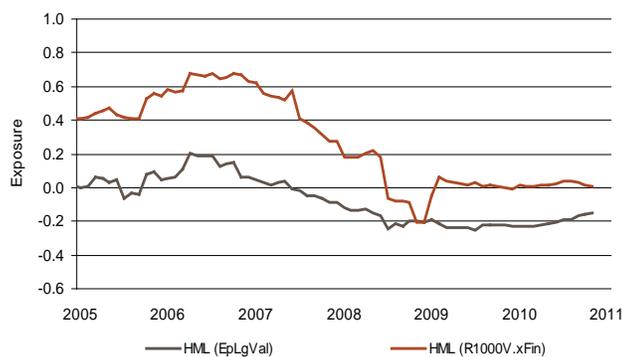


FIGURE 4C: FAMA-FRENCH ROLLING 24-MONTH BOOK/MARKET (HML) EXPOSURE

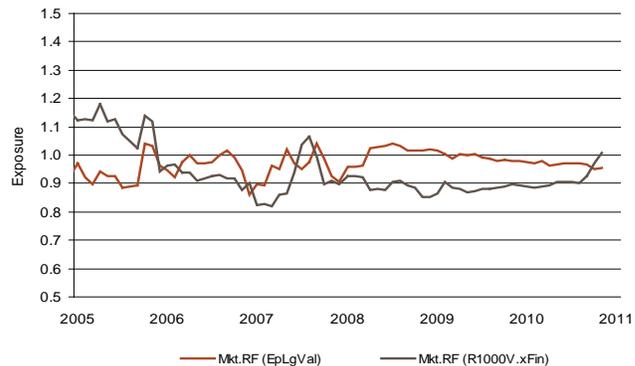


FIGURE 5A: CHEN, NOVY-MARX AND ZHANG ROLLING 24-MONTH MARKET EXPOSURE

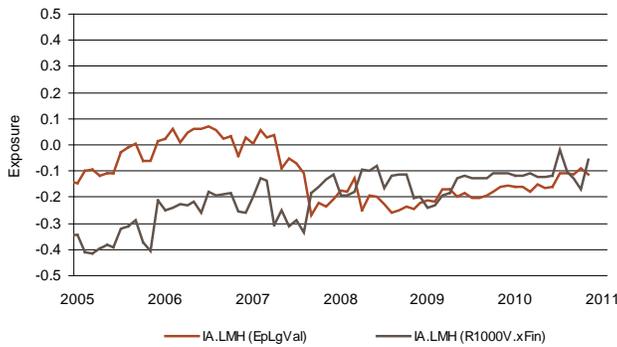


FIGURE 5B: CHEN, NOVY-MARX AND ZHANG ROLLING 24-MONTH INV EXPOSURE

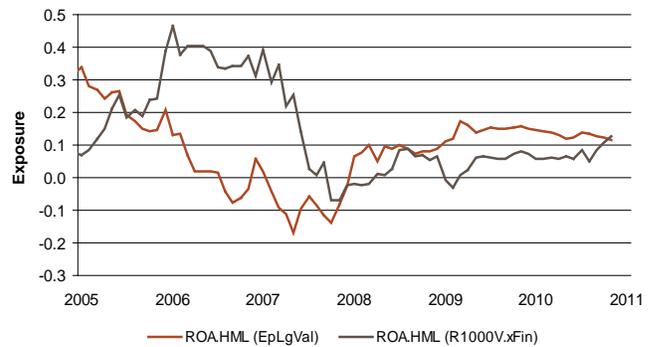


FIGURE 5C: CHEN, NOVY-MARX AND ZHANG ROLLING 24-MONTH ROA EXPOSURE

CONCLUSION

Unlike most investors, we deploy investment capital in the same way companies conduct capital budgeting exercises. Because of this, there are times we may appear to drift between the traditional style designations of value and growth despite our consistent investment approach. However, it has been shown that, because of our focus on free cash flow, we have been able to ride out the market fluctuations that put so many other money managers in dire straits.

A recent study by BofA Merrill Lynch reinforces this point and is reflected in Figure 6. Their study identified three explanatory variables that dominated equity market returns over a 25 year period (free cash flow yield, quality as reflected in high ROE firms, and Beta). In examining the relative contribution of these three variables, we see (1) the dominance of cash flow over time relative to the other two variables and (2) that every speculative rally lead by high Beta stocks has been followed by a period where strategies based on Free-Cash-Flow yield ruled the day. The lesson is that true value is found by investing in firms with strong free cash flows and efficient capital allocation strategies.

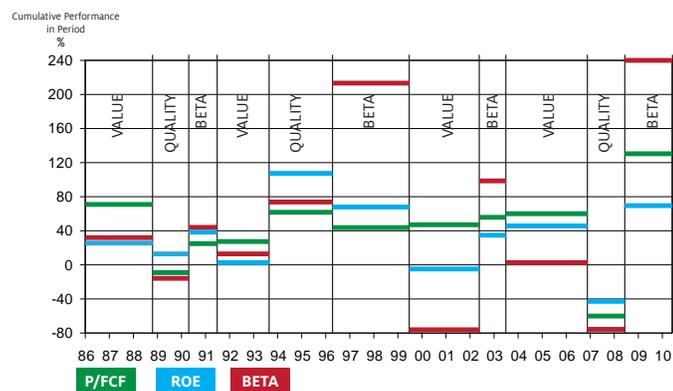


FIGURE 6: AFTER BETA IT'S CASH FLOW

Source: BofA Merrill Lynch U.S. Quantitative Strategy, December 2011

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We have also tried to show that an alternative systematic risk framework, grounded in the capital budgeting decision process of the firm, better encapsulates the systematic risks faced by the free-cash-flow investor than the traditional Fama-French Returns based methodology. “Sunlight is the best disinfectant” said Oliver Wendell Holmes, and more sunlight is found through the prism of cash-flow analysis than traditional accounting metrics.