February 16, 2011

To: Principals and Veterans

I'm sure you'll enjoy these recent "items of interest" that are attached.

A. No, it wasn't I who wrote this ringing endorsement of indexing in the current (January-February) issue of *The Financial Analysts Journal.* It was respected (and totally objective) academic Mark Kritzman, CFA, who lays out—in just three pungent pages—something all of us at Vanguard know: "Elevating unnecessary expenses is the most reliable path to higher returns."

B. A similar philosophy is described in *Financial Times,* where journalist Tom Stabile writes: "Investing passively should (be) the norm . . . and active management should come with a brighter warning sticker."

C. A perfectly marvelous letter from a long-time Vanguard shareholder. (I get at least one letter like this just about every day.) Interestingly, this 1999 investor hit those two big market bumps along the way, but his original $890,000 is now worth $1,023,000, *after $443,000 in withdrawals.* (He's now moving to a more conservative allocation than the original 20 percent in our bond funds). Investing his life's savings at Vanguard was, he writes, "the best decision of my life."

D. Alas, a bit self-serving. I'm so pleased that my essay "The Fiduciary Principle" has won the Bernstein Fabozzi/Jacobs Levy 2010 award for Outstanding Article in *The Journal of Portfolio Management.* This comes as a nice "twofer," since my earlier essay "A Question So Important . . ." won the award in 2009. (You may recall that my essays "Black Monday and Black Swans" and "Markets in Crisis" won Graham and Dodd awards at the *Financial Analysts Journal* in 2008 and 2009, respectively, so I've got quite a remarkable streak going.) I believe that the constant pounding home to financial professionals of the flaws in the markets and the importance of traditional investment principles has been a major asset to our firm. I hope you agree.

Best,

Jack

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A

GUEST EDITORIAL

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Post-Crisis Investment Management

By any reasonable measure, the recent financial crisis qualifies as the most jarring financial event since the Great Depression, and it has drastically altered the way we think about many aspects of investing, especially leverage, liquidity, and transparency. But the central tenets of successful investing remain as valid today as they were before the crisis:

1. Diversify.
2. Eliminate unnecessary expenses.
3. Respect the micro-efficiency of markets.
4. Manage the macro-inefficiency of markets.

Diversify

The notion that investors should diversify may seem to be rather ordinary advice, but in my view, most investors do it very badly, as illustrated by the following example. Most investors look to their domestic equity market as the main growth engine for their portfolios and seek other assets to diversify that exposure. For instance, U.S. investors have historically sought to diversify their portfolios by including non-U.S. equities. When both markets experience returns one standard deviation above average, their correlation is –17 percent; when they both experience returns one standard deviation below average, their correlation is 76 percent.[1] Although the average correlation is virtually meaningless, most investors rely on it when gauging an asset's diversification potential. Suppose that I had selected only one set of clothes on the basis of the average annual temperature in Boston (51°F). Most of the year, I would be very uncomfortable. Yet that is how the typical investor approaches diversification.

This asymmetry in correlation not only renders the average correlation useless, but it also is the opposite of what we would like. When our portfolio's main growth engine performs well, we would like the portfolio's other assets to be unified with it. And when it performs poorly, we would like the other assets to provide diversification. To diversify effectively, we should identify the covariances that prevail during conditions when losses are likely to occur, such as periods of market turbulence.

In a recent article published in this journal, Yuanzhen Li and I presented a statistical procedure for partitioning historical returns into those associated with turbulent market conditions and those associated with calm conditions.[2] We also presented evidence showing that returns to risk are substantially lower during turbulent periods than during nonturbulent periods. I believe that investors would be much better served by using covariances from turbulent regimes to structure diversified portfolios instead of relying on covariances averaged across all market conditions, including those conditions under which losses are unlikely.

Eliminate Unnecessary Expenses

The typical actively managed equity mutual fund must overcome nearly 400 bps of expense drag to break even with a passively managed exchange-traded fund (ETF).[3] And the situation is even worse for hedge funds, which start out behind ETFs by nearly 1,000 bps.[4] Investors can reduce expenses by investing in funds with low fees and low turnover; taxable investors can also do so by harvesting short-term capital losses and postponing short-term capital gains. The best way to reduce fees and turnover is to use passively managed index funds and ETFs. Whether this low-cost approach is justified depends on one's conviction that active managers can produce sufficiently large alphas, which brings us to the third tenet of successful investing.

Guest Editorial is an occasional feature of the Financial Analysts Journal.
This piece reflects the views of the author and does not represent the official views of the FAJ *or CFA Institute.*

Respect the Micro-Efficiency of Markets

The late Paul A. Samuelson stated the following in a letter to John Campbell and Robert Shiller:[5]

> Modern markets show considerable *micro* efficiency (for the reason that the minority who spot aberrations from micro efficiency can make money from those occurrences and, in so doing, they tend to wipe out any persistent inefficiencies). In no contradiction to the previous sentence, I had hypothesized considerable *macro* inefficiency, in the sense of long waves in the time series of aggregate indexes of security prices below and above various definitions of fundamental values. (p. 221; italics in the original)

This notion of the co-existence of micro-efficiency with macro-inefficiency is known as the Samuelson dictum. Samuelson offered a theoretical argument for micro-efficiency, but there is also overwhelming empirical support for his thesis of micro-efficiency. Two recent studies are of particular interest.

Laurent Barras, Olivier Scaillet, and Russ Wermers examined the returns of 2,076 U.S. equity mutual funds over 1989–2006.[6] Their study is interesting because they devised a way to control for luck: They recognized that in a universe in which alpha does not exist but noise does, some fraction of observed alphas will appear to be significantly positive. For example, if we require 95 percent confidence to declare an alpha truly positive, 5 percent of observed alphas will show up as positive even though none truly are. After reducing the fraction of observed positive alphas by the fraction that appeared positive owing to luck, Barras et al. discovered that only 0.6 percent of the funds produced positive alphas net of expenses and luck (but not taxes). In other words, out of 2,076 mutual funds, only 12 had positive alphas—and there is no way to determine in advance which funds are among these elite 12.

Standard & Poor's produced a noteworthy study that covers a much wider set of categories than the study by Barras et al.[7] The S&P study reported the fraction of actively managed funds that outperformed their benchmarks for 2005–2009 (see **Table 1**). Again, these results are before taxes.

Table 1. Percentage of Active Funds That Outperformed Their Benchmarks, 2005–2009

Type of Fund	Percentage
U.S. large-cap funds	39.2
U.S. mid-cap funds	22.8
U.S. small-cap funds	33.4
U.S. real estate	42.7
International equity	11.4
Emerging market equity	10.5
U.S. intermediate government bonds	29.4
U.S. intermediate investment-grade bonds	28.9
Global bond funds	29.2
U.S. municipal bond funds	11.1

Source: Standard & Poor's.

These results offer persuasive evidence that micro-efficiency is not limited to the U.S. equity market but extends to a variety of domestic and foreign asset classes. In the S&P study, none of these asset classes offered a better-than-even chance of producing a positive alpha, and most presented overwhelming odds against obtaining a positive alpha. Moreover, unlike the results in the study by Barras et al., these results were not adjusted for luck. Now let us turn to the final tenet of successful investing.

Manage the Macro-Inefficiency of Markets

Samuelson argued that investors quickly correct micro-inefficiencies by trading to exploit them. But when an entire market is mispriced, investors that act individually are powerless to drive the market back to fair value. Instead, they must act in concert. Therefore, to profit from macro-inefficiencies—or at least to reduce exposure to risk—gauging the extent to which investors are acting in concert may be helpful. In part, we can capture this herding behavior by measuring the degree of systemic risk in the market.

In recent research, Yuanzhen Li, Sebastien Page, Roberto Rigobon, and I introduced a metric for inferring systemic risk from asset prices, which we called the absorption ratio.[8] It equals the fraction of the market's variance that is explained, or absorbed, by a subset of the most important principal components. When this ratio is low, the market is well diversified and thus relatively resilient to shocks. For example, an unanticipated jump in oil prices might drive down the price of airline stocks, but this shock would likely not travel to other parts of the market that are not fundamentally connected to the price of oil. A high ratio, however, signifies that the market is very compact or tightly coupled; when the market is in that state, it is quite fragile. An unexpected rise in the price of oil would likely provoke a systemwide response, resulting in a broad market sell-off.

Even though our research shows that most major drawdowns were preceded by large increases in our measure of systemic risk, not all spikes were followed by drawdowns. Not surprisingly, there were many false positives. Systemic risk is a measure of market fragility, but a large drawdown requires both a fragile market and a negative shock. In many cases when the market was fragile, there was no negative news and the market gradually retreated to a normal state.

To distinguish false positives from true positives, we can combine the absorption ratio with the measure of financial turbulence that I mentioned earlier. The temporal relationship of these two measures constitutes a "risk cycle" that investors can monitor to manage macro-inefficiencies.[9]

The Bottom Line

The financial crisis revealed devastating weaknesses in our financial systems, and it highlighted severe deficiencies in the way we measure and manage risk. In my view, however, the crisis did nothing to undermine the central tenets of successful investing. The best way to control risk is to diversify, but we need to do it more intelligently. Eliminating unnecessary expenses is the most reliable path to higher returns. Although respecting micro-efficiency may not be entertaining, it is prudent. And managing macro-inefficiencies could offer the most promising opportunities.

Notes

1. The correlations are based on the monthly returns of the Russell 3000 Index and the MSCI World ex US Index from January 1979 through February 2008.
2. Mark Kritzman and Yuanzhen Li, "Skulls, Financial Turbulence, and Risk Management," *Financial Analysts Journal*, vol. 66, no. 5 (September/October 2010):30–41.
3. I assume that the actively managed mutual fund has a dividend yield of 1.5 percent, a standard deviation of 16 percent, a turnover of 95 percent, transaction costs of 0.4 percent, and a management fee of 1.4 percent. I assume that the passively managed ETF has the same dividend yield, standard deviation, and transaction costs as the actively managed mutual fund but a turnover of 4 percent and a management fee of 0.2 percent. I also assume a tax regime similar to that of New York City or Massachusetts.
4. I assume that the hedge fund has the same standard deviation and transaction costs as the mutual fund and the ETF but no dividend yield, a 200 percent turnover, a management fee of 2 percent, and a performance fee of 20 percent. For more detail about how I estimated the expense drag, see Mark Kritzman, "Rules of Prudence for Individual Investors," *Economics and Portfolio Strategy*, Peter L. Bernstein, Inc. (1 February 2009):4–6.
5. Jeeman Jung and Robert Shiller, "Samuelson's Dictum and the Stock Market," *Economic Inquiry*, vol. 43, no. 2 (April 2005):221–228.
6. Laurent Barras, Olivier Scaillet, and Russ Wermers, "False Discoveries in Mutual Fund Performance: Measuring Luck in Estimated Alphas," *Journal of Finance*, vol. 65, no. 1 (February 2010):179–216.
7. "Standard & Poor's Indices versus Active Funds (SPIVA) Scorecard, Year-End 2009," Standard & Poor's (March 2010).
8. Mark Kritzman, Yuanzhen Li, Sebastien Page, and Roberto Rigobon, "Principal Components as a Measure of Systemic Risk," *Journal of Portfolio Management*, vol. 37, no. 4 (forthcoming Summer 2011).
9. Lucas Turton introduced the notion of a risk cycle.

B

Passive investing should be norm

Tom Stabile
COMMENT

It would be satisfying to settle the debate one of these days with a headline reading "Active Management Triumphs over Passive" or "Passive Management Vanquishes Active Approach".

That argument won't be settled, of course, as long as we have active managers – and we always will – that post benchmark-smashing returns. Still, there is a case to be made that wealth management advisers ought to pick a horse in this race and turn the holiday party chatter that I hear from investment professionals into shared industry wisdom, in the same way that "diversify your portfolio" has become a basic tenet.

John Bogle of Vanguard has long made a sober argument: most investors – the people who do not have the means to hire the smartest consultant to pick the finest managers and gain access to their exclusive funds – should not "waste time" chasing top active managers. Instead, he contends, the typical investor should aim to not get left behind when the market advances by investing in low-cost passive funds that track broad indices.

It is not a thrilling premise, and probably isn't the reason most people dive into the markets. And there are plenty of claims from active managers who can show that their strategies beat the indices, at least for some specified period.

But there is a growing body of evidence to show how passive investing, on average, is a "safer" bet. Most active managers simply do not beat the market consistently. In his 2007 book, *The Little Book of Common Sense Investing*, Mr Bogle argues that the typical mutual fund pales next to the market over long investing periods. In one exercise, he outlines how $10,000 invested over a 50-year stretch using the average net return of mutual funds would garner $145,400, alongside a $469,000 gain from the market itself.

Indeed, years like 2010 make you wonder exactly why investors would "gamble" on active managers, when only a few investing sectors topped standard benchmarks. Mutual fund sector reports issued last month by Merrill Lynch told a tale of few winners. Overall, only one in five large-cap funds beat the Russell 1000 in 2010, though Merrill says 2011 will be better for active managers. One would certainly hope.

Add to that the casual conversations I and several of my colleagues have had with investing pros over the years. Just this season, I twice again enjoyed chats over holiday cheer with asset management and due diligence specialists – folks who pick active managers, or market such investments – where they confided how they invest most of their own money passively.

Despite what their firms sell, and what underpins their jobs, they saw active management as a worse bet than passive versions of many of the same investments. And the explosion of exchange traded fund varieties, they say, is only making the menu of passive options more robust.

Sure, with a fair bit of squinting, it is possible to pick spots where funds have a good chance to top the markets. Small-cap, for instance, often is a good place to look, and unconstrained funds are having a good run.

The bigger idea, however, is that it is high time for broader industry acknowledgement that passive management is a preferable default for most individual investors, and that active management should come with a brighter warning sticker of sorts.

Investing passively should become a basic rule of the road, freeing wealth management advisers to still specialise in helping investors understand when and how to pick active managers so that they can truly add value for their clients.

And it would avoid the darker perception that could take root over time that the average investor is somehow being had.

Small-and mid-cap funds versus Russell 2000
2010

	% of funds out performing benchmark
Small-cap value	69.2
Small-cap core	33.8
Small-cap growth	40.6
Mid-cap value	26.3
Mid-cap core	22.2
Mid-cap growth	52.2

Large-cap funds versus Russell 2000
2010

	% of funds out performing benchmark
Large-cap all types	20.4
Large-cap value	13.4
Large-cap core	10.8
Large-cap growth	30.1

Source: Bank of America-Merrill Lynch

Tom Stabile is a reporter on FundFire, a Financial Times publication

FEB 11 2011

C

Dear Mr. Bogle, February 8, 2011

I enjoyed your article in the January issue of MONEY. I am a devoted Vanguard investor for the 12 years since I retired from AMP Incorporated . As part of a 401K program , AMP offered Vanguard funds during my employment. Then in late 1998, with rumors of a TYCO takeover , I agreed to retire and was offered a cash settlement instead of a pension .

So in early 1999, I came down to Valley Forge to discuss a Rollover plan and had the opportunity to meet you in your very interesting office . I needed Vanguard's expertise to invest my nest egg of $890,000 . I was 63 years old and needed a plan to provide safe funds for my retirement.

I adopted your "Buy and Hold" strategy but took a few more risks than I should have . ie Equities 80% , Bonds 20%. As a result , I did suffer through two significant market downturns in the last decade. But through it all, I have more money in my Vanguard IRA now than I did 12 years ago .

INVESTED	$890,000	
WITHDRAWALS	$310,000	
VALUE (Dec 2010)	$1,023,440	
GAIN	$443,440	or 76% in 12 years or 6.3% /year

During the decade, I "stayed the course" during two significant declines in the market .

High 1st Qtr 2000	$ 1,024,000	
Low 3rd Qtr 2002	$ 650,000	Decline 36.5%
	- $ 374,000	
High 3rd Qtr 2007	$ 1,160,000	
Low 1st Qtr 2009	$ 720,000	Decline 37.9%
	-$ 440,000	

Now , 2011 is off to a good start and at 75 years old , I have to move to a less risky profile .

So, back in late 1998, my decision to invest my life's savings in Vanguard funds was the best decision of my life .

Thanks to you and all the people at Vanguard. I am enjoying my retirement and may even have some monies to pass onto my heirs .

D

THE 12[TH] ANNUAL BERNSTEIN FABOZZI/JACOBS LEVY AWARDS

The Bernstein Fabozzi/Jacobs Levy Awards were established in 1999, on the 25th anniversary of *The Journal of Portfolio Management*, to honor Editors Peter Bernstein and Frank Fabozzi for their extraordinary contributions and to promote research excellence in the theory and practice of portfolio management. The annual awards, generously funded by Jacobs Levy Equity Management, consist of a $2,500 prize for the Best Article and $1,000 prizes for each of three Outstanding Articles.

■ ■ ■

The Journal of Portfolio Management is pleased to announce the recipients of the 12th Annual Bernstein Fabozzi/Jacobs Levy Awards for articles appearing in five regular issues beginning with Fall 2009 and ending with Fall 2010 as well as the special Real Estate issue from September 2009. On the basis of voting by subscribers,* the 12th Annual Bernstein Fabozzi/Jacobs Levy Awards are presented to:

BEST ARTICLE

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Robert A. Jarrow
SUMMER 2010

OUTSTANDING ARTICLES

THE FIDUCIARY PRINCIPLE: NO MAN CAN SERVE TWO MASTERS
John C. Bogle
FALL 2009

THE MYTH OF DIVERSIFICATION
David B. Chua, Mark Kritzman, and Sébastien Page
FALL 2009

CRISIS AND INNOVATION
Robert J. Shiller
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**Articles authored by Frank Fabozzi were not eligible for an award. Authors were not permitted to vote for their own articles. The ballots were tallied by Institutional Investor Journals.*