FUNDAMENTALS™

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Chris Brightman, CFA

"We believe the quality-yield trade-off is largely unnecessary."

KEY POINTS

1. The AND principle holds that creative product design can surmount some trade-offs that conventional thinking considers unavoidable.
2. Simple investment strategies are easier to govern than complex ones and may be less likely to result in catastrophic outcomes.
3. A simple new design demonstrates that income-oriented indices need not trade off yield for capacity and quality.

Elegant Design

Chris Brightman, CFA, Vitali Kalesnik, Ph.D., and Engin Kose, Ph.D.

> "When you first start off trying to solve a problem, the first solutions you come up with are very complex, and most people stop there. But if you keep going, and live with the problem and peel more layers of the onion off, you can often times arrive at some very elegant and simple solutions."
>
> —*Steve Jobs*[1]

In January 2007 Steve Jobs announced a revolutionary product: the iPhone. Before that, phones were either easy to use but only had a single function, or multi-functional ("smartphones") but hard to use. The conventional wisdom in phones, as in many areas of product design, was that trade-offs are inescapable: the consumer simply cannot have everything she wants delivered in one appealing product. But with the historic unveiling of the iPhone, Jobs proved the conventional thinkers wrong. The iconoclastic iPhone design showed that the consumer can enjoy a product with rich functionality *and* ease of use. We call this the AND principle. It guides all of our new product designs. Instead of accepting unnecessary trade-offs, we seek to combine the qualities investors desire in a single vehicle.

But before we explore the AND principle in more depth, let's review two important elements in product design: structure and implementation.

The Challenge of Simplicity

> "That's been one of my mantras—focus and simplicity. Simple can be harder than complex."
>
> —*Steve Jobs*[2]

Structure is essential to product design. Structure can be simple. Structure can be complex. We agree with Steve Jobs that simplicity is often the more difficult to achieve, but we believe it improves on complexity in two major ways. Simple solutions 1) lead to more predictable outcomes, and 2) allow cleaner and easier oversight.

In the investment world, complexity leads to crises, crashes, and fund collapses. A short list of events over the last three decades in which complexity played some role includes the 1987 stock market crash, the late 1990s Long-Term Capital Management collapse, the 2000 bursting of the dot-com bubble, the 2007 quant meltdown, the 2008 global financial crisis, and the 2010 flash crash, among others. Simple strategies are exposed to unpredictable events—especially those with systemic effects—but, compared to more intricate structures, the way they will react under stress may be easier to grasp, transactions easier to unwind, assets easier

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to locate, and ownership easier to establish. (Recall the difficulties Lehman's counterparties encountered when they tried to claim derivatives collateral after the firm filed for bankruptcy in 2008.[3]) Simple strategies may be less likely to result in catastrophic outcomes.

The second important advantage of simplicity is easier governance. For institutional investors, it means that an officer can understand and coherently explain to the board what the strategy is doing. Also, during periods of underperformance (let's not kid ourselves, periods of underperformance are inevitable for any strategy), this ability to understand what the strategy is doing helps investors stay with the strategy. For individual investors, simplicity means that at the next BBQ party they will be able to explain why they are staying with the strategy instead of switching to some new "bright and shiny" magical stock that their neighbor just bought.[4]

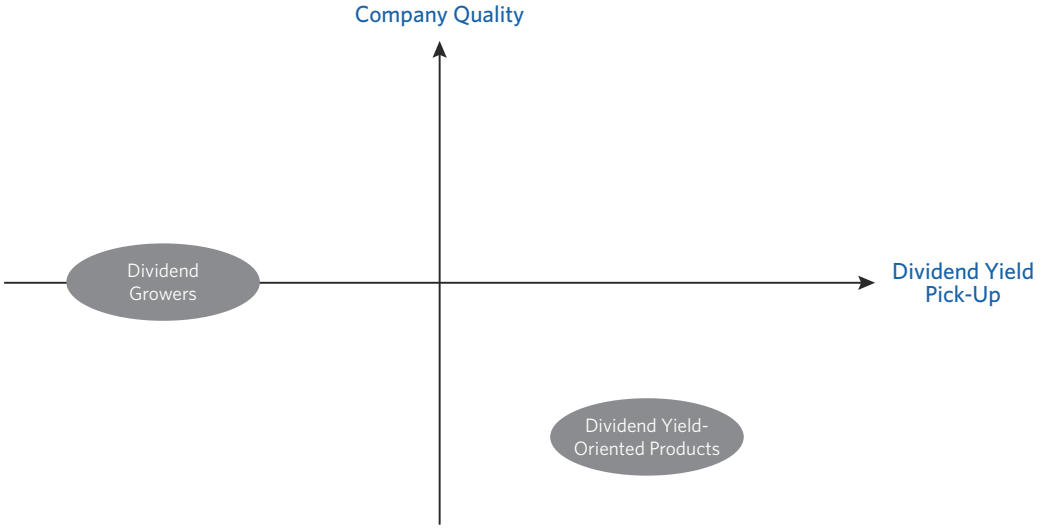
A Design That Works

> "Some people think design means how it looks. But of course, if you dig deeper, it's really how it works."
>
> — *Steve Jobs*[5]

Designers charged with developing a new product should start by focusing on how that product can work best. For an investment product, that means they should focus on the components of return most valued by a particular type of investor. For many investors, total return is what matters, but some investors prefer to maximize the income component relative to the capital appreciation, or growth, component. Individual investors, for example, use portfolio income to meet their living expenses; defined benefit pension funds use current income to discharge their obligations to beneficiaries; university endowments need income to pay the institutions' operating expenses; and charitable trusts dispense investment income to support their particular cause. Many investors with an income preference turn to high-yield equity products, those with relatively high dividend distributions.

Currently, investors with a greater preference for income have two product options to choose from: dividend yield–oriented products and dividend grower products. **Figure 1** illustrates how these two products differ in terms of company quality (vertical axis), as measured by the average Standard & Poor's credit rating of the constituent companies, and the dividend yield pick-up, which is the difference between the current dividend yields of the strategy and the benchmark (horizontal axis). The dividend yield–oriented products seek higher dividend-yielding stocks; that is, stocks with a record of high dividend payouts and a low current price. But the low price relative to dividends paid can signal one of two

Figure 1. Company Quality vs. Dividend Yield



Note: Both portfolios are equal-weighted. The dividend growers portfolio yield is 3.32%, and the dividend yield–oriented products portfolio yield is 4.76%. The dividend growers portfolio holdings have, on average, higher ratings than those contained in the dividend yield–oriented products portfolio. All values are estimated using U.S. data.
Source: Research Affiliates, LLC.

things: cheap future dividends (that's what investors want!) or distressed and slow-growing companies that may stop paying dividends in the future (that's what investors want to avoid!).

The dividend grower products seek stocks that have a lengthy history of positive, steady dividend growth. This strong historical record is an indirect proxy for quality and typically signals a healthy company. As a result, dividend grower products generally own higher quality companies than dividend yield–oriented products. But because a stock's history of dividend growth is unrelated to its dividend yield (i.e., no bias exists toward higher yielding stocks), the stocks in this category typically have a lower dividend yield, as indicated in Figure 1, than dividend yield–oriented products.

The consequence is that dividend-oriented investors often must make a trade-off between quality and yield. Both high- and low-quality companies can have the same dividend yield. Not knowing which is which can introduce poorly performing companies into a dividend-yield portfolio. Some high-yield stocks are cheaply priced equity of high-quality dividend-paying companies. Other high-yield stocks are cheaply priced equity of low-quality companies with unsustainable dividends. Low quality can be explained by one or more of the following considerations: financial distress, unsustainability of profits, and poor accounting practices, sometimes even extending to fraud. Simply paying the lowest price for a given dividend is not an optimal strategy.

> *"Let's not kid ourselves, periods of underperformance are inevitable for any strategy."*

We believe the quality–yield trade-off is largely unnecessary. The challenge is to find the high-quality companies among those with high dividend yields. In an article we published in June 2015, "The Market for 'Lemons': A Lesson for Dividend Investors," we showed that introducing company-quality screens in selecting stocks for a high dividend–yield portfolio can help investors avoid this trade-off.

Table 1 summarizes the main points of the "Lemons" article. The first line reports the average return and risk, realized dividend yield, dividend growth rate, and delisting characteristics of a large-cap index, which consists of the 1,000 largest companies by market capitalization. The second line reports the same statistics for a high dividend–yield portfolio, composed of the 200 companies in the large-cap index with the highest dividend yields. The high dividend–yield portfolio includes nine delisted companies, has a higher annual delisting rate per holding, and exhibits a slower future dividend growth rate than the large-cap index.

The 200-stock high dividend–yield portfolio is then divided into two non-overlapping portfolios composed of the 100 highest quality stocks and the 100 lowest quality stocks. The statistics for these two portfolios are reported in the third and fourth lines, respectively, of Table 1. In the high-quality portfolio, the number of delisted companies drops to zero, the subsequent five-year dividend growth rate increases, the average return improves, and the average volatility decreases. Selecting stocks of overall higher quality will result in higher

Table 1. U.S. High-Yield Portfolio Controlled for Quality (1964–2014)

	Average Return	Average Volatility	Realized Dividend Yield	Number of Delisted Companies	Annual Delisting Rate per Holding	Subsequent 5-year Dividend Growth Rate
Large Cap 1000	10.2%	14.8%	2.9%	36	0.07%	16.4%
High Dividend Yield 200	12.3%	14.2%	5.6%	9	0.09%	15.1%
High Yield, High Quality 100	13.4%	13.6%	5.4%	0	0.00%	18.0%
High Yield, Low Quality 100	11.4%	15.3%	5.7%	9	0.18%	11.1%

Source: Research Affiliates, LLC, using data from Compustat and CRSP.

performance, significant reduction in the likelihood of defaults, and materially higher future dividend growth rates.

A Simple Elegant Design

Our design of the RAFI™ equity income strategy follows Steve Jobs' design principles for the iPhone. He believed in what was, until then, self-evidently impossible: cell phone users did not have to choose between functionality and ease of use. They could enjoy both in the same phone. **Figure 2** shows how Jobs clearly illustrated the AND principle on the day he unveiled the iPhone.

Likewise, **Figure 3** illustrates how Research Affiliates is applying the AND principle in the hypothetical RAFI equity income strategy: dividend-yield investors can enjoy both high yield and high quality.

> *"Implementation details are especially important for passive strategies."*

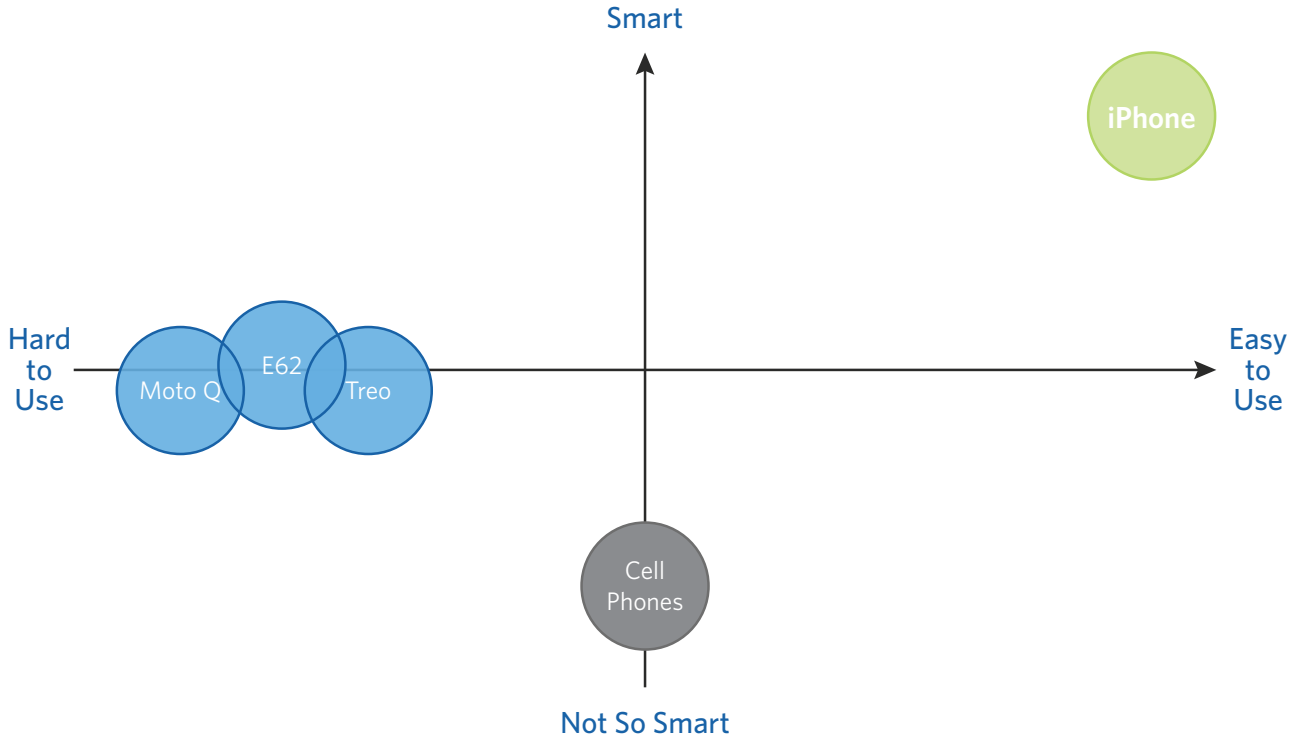
The yields for dividend growers, dividend yield-oriented products, and the RAFI equity income strategy are 3.32%, 4.76% and 4.83%, respectively. We see that RAFI equity income portfolio has higher average ratings than both dividend growers and dividend yield-oriented products.

(Implementation) Details Matter

> "Details matter, it's worth waiting to get it right."
>
> — *Steve Jobs*[6]

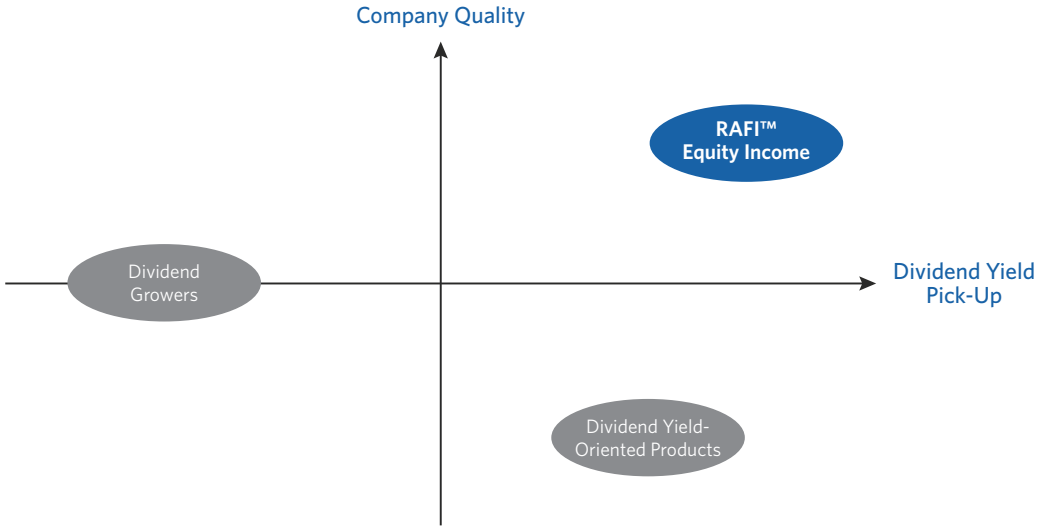
Besides a stable stream of cash flows, investors should also expect overall high total returns from these strategies. Although targeting high yield will provide higher expected total returns, investors may not fully realize these gains if a strategy is not structured to reduce transaction costs. Unfortunately, investors usually ignore liquidity issues related to high yield strategies since they don't directly observe their impact on returns.

Figure 2. Steve Jobs' Functionality vs. Ease-of-Use Trade-Off for iPhone



Source: "Steve Jobs – 2007 iPhone Presentation (Part 1 of 2)." YouTube. https://www.youtube.com/watch?v=Etyt4osHgX0 at 00:04:39.

Figure 3. Quality vs. Yield Trade-Offs in Dividend-Yield Products



Source: Research Affiliates, LLC.

Implementation details matter for both active and passive strategies, but they are especially important for passive strategies. Active managers have inherent advantages over passive managers. Active managers have discretion over when to trade. They also are free from the front running that often arises when they inform the rest of the world what they will be trading—as index fund managers typically have to do. Consequently, in order to transcend the inherent implementation drawbacks associated with passive strategies, they should be constructed to ensure the securities being traded are highly liquid and to minimize their turnover.

A prime determinant of the amount of liquidity available in the implementation process is the weighting mechanism of the strategy. Let's investigate the implications of different weighting approaches through the lens of a high dividend-yielding strategy. At the present time, investors who seek large dividend distributions have three options in how a product assigns weights to stocks: 1) proportional to capitalization weights, 2) equal weighting, and 3) proportional to dividend yields. Each weighting scheme has a unique implication for the liquidity characteristics of the strategy and its investment outcomes. Given these three options, investors are faced with a trade-off between capacity and dividend yield pick-up.

On the one hand, assigning weights proportional to market capitalization allocates more weight to the companies with larger volumes traded. This results in very high liquidity. That's good. On the other hand, capitalization weighting implicitly assigns weights proportional to prices and, as a result, inversely proportional to yields. Not surprisingly, the capitalization-weighted strategy has the lowest yield pick-up of the three weighting schemes.

The equally weighted strategy allocates identical $1/n$ weights to all stocks with no consideration given to the size of the company or the liquidity of its common stock. Although this removes the negative correlation between yield and weight (i.e., its yield is higher than that of the cap-weighted strategy), it also lowers the liquidity of the strategy.

The third strategy, the dividend yield–weighted strategy, allocates weights proportional to yield. As a result, its yield is higher than the yield of the equally weighted strategy, but without a commensurate gain in liquidity.

So, where does this leave investors? With limited options, investors find themselves between the proverbial rock and a hard place, forced to prioritize two equally valued characteristics of yield and liquidity.

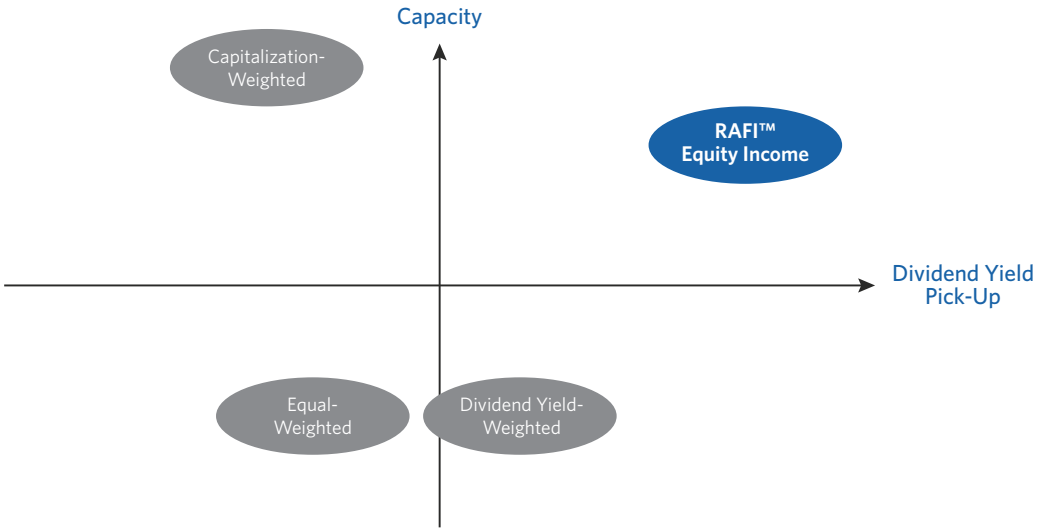
Under the AND principle, however, this trade-off between capacity and yield is largely unnecessary. We believe investors can have both preferences in one product by applying a fundamental weighting approach that intrinsically provides an excellent proxy of liquidity (it assigns larger weights to larger companies on the basis of accounting measures). And unlike capitalization weighting, the fundamental weighting approach is not inversely proportional to company yield.

The RAFI equity income strategy first weights sectors by fundamental weights; then, within sectors, it multiplies the weight of each company by dividend yield to increase the future yield of the strategy. As **Figure 4** illustrates, this weighting scheme provides investors with both high capacity *and* high dividend yield pick-up.

In Closing

In our view, it is not enough for the investment industry to come up with product ideas that meet investors' financial needs; products that are genuinely useful should additionally be designed for simplicity and cost-efficient implementation. (We shouldn't have to add that they should also be priced fairly, with most of the excess return passed along to the investor.) Drawing inspiration from Steve Jobs, we further apply the AND principle to our index design initiatives: we look for ways to build in desirable features that might, at first glance, appear to require compromises. The simulated RAFI equity income index described here is a case in point: it is designed to provide capacity, quality, and yield without trading one off against the other.

Figure 4. Capacity vs. Yield Pick-Up of Four Dividend-Yield Strategies



Note: The WAMCs are $114,429 billion, $32,406 billion, $33,685 billion, and $108,905 billion for the cap-weighted, equal-weighted, dividend yield–weighted, and RAFI equity income portfolios, respectively. The corresponding yield pickup numbers are 3.82%, 3.84%, 4.24%, and 4.83%. All values are estimated using U.S. data.
Source: Research Affiliates, LLC.

Endnotes

1. Quoted in Levy (2006).
2. Quoted in Reinhardt (1998).
3. See Goldstein and Henry (2008).
4. Contrarian investing—trading against the crowd—is socially difficult. Meir Statman writes that investing has expressive as well as utilitarian and emotional benefits. "Expressive benefits convey to us and to others our values, tastes, and status. They answer the question, What does it say about me to others and to me?" Citing DeMarzo, Kaniel, and Kremer (2008), Statman further observes that status-conscious investors tend to inflate bubbles by crowding into similar investments for fear of falling behind the herd. (Statman 2011, Introduction.)
5. Quoted in Wolf (1996).
6. Quoted by Apple CEO Tim Cook on Twitter (@tim_cook) on February 24, 2014.

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