FUNDAMENTALS™

research affiliates™ June 2015

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"Identical dividend yields may hide important differences in the quality of companies."

KEY POINTS

1. In the current near-zero interest rate environment, dividend-yield investing allows investors to reallocate their portfolios to higher yielding equities, thereby increasing current income and building a sustainable income source.
2. Investors can screen high dividend–paying equities by three quality filters—return on assets, growth in net operating assets, and debt coverage ratio—to avoid unknowingly investing in a lemon.
3. Because equity prices are much more volatile than dividends, investors can use cheap equities to buy high, sustainable dividends at bargain prices.

The Market for "Lemons": A Lesson for Dividend Investors

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Central banks the world over are buying high-quality bonds, thereby removing them from the market and forcing savers to find alternative strategies to meet their income needs. In this environment of financial repression and near-zero interest rates, dividend-yield (or equity income) investing has become increasingly popular. Investors are understandably reallocating their portfolios from lower yielding bonds to higher yielding equities. But in selecting equities with a high dividend yield, investors should be aware of the risk of concentrating their portfolios in low-quality companies.

In 1970, George Akerlof published "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism," an article for which he won the Nobel Prize. In the article, he explains the problem of asymmetric information by examining the market for used cars: some used cars are "cherries" and others are "lemons." The rub, however, is that the buyer cannot distinguish between them. Only the seller knows if the used car is a cherry or a lemon. Afraid of buying a lemon, the buyer demands a discount from a would-be cherry's price, and the seller—if knowingly selling a cherry—will refuse to deal at the discounted price. Without a meeting of the minds, the seller will not receive a fair price and is discouraged, as are other owners of cherries, from even offering them for sale. As a result, the market for used cars contains a disproportionate amount of lemons.

Akerlof's observation about used cars can help us understand why more information improves purchasing decisions, and not just for used cars. As when buying a used car, buying bargain equities can produce nasty surprises. Measuring the quality (reducing our information asymmetry) of the companies whose equities we are considering adding to our portfolio can improve our investment returns.

Dividend-Yield Investing

Investing to earn a high dividend yield is a venerable and sound strategy. Because most companies choose to pay a steady dividend to their shareholders, dividends—their frequency and amount—are persistent and much less volatile than equity prices. Investors can thus use the much higher volatility of equity prices as an opportunity to buy future dividends quite cheaply. Further, dividend-yield investing allows investors to distinguish income from principal: investors can spend dividends and leave principal

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intact. The income sustainability strategy works better, however, if the companies whose equities investors buy are not lemons.

Table 1 compares a portfolio composed of the 200 highest yielding U.S. equities selected from the 1,000 largest companies by market capitalization, rebalanced annually, with a portfolio of the 1,000 largest U.S. equities. Both portfolios are capitalization weighted.

The high-yield portfolio provides a much higher realized dividend yield (5.6% vs. 2.9%) and total return (12.3% vs. 10.2%) with lower volatility (14.2% vs. 14.8%). The higher return is no surprise because yield is measured as the ratio of dividend to price and is thus a direct measure of value. Cheap equities (i.e., equities with a relatively higher yield, or higher dividend to price) have historically, on average, outperformed expensive equities. Lower volatility, however, is a pleasant surprise.

Although the high-yield portfolio delivered both higher dividend yield and total return, it also had a higher percentage of delisted companies[1] and

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slower dividend growth. So if not every cheap dividend (i.e., the dividend paid by a cheap equity) is a bargain, can we avoid the lemons? Yes! For dividend-yield investors, three characteristics help us judge the quality of the companies that offer high dividend yields: profitability, distress, and accounting red flags that can indicate poor management, sometimes extending to fraud.

Profitability

Some cheap dividends belong to companies with poor growth prospects, rather like used car lemons that are always in and out of the auto repair shop. To avoid these lemons, we need a reliable method for assessing a company's prospects for growth. An intuitive and effective indicator of future growth is current profitability, as measured by return on assets (ROA).

The story of Blockbuster Video Entertainment, Inc., illustrates the risk of investing in companies with a high dividend yield, but poor profitability. Blockbuster, in the business of renting movies (on VCR cassettes and later DVDs) from its stores, was a profitable business from the late 1980s to the mid-2000s. But with the arrival of broadband and on-demand access to movies through cable and satellite, its business model became obsolete. Blockbuster's profits suffered, and in 2010 the company filed for bankruptcy and was acquired a year later by Dish Network.

In **Table 2**, we report the same six metrics for the 200 highest yielding equities from Table 1, dividing the portfolio into two groups: the top 100 equities in terms of profitability (as measured by ROA[2]), and the remaining 100. We call the first group the High-Yield, High-Profitability 100 and the second group the High-Yield, Low-Profitability 100.

The high-yield, high-profitability portfolio generated higher total return (12.8% vs. 12.3%) with lower volatility (13.7% vs. 15.4%) and higher subsequent five-year

Table 1. U.S. High-Yield Portfolio Compared to Large-Cap Portfolio (1964–2014)

	Average Return	Average Volatility	Realized Dividend Yield	Number of Delisted Companies	Annual Delisting Rate Per Holding	Subsequent 5-Yr. Dividend Growth Rate
High-Dividend-Yield 200	12.3%	14.2%	5.6%	9	0.09%	15.1%
Large-Cap 1000	10.2%	14.8%	2.9%	36	0.07%	16.4%

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

Table 2. U.S. High-Yield Portfolio Controlled for Profitability (1964–2014)

	Average Return	Average Volatility	Realized Dividend Yield	Number of Delisted Companies	Annual Delisting Rate Per Holding	Subsequent 5-Yr. Dividend Growth Rate
High-Yield, High-Profitability 100	12.8%	13.7%	5.5%	1	0.02%	18.6%
High-Yield, Low-Profitability 100	12.3%	15.4%	5.6%	8	0.16%	10.5%

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

dividend growth (18.6% vs. 10.5%). The higher return is not a function of higher dividend distributions, but of a faster rate of company growth. Profitable companies possess internally generated resources to fund growth opportunities and sustain dividend distributions. Cheaply priced dividends of companies with low ROA are like the lemons that require frequent and expensive trips to the repair shop.

Distress

Like a used car's disrepair following many miles of aggressive driving, some high-yield companies fall prey to distress. Perhaps the simplest and most effective indicator of distress risk is the debt coverage ratio (DCR). DCR is the ratio of a company's earnings available to make debt payments to the company's near-term debt obligations. It measures a company's debt-servicing capacity. Examples of companies with a high dividend yield and a low DCR that were subsequently delisted or filed for bankruptcy include General Motors, Lehman Brothers, Washington Mutual, and Fannie Mae.

In **Table 3**, we divide the 200 highest yielding equities from Table 1 into two groups: the 100 equities with the highest distress risk (as measured by DCR), and the remaining 100. The first group is the High-Yield, Low-Distress 100 and the second group is the High-Yield, High-Distress 100.

The companies with the lowest distress risk had a higher total return (13.3% vs. 11.7 %), lower defaults (0 vs. 9),[3] and lower volatility (13.6% vs. 15.3%). As was the case with the profitability screen, the return benefit from screening for distress does not come from higher dividend distributions; in fact, the realized dividend yield was slightly higher (5.6% vs. 5.5%) for the more distressed group. The less distressed companies, however, had more sustainable businesses and were less-often delisted. The return benefit from avoiding distressed companies is due to better preservation of principal and higher dividend growth (17.8% vs. 12.1%). Cheaply priced equities of companies with high distress risk are like the lemons that break down soon after you drive the car off of the lot.

Accounting Red Flags

Similar to a flood-ruined car that has subsequently been dried, cleaned, and fraudulently sold on a used-car lot, some companies that appear to be attractive (i.e., whose dividends can be acquired cheaply) have managements that are not following accounting best practice, perhaps even going so far as to perpetrate accounting fraud. A common method that companies use to defraud investors is to abuse accruals, such as recording fake sales as accounts receivable.

All things equal, an increase in accounts receivable generates a concurrent increase in net operating assets (NOA), which are the cumulative difference between net operating income (or accounting earnings) and free cash flow. As accounting earnings outpace free cash flow, future profitability is placed in doubt. Hirshleifer et al. (2004) find that a high level of NOA indicates that current earnings performance will be unsustainable. And in other research, Sloan (1996) finds that earnings performance attributable to accruals lacks persistence. Therefore, both higher levels of accruals and NOA suggest lower future equity returns, regardless of causation. We use growth in NOA as an accounting red flag and as a proxy for potentially fraudulent behavior.

At its peak in 2000, Enron employed close to 20,000 people and booked annual revenue of over $100 billion as one of the world's largest suppliers of electricity and natural gas. *Fortune* magazine named Enron "America's most innovative company of the year" for six consecutive years. Now, however, Enron is infamous for its massive accounting fraud, catastrophic

Table 3. U.S. High-Yield Portfolio Controlled for Distress Risk[4] (1964–2014)

	Average Return	Average Volatility	Realized Dividend Yield	Number of Delisted Companies	Annual Delisting Rate Per Holding	Subsequent 5-Yr. Dividend Growth Rate
High-Yield, Low-Distress 100	13.3%	13.6%	5.5%	0	0.00%	17.8%
High-Yield, High-Distress 100	11.7%	15.3%	5.6%	9	0.18%	12.1%

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

failure, and immense destruction of shareholder wealth. Companies like Enron are rare, but smaller scale accounting manipulations are more frequent than we may wish to believe. Enron was a prime example of a company that booked fake sales coded as accounts receivables, which inevitably would have had to be unwound in future periods.

In **Table 4**, we divide the 200 highest yielding equities from Table 1 into two groups: the 100 equities with the highest accounting quality (as measured by NOA), and the remaining 100. The first group is the High-Yield, High-Accounting-Quality 100, and the second group is the High-Yield, Low-Accounting-Quality 100.

The benefit of investing in equities of companies with higher accounting quality is fewer defaults (4 vs. 5) and a higher total return (13.2% vs. 11.6 %). Interestingly, the companies with lower accounting quality managed to produce somewhat lower volatility (14.3% vs. 14.4%), possibly by manipulating their accounting earnings. As demonstrated by the higher return reported in Table 4, the short-term volatility of better accounting practices is preferable to the smoother ride to failure resulting from poor accounting practices, perhaps even fraud.

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High-Quality Dividend-Yield Investing

When we shop for cars or equities, we seek multiple sources of information as a means to avoid adverse selection. In this article, we have identified three types of high-yield lemons: low profitability, high distress, and low accounting quality. We now analyze our sample by creating a composite measure of quality based on the three filters. To calculate the quality measure, we rank the companies by each of the three filters, and then take a simple weighted average. **Table 5** compares the 200 highest yielding equities from Table 1, dividing them into two groups: the 100 equities with the highest composite quality, and the remaining 100. The first group is the High-Yield, High-Quality 100, and the second group is the High-Yield, Low-Quality 100.

The resulting portfolio of the 100 highest quality equities does not benefit from an immediate income boost, as measured by the realized dividend yield (5.4% vs. 5.7%). It does benefit, however, from holding healthier underlying companies with reduced instances of delisting (0 vs. 9), which leads to a higher average total return (13.4% vs. 11.4%), lower volatility (13.6% vs. 15.3%), and higher subsequent five-year dividend growth rate (18.0% vs. 11.1%).

Table 4. U.S. High-Yield Portfolio Controlled for Accounting Red Flags (1964–2014)

	Average Return	Average Volatility	Realized Dividend Yield	Number of Delisted Companies	Annual Delisting Rate Per Holding	Subsequent 5-Yr. Dividend Growth Rate
High-Yield, High-Accounting-Quality 100	13.2%	14.4%	5.3%	4	0.08%	15.4%
High-Yield, Low-Accounting-Quality 100	11.6%	14.3%	5.8%	5	0.10%	14.5%

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

Table 5. 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-Yr. Dividend Growth Rate
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.

Conclusion

When purchasing a used car, finding the cherry in the basket of lemons is a challenge. Seemingly identical cars may hide important differences in quality due to their past owners' driving habits, maintenance practices, and accident history. Finding a cherry takes effort, but that effort is rewarded with many miles of worry-free driving acquired at a reasonable price.

Likewise, when purchasing high dividend-yielding equities, the challenge is to find high-quality companies at reasonable prices. Simply paying the lowest price for a given dividend is not an optimal strategy. Some high-yield equities are cherries, cheaply priced equity of high-quality dividend-paying companies. Other high-yield equities are lemons, cheaply priced equity of low-quality companies with unsustainable dividends. Identical dividend yields may hide important differences in the quality of companies arising from financial distress, unsustainability of profits, and poor accounting practices, sometimes even extending to fraud.

Endnotes

1. In our analysis, delisting is due to default.
2. Just as with DCR, ROA is not a magic indicator of profitability. ROE or gross profitability would give similar outcomes.
3. In this simulation we use DCR to identify potentially distressed companies. The results are robust to many other metrics that could be useful to identify distress.
4. Using the DCR filter, the absolute number of delisted companies is zero. It is actually quite rare for companies in the top 1,000 roster by market capitalization to be delisted; for every company that actually defaulted and delisted while in the top 1,000, tens of companies dropped out of the top 1,000 because the market perceived their imminent default, leading to their subsequent delisting. This result shows that DCR is a great measure to predict default, but in live portfolios can provide no guarantee that the portfolio is immune to default risk.

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Disclosures