Fact: Mutual Fund Investors “Chase Performance” and get Lower Returns

It’s human nature to purchase funds after recent great performance, and sell funds after what is perceived as poor performance. This behavior leads to a lower rate of return as evidenced in recent studies by Dalbar and Morningstar®.

DALBAR AND MORNINGSTAR® STUDY FINDINGS

The Dalbar study of "Qualitative Analysis of Investor Behavior" shows that in a recent decade:

<table>
<thead>
<tr>
<th>Average Stock Return</th>
<th>Average Stock Investor Return</th>
<th>Investor Behavior Penalty</th>
</tr>
</thead>
<tbody>
<tr>
<td>+11.6%</td>
<td>+4.5%</td>
<td>-7.1%</td>
</tr>
</tbody>
</table>

In addition, Morningstar® tracks “Investor Return”, which represents the actual return experienced by the “average” mutual fund investor. Out of the 1832 mutual funds in the Morningstar database with a 15-year track record (as of 1/31/2018):

<table>
<thead>
<tr>
<th>Average Annualized 15-year Fund Return</th>
<th>Average Annualized 15-year Investor Return</th>
<th>Investor Behavior Penalty</th>
</tr>
</thead>
<tbody>
<tr>
<td>+7.95%</td>
<td>+6.53%</td>
<td>-1.42%</td>
</tr>
</tbody>
</table>

Examples of fund investors piling in at the wrong time (as of 1/31/2018):

Thornburg Core Growth A (THCGX)

- 15-year annualized return: +11.70%
- 15-year annualized investor return: -1.12%
- Investor Behavior Penalty: -12.82%

DFA Emerging Markets Value I (DFEVX)

- 15-year annualized return: +14.83%
- 15-year annualized investor return: +5.75%
- Investor Behavior Penalty: -9.08%

Performance data quoted from studies represents past performance, which is not a guarantee of future results. Matisse Capital is not affiliated with Dalbar, Inc. or Morningstar®, Inc. The content of this whitepaper is for informational and educational purposes only and does not constitute any investment advice or recommendation by Matisse Capital. Any reference to a specific fund or security does not constitute a recommendation to buy, sell, hold, or directly invest in the fund or its securities. It should not be assumed that investment decisions made in the future will be profitable or will equal the performance of the funds or securities discussed in this whitepaper. Past performance does not guarantee future results, which may vary. The value of investments and the income derived from investments will fluctuate and can go down as well as up. A loss of principal may occur.
CLOSED-END FUND (CEF) MARKET ALLOWS US TO CAPITALIZE ON POOR INVESTOR BEHAVIOR

CEFs give us "real time" signals when investors are greedy or scared, as shown by the discount/premium levels. A CEF is a mutual fund with two primary differences from open-end funds:

1) CEFs trade in the open market like a stock.

2) CEFs issue a fixed number of shares rather than constantly creating and redeeming shares at Net Asset Value (NAV).

CEFs are subject to the same emotional fund flows as open-end funds. However, unlike open-end funds, when investors herd into and out of CEFs, they move the price. Since the share quantity is fixed, this price movement almost always exceeds the movement in the CEF's NAV. The relationship between price and NAV (the "discount" or "premium" at which a CEF trades) is therefore a key real-time indicator of the actions of the "average investor".

All else equal, a CEF trading at an unusually high premium is a CEF being purchased by excited investors. For example, PIMCO Corporate & Income Opps (PTY) investors fell in love with the bond king (Bill Gross) and were willing to pay a 22% premium for 6 months in 2014. By the end of 2015 when Gross left PIMCO, the fund traded at no premium. Our research indicated this discount would narrow significantly, and it did.

Using the same logic, a CEF trading at an unusually large discount is a CEF being sold by disappointed investors, and is a candidate to outperform going forward. For example, EV Limited Duration Income (EVV), sold at a 25-30% discount in the teeth of the 08-09 mortgage crisis, but was trading at a 5% premium in 2013.

We monitor all 500+ CEFs daily, analyzing the opportunities. The smart investor can watch these price moves, systematically buy when the discount is wider than normal, and sell when it is narrower than normal. Through this disciplined process, an advisor might reasonably hope to capture the +1.42% annual "smart investor bonus" for clients.

MEAN REVERSION "ALIVE AND WELL”

Research and experience shows that when you buy deeply discounted funds, it's likely you’ll be able to sell that fund at a much narrower discount. Large discounts tend to narrow, and small discounts or premiums tend to widen, submitting to the nearly inexorable force of mean reversion. In fact, according to our “University of Oregon Study”, CEFs in the most discounted quintile experience about a one percentage point narrowing in their discount over the subsequent month.

But why does this happen? What's the engine? It's basically another natural consequence of the performance chasing discussed above. When money attempts to "flow out of" a particular CEF, aggressive sellers (since they can't sell shares to the fund company) must name a lower price in order to interest less aggressive CEF buyers. The discount therefore widens. However, fund flows are notoriously fickle. At some time, usually within the next year, performance improves, money tries to flow back into that same CEF, and the discount narrows. This is when the smart investor sells.

DISCOUNT AND MARKET PRICE CORRELATIONS HIGH

Further evidence for the irrational behavior of CEF investors comes from a study of the correlation between a fund’s discount and its price. If discount movements are highly affected by investor sentiment, and if investor sentiment essentially chases performance, then we would expect to see a high correlation between discount and price. This is indeed the case: CEFs typically sport a 60-80% correlation between price movements and discount movements. A CEF trading at a large discount is typically also trading at a low price relative to both its past and future price.

Stock and bond markets will do whatever they want, but a focus on CEF discounts should give the smart advisor a sustainable advantage – so long as investors remain human.

The content of this whitepaper is for informational and educational purposes only and does not constitute any investment advice or recommendation by Matisse Capital. Any reference to a specific fund or security does not constitute a recommendation to buy, sell, hold, or directly invest in the fund or its securities. It should not be assumed that investment decisions made in the future will be profitable or will equal the performance of the funds or securities discussed in this whitepaper. Past performance does not guarantee future results, which may vary. The value of investments and the income derived from investments will fluctuate and can go down as well as up. A loss of principal may occur.