



## Closed-end Fund IPOs

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A closed-end mutual fund is an investment company that in concept is similar to an open-end mutual fund. The big difference is that closed-end funds are traded between investors on an exchange just like a stock rather than between investors and mutual fund companies like an open-end mutual fund. Most closed-end funds trade at a discount to NAV. However, at the IPO, the offering price is set equal to the NAV. Investors who purchase closed-end funds at the IPO almost invariably see the fund price drop relative to the NAV by as much as 5% over the year after the IPO. In addition, investors at the IPO often pay a significant amount in commissions. Investors who wish to hold closed-end funds should never buy them at the IPO and the suggestion that they should by financial advisors is suspect.

### **I. Discounts on Closed-end Funds**

A closed-end mutual fund is a form of investment company. Like its cousin the open-end mutual fund, a closed-end fund is a portfolio of securities. By purchasing shares of the closed-end fund, investors obtain a fractional ownership of the underlying securities portfolio. The closed-end fund has an investment manager just like a mutual fund who actively manages the portfolio in return for a management fee.

The big difference between a mutual fund and a closed-end fund is how ownership is transferred. In the case of open-end mutual funds, the fund distributor stands ready to redeem or sell shares of the fund to investors.<sup>2</sup> These sales and redemptions occur at the Net Asset Value (NAV) of the fund. The NAV is determined by summing the value of all investments held by the fund and dividing by the number of mutual fund shares outstanding. The NAV for a closed-end fund is calculated in the

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<sup>2</sup> If a fund is closed to new investment, the distributor will still redeem shares, but will not sell additional shares.



same way. However, closed-end funds do not redeem or sell additional shares on an ongoing basis. The number of shares is static. Investors who wish to hold closed-end funds must purchase them on an exchange just like a stock. The price of closed-end fund shares is therefore determined by demand and supply in the market.

One of the most persistent anomalies in modern capital markets has been coined the “closed-end fund puzzle.” The puzzle has two parts in which we are interested, the first of which is the tendency for the price of closed-end funds in the market to be different from their NAV. Because all of the assets of a closed-end fund are marketable securities that are easily valued, an efficient market should price the closed-end fund shares almost identically to the value of the underlying investments. In reality, most closed-end funds sell at a discount to NAV. The magnitude of the difference between price and NAV for a closed-end fund fluctuates over time and the fund can sell at a premium to NAV. However, in most circumstances, the fund will sell at a discount to NAV.

Numerous potential explanations for the divergence between price and NAV for closed-end funds have been offered by academic researchers. These explanations fall into one of two camps. The first camp holds that there are rational explanations for the phenomenon. The second camp suggests that irrational investor sentiment leads to the existence of discounts in closed-end funds.

Among the rational explanations for closed-end fund discounts is that the expenses charged by the manager actually reduce the value of the fund relative to the underlying holdings. If you instead bought all the underlying securities in the same proportions as the fund, you would have a basket of securities that would be priced at the NAV. Holding that same basket within the closed-end fund is less valuable because you must pay the manager each year. Therefore the basket within the fund is worth something less than the basket outside of the fund. A second explanation for the discount is that by holding the basket within the closed-end fund rather than outside of it, the investor sacrifices the ability to efficiently manage taxes. Therefore, all other things being equal, the value of the holdings in the fund is less than the value of the holdings



outside of the fund. A third explanation is that a closed-end fund is a reasonable organizational form because it allows investors the ability to hold illiquid securities without incurring transactions costs. This explanation suggests that discounts (and premiums) on closed-end funds fluctuate over time with the liquidity of fund holdings.

The most common irrational explanation for closed-end fund discounts is investor sentiment. Investors in closed-end funds bear two types of risk. One is the risk of the underlying securities. The second is the risk that investor sentiment will change, affecting the demand for closed-end funds and potentially pushing the NAV and price of the fund further apart. The discount (being able to buy the fund more cheaply) compensates investors for this additional investor sentiment risk.

None of these explanations has been proven empirically and the reason for closed-end fund discounts may be a combination of the above factors. Empirical papers that examine these factors typically find some statistical regularities that are consistent with the offered explanations and some regularities that are not consistent with the explanations.

## **II. Part Two of the Puzzle: Closed-end Fund IPOs**

The second part of the closed-end fund puzzle is the behavior of closed-end fund prices after the initial public offering (IPO). This part of the puzzle was thoroughly investigated by Hanley, Lee and Seguin (1996) ten years ago. They write:

“(Information asymmetry) models do not explain the motivation of those who purchase funds that are expected to decline in price. With the typical fund losing 8% of its value over the first 100 trading days, rational investors should wait several months before buying into these securities. Anticipating such behavior, prospective issuers and underwriters would have no incentive to bring these offerings to market. Consequently, in a rational expectations equilibrium, these funds should not get started at all.”<sup>3</sup>

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<sup>3</sup> From “The Marketing of Closed-end Fund IPOs: Evidence from Transactions Data,” 1996, by Hanley, Lee and Seguin, *Journal of Financial Intermediation* 5, 127-159. Quote from page 128.



The authors attribute the existence of closed-end funds in the face of such poor post-IPO behavior to marketing tactics of brokerage firms and the informational disadvantage of small investors. That is, small investors are being duped by brokerage firms into overpaying in the offerings of closed-end mutual funds.

Material features of closed-end fund IPOs lend credence to the idea that investors may be uninformed about the prospects of these IPOs and that brokerage firm behavior obscures the workings of the process to the detriment of small investors. Lead underwriters stabilize the price of closed-end fund IPOs by standing ready to buy shares that are flipped shortly after issue. This stabilization may last as long as 29 days after issue. This stabilization may retard the deterioration in the price that occurs because the underwriting fee ensures that the NAV of the fund will be below the offering price from day 1.<sup>4</sup>

Much of the early trading in fund shares is attributable to large investors who are flipping fund shares. During this period, closed-end fund prices change very little, indicating that brokerage firms are supporting prices and buying shares from flippers. After this initial period of flipping, the vast majority of trades are small indicating that the investors who hang around for the subsequent downward price trend are predominantly small investors. In general, institutional investors hold a far smaller fraction of closed-end funds in the periods after the IPO than traditional industrial IPOs.

### **III. Recent Closed-end Fund IPO Activity**

Over the 30-month period from January 2005 through June 2007, there were approximately 88 closed-end fund IPOs which in aggregate raised \$49 Billion.<sup>5</sup> The average underwriting fee on these issues was 4.99% which translates into \$2.45 Billion in

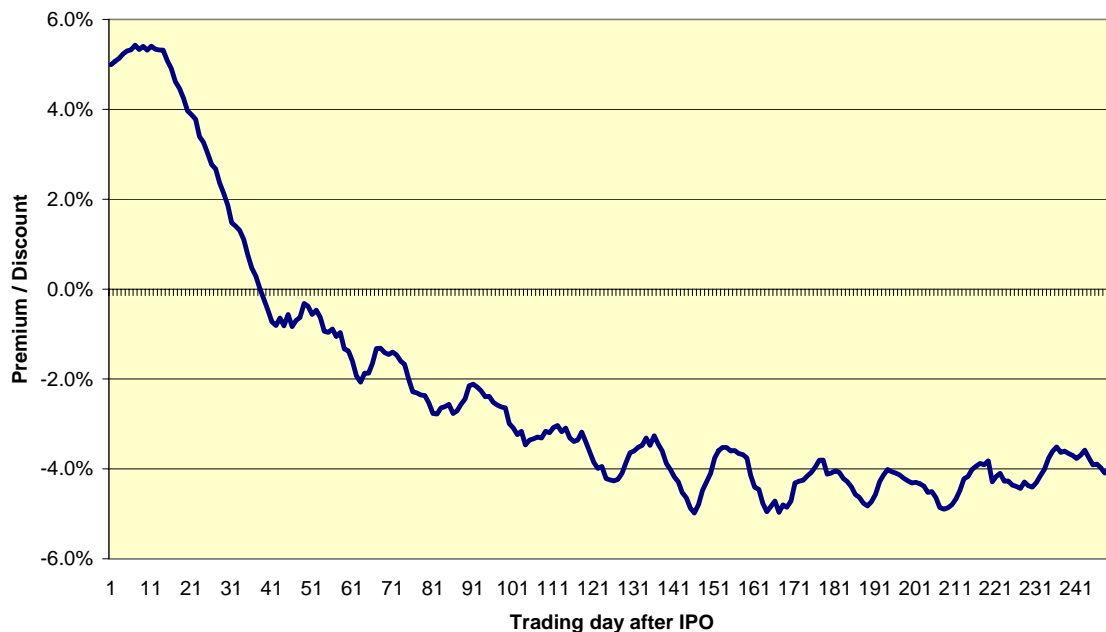
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<sup>4</sup> The price of the closed-end fund IPO has the underwriting fee embedded. For example, if a fund has a 5% underwriting fee and the price of fund shares is \$20 at the IPO, only \$19 goes into the fund, with the remaining 5% going to the underwriters. Therefore only \$19 is invested in fund assets and the NAV at that point is \$19.

<sup>5</sup> This sample of closed-end fund IPOs was drawn from the website of the Closed-end Fund Association of America (CEFA). The website is: [closed-endfunds.com](http://closed-endfunds.com). Information on prices and net asset values are collected from Bloomberg.

underwriting fees generated from the issuance of closed-end fund IPOs over the period.<sup>6</sup> Figure 1 shows the evolution of the discount/premium price of closed-end fund shares in the 250 trading days after issuance. The figure presents the variable  $[(\text{Price}-\text{NAV})-1]$ .

**Figure 1: Evolution of Closed End Fund Premia and Discounts:  
First 250 Trading Days**



The characteristics of the graph are entirely consistent with previous studies of closed-end funds. The stabilization of immediate post-IPO prices is indicated by the fact that the price, relative to the NAV, remains very stable over the first 15 trading days. The offering price is significantly above the NAV because of the selling concession paid to brokerage firms and brokers. Over the subsequent 30 days, the price of the issue relative to the NAV drops almost monotonically. A more gradual and erratic decay in price to NAV occurs over from approximately day 45 through day 127. At day 127, the average discount in our sample of closed-end funds is -4.2%. Therefore over the first 6 months of trading, the price of the average closed-end fund in our sample declines by 9% relative to

<sup>6</sup> 4.99% is the average difference between the NAV and the price of the closed-end funds at the end of the first trading day.



the NAV or over \$4.5 billion. The \$4.5 billion in losses suffered by investors who purchased at or shortly after closed-end fund IPOs are predictable and explain why primarily small investors hold shares purchased during the stabilization period.

#### **IV. Case Study: Clough Global Opportunities Fund**

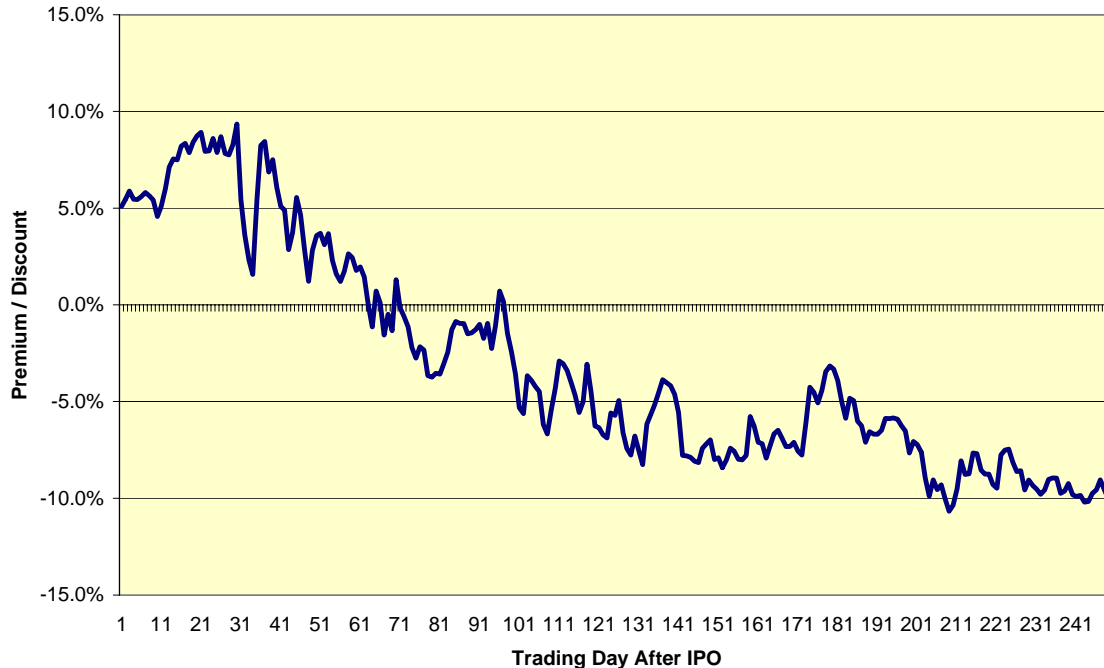
The Clough Global Opportunities Fund IPO occurred on April 25, 2006 at \$20 per share. 47.5 million shares were offered at the \$20 initial offering price which included a sales load of 4.5% (\$.90 per share) and additional offering expenses paid by the fund of 0.2% (\$.04 per share). After the deduction of the sales load and the offering expenses, \$19.06 per share was actually paid into the fund. Therefore an investor at the IPO paid \$20 per share, but the immediate underlying NAV of the fund was \$19.06. The total offering price was \$950 million and the net proceeds to the fund were \$905.350 million. The remaining \$44.650 million were a combination of the sales load and the additional offering expenses.<sup>7</sup>

Figure 2 shows the evolution of the discount of Clough Global Opportunities Fund shares in the 250 trading days after issuance. The fund started trading at a 5% premium. The premium increased in the immediate aftermarket to as high as 9.3% on the 30<sup>th</sup> trading day. From there, the premium began to decrease significantly. At day 120, the discount was -6.3%. The discount continued to widen over the subsequent 6 months to -10.4% by the 250th trading day. By June 30, 2007, the discount to NAV was -10.8%.

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<sup>7</sup> Offering details are gathered from the prospectus available at <http://www.sec.gov/Archives/edgar/data/1350869/000104746906005576/a2168239zn-2a.htm>

**Figure 2: Evolution of Discount on Clough Global Opportunities Fund**

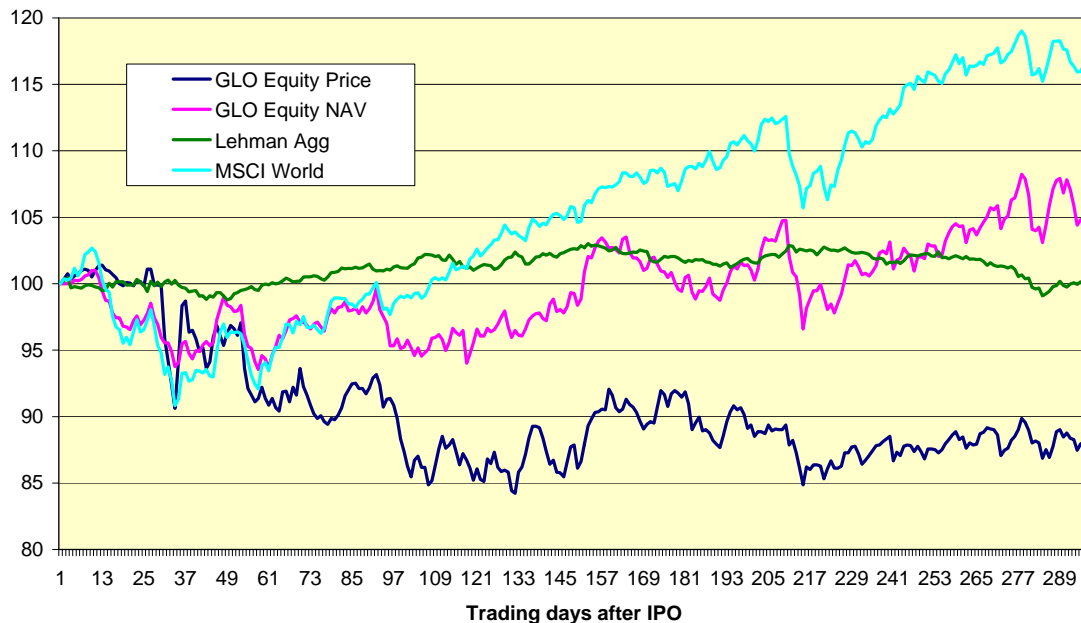


Over this period, the price of the fund declined from \$20 to approximately \$18 per share. The objective of the fund as stated in the prospectus is total return. The fund invests in stocks and fixed income instruments of both US and foreign issuers. Figure 3 shows the performance of the Clough Global Opportunities Fund, the change in the Net Asset Value of the fund and two indexes: the MSCI World Index and the Lehman Aggregate Bond Index. By June 30, 2007, the price of fund shares had dropped by 10.8%. Over that same period, the NAV of the fund actually rose by 5%.<sup>8</sup> The Lehman Aggregate Bond Index was almost flat over this period, rising just 0.2%. The MSCI World index rose by 17%. It is intuitive that the performance of the underlying assets in the fund, tracked by the NAV of the fund, would be somewhere in between the global stock market index and the broad-based US bond market index since those asset classes are likely to be strongly represented in this portfolio according to the prospectus. The

<sup>8</sup> It may seem strange that the discount to NAV at June 30, 2007 is -10.8%, but that the fund price dropped by 10.8% while fund NAV actually rose by 5%. This would suggest that the discount would be closer to 15% than to 10%. However, recall that due to the sales load, the price of the fund started out at a 5% premium to NAV.

deterioration in the price of the closed-end fund came even as the value of the underlying securities rose. This price behavior of the fund relative to the underlying assets is characteristic of closed-end funds in general.

**Figure 3: Performance of Clough Global Opportunity Fund Shares vs. NAV, Lehman Aggregate Bond Index and MSCI World Index**



#### IV. Conclusion

The price behavior of the Clough Global Opportunities closed-end fund is not unique. In fact, it is the rule rather than the exception. It has been well-documented for at least the past 10 years that closed-end funds are brought to the market at a premium to NAV and that this premium erodes over the ensuing 6 to 12 months. Investors at the IPO, if they were informed of this regularity of closed-end fund price behavior, would not purchase closed-end funds at the IPO since they will lose nearly 10% in the first six months compared to a seasoned closed-end fund or an open-end fund holding similar securities. Rather, if they were inclined to hold a portfolio of the underlying assets of the fund, investors would wait until the highly predictable erosion of fund price relative to NAV before purchasing shares.





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Investors in the Clough Global Opportunities fund IPO lost nearly \$90 million as a result of buying shares at the IPO – and investors in the 88 IPOs between January 2005 and June 2007 lost over \$4.5 billion. It is not the underlying portfolio that caused the losses; it is the structure of the closed-end fund product and the high selling concession that accompanies the purchase of the fund at the IPO. Informed investors could both avoid the selling concession and avoid the erosion to discount of fund shares by waiting until the fund has seasoned.<sup>9</sup>

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<sup>9</sup> Investors who purchase after the IPO would pay commissions on par with what they pay to purchase any stock from their brokerage firm.