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> UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549



DIVISION OF INVESTMENT MANAGEMENT

April 30, 2001

Mr. Craig S. Tyle General Counsel Investment Company Institute 1401 H Street, N.W. Washington, D.C. 20005

ACT ICA SECTION 22(c). RULE 22C-1 FUPLIC A VALLABULTY

Dear Mr. Tyle:

This letter follows up on our December 1999 letter<sup>1</sup> to you and addresses several topics for which further clarification and guidance appear to be necessary. We set forth our views on the obligations of funds and their directors under the Investment Company Act of 1940 (the "1940 Act") to determine, in good faith, the fair value of the funds' portfolio securities when market quotations are not readily available. We also provide our views on other topics, such as the valuation of securities traded on certain foreign exchanges and the inappropriate use of fair value pricing for securities for which market quotations are readily available.<sup>2</sup>

#### 1. FAIR VALUE PRICING AND SIGNIFICANT EVENTS

#### A. Background

The 1940 Act requires funds to calculate their net asset values ("NAVs") by using the market value of their portfolio securities when market quotations for those securities are "readily available."<sup>3</sup> When market quotations for a portfolio security are not readily available, a fund must calculate its NAV by using the fair value of that security, as

<sup>2</sup> The guidance provided in this letter and the 1999 Letter applies to all investment companies regardless of their classification (*e.g.*, open-end, closed-end) or investment objectives or strategies (*e.g.*, investing in a particular sector or tracking an index).

<sup>3</sup> Section 2(a)(41)(B) of the 1940 Act defines "value" as: "(i) with respect to securities for which market quotations are readily available, the market value of such securities; and (ii) with respect to other securities and assets, fair value as determined in good faith by the board of directors." This definition also is used in Rule 2a-4 under the 1940 Act as the required basis for computing a fund's current NAV.

See Letter to Craig S. Tyle, General Counsel, Investment Company Institute, from Douglas Scheidt, Associate Director and Chief Counsel, Division of Investment Management (Dec. 8, 1999) (the "1999 Letter").

determined in good faith by the fund's board.<sup>4</sup> The 1940 Act generally requires funds to compute their NAVs at least once daily, Monday through Friday, at a specific time or times as determined by their boards ("NAV calculation").<sup>5</sup> Typically, funds calculate their NAVs once each day at or near the close of the major U.S. securities exchanges and markets (usually 4:00 p.m., Eastern Time ("ET")).

Funds generally calculate their NAVs by using the closing prices of portfolio securities on the exchange or market (whether foreign or domestic) on which the securities principally trade. Many foreign markets, however, operate at times that do not coincide with those of the major U.S. markets. For example, Asian markets generally operate during the evening and nighttime in the United States and close before the opening of the major U.S. markets.<sup>6</sup> As a result, the closing prices of securities that principally trade on foreign exchanges or markets ("foreign securities") may be as much as 12-15 hours old by the time of the funds' NAV calculation, and may not reflect the current market values of those securities at that time. In particular, the closing prices of foreign securities may not reflect their market values at a fund's NAV calculation if an event that will affect the value of those securities ("significant event") has occurred since the closing prices were established on the foreign exchange or market, but before the fund's NAV calculation.

B. <u>The Failure to Determine the Fair Value of Portfolio Securities Following</u> Significant Events May Result in Dilution

Funds may dilute the value of their shareholders' interests if they calculate their NAVs using closing prices that were established before a significant event has occurred. Dilution generally may occur, for example, if fund shares are overpriced because redeeming shareholders will receive a windfall at the expense of the shareholders that remain in the fund. Similarly, dilution may occur when a fund sells its shares at a price lower than its NAV. The risk of dilution increases when significant events occur because such events attract investors who are drawn to the possibility of arbitrage opportunities.<sup>7</sup>

<sup>6</sup> From November through March, for example, the Tokyo Stock Exchange is generally open for trading between 7:00 p.m. and 1:00 a.m., ET, while the Hong Kong Stock Exchange is open between 9:00 p.m. and 3:00 a.m., ET.

<sup>7</sup> Investors are drawn to market conditions that allow them to "take advantage of an upswing in the market and an accompanying increase in the net asset value of investment

<sup>&</sup>lt;sup>4</sup> *Id.* As the Commission previously has noted, funds that fair value price their portfolio securities should document their decision making and retain the supporting data for inspection by the funds' independent accountants. *See* Accounting Series Release No. 118, Financial Reporting Codification (CCH) § 404.03 (Dec. 23, 1970) ("ASR No. 118").

<sup>&</sup>lt;sup>5</sup> Rule 22c-1(b) under the 1940 Act. Rule 22c-1(a) requires funds to sell and redeem their shares at the NAVs next computed after receipt of an order.

In such situations, short-term investors may attempt to exploit the discrepancies between market prices that are no longer current, and the values of a fund's portfolio securities.<sup>8</sup>

Fair value pricing can protect long-term fund investors from short-term investors who seek to take advantage of funds as a result of significant events occurring after a foreign exchange or market closes, but before the funds' NAV calculation. Attached as Exhibit 1 is an example that demonstrates how certain short-term investors, in two days and at no risk to their investments, could profit by more than \$900,000, on a \$10 million investment, from a small fund that does not use fair value pricing. These profits would dilute the share value of long-term investors in the fund. Although the value of the securities held by both funds in the example would remain the same after the market recovers from the short period of volatility, the NAV of the fund that does not use fair value pricing would decline from \$10 to \$9.82 -- a drop of nearly 20 cents per share for every remaining shareholder in the fund, which is a direct result of the actions taken by the aggressive short-term investors.

#### C. Availability of Market Quotations

The Commission previously has addressed the issue of whether market quotations are readily available under certain circumstances. In ASR No. 118, the Commission instructed funds to carefully consider various indications of the validity and reliability of market quotations. With regard to securities listed or traded on a national securities exchange, the Commission stated that:

[i]f sales have been infrequent or there is a thin market in the security, further consideration should be given to whether "market quotations are readily available." If it is decided that they are not readily available, the alternative method of valuation prescribed by Section [2(a)(41)] -- "fair value as determined in good faith by the board of directors" -- should be used.

The Commission reached the same conclusion with regard to over-the-counter securities, indicating that if the validity of quotations from broker-dealers appears to be questionable or if the number of quotations is such as to indicate that there is a thin market in the security, further consideration should be given to whether market quotations are readily

company shares by purchasing such shares at a price which does not reflect the increase." Investment Company Act Release No. 5519 (Oct. 16, 1968) (Rule 22c-1 adopting release).

<sup>8</sup> Arbitrage activity also may harm shareholders because it may cause funds to manage their portfolios in a disadvantageous manner. For example, a fund's investment adviser may maintain a larger percentage of its assets in cash or may be forced to prematurely liquidate certain portfolio securities to meet higher levels of redemptions due to arbitrage activity. This is particularly true for funds that invest primarily in foreign or emerging markets securities, which are often thinly traded. Funds also may incur increased brokerage and administrative costs related to the arbitrage activity.

available. With regard to foreign securities, a fund similarly must consider the reliability of market quotations. Low trading volume of securities in some foreign markets raises issues as to the reliability of the market quotations and can trigger the requirement to fair value price those securities.

Additionally, with regard to a foreign security, a fund must evaluate whether a significant event (*i.e.*, an event that will affect the value of a portfolio security) has occurred after the foreign exchange or market has closed, but before the fund's NAV calculation. If the fund determines that a significant event has occurred since the closing of the foreign exchange or market, but before the fund's NAV calculation, then the closing price for that security would not be considered a "readily available" market quotation, and the fund must value the security pursuant to a fair value pricing methodology.<sup>9</sup> This position is consistent with the views expressed by the Commission in Investment Company Act Release No. 14244 (Nov. 21, 1984).<sup>10</sup>

This position applies equally to domestic securities. If, for example, a U.S. market closes early on a given day, or if the market regularly closes before a fund's NAV calculation, and an event occurs that affects the value of a fund's portfolio security subsequent to that closing, but before the fund's NAV calculation, then the market's closing price for that security would no longer be considered a "readily available" market quotation. Likewise, if trading in a security is halted during the trading day, and trading in that security does not resume prior to the close of the exchange or market, the last quotations prior to the trading halt would not be considered "readily available."

<sup>10</sup> In that release, the Commission affirmed that a fund whose portfolio contains foreign securities could continue to rely on the Division's no-action position in *Putnam Growth Fund and Putnam International Equities Fund, Inc.*, Division of Investment Management no-action letter (Feb. 23, 1981), with respect to the use of immediately preceding closing prices on foreign exchanges or markets when no significant event has occurred. Discussing *Putnam*, the Commission also stated that:

[i]f an event does occur which will affect the value of portfolio securities after the market has closed, the fund must, to the best of its ability, determine the fair value of the securities, as of the time pricing is done under Rule 22c-1, by using appropriate indicia of value which, in certain cases, may include the opening price at which trading in the securities next begins.

Investment Company Act Release No. 14244, at n. 7 (proposing amendments to Rule 22c-1).

<sup>&</sup>lt;sup>9</sup> A determination that market quotations are no longer "readily available" would not preclude a fund's board from concluding that the most recent closing market prices represent fair value. The most recent closing market prices generally should be considered, along with other appropriate factors, when determining the fair value of securities for which current market quotations are not readily available. *See* the 1999 Letter, *supra* n. 1, at n. 5.

## D. <u>Monitoring for Significant Events and Assessing the Availability of Market</u> Quotations

Consistent with their obligations under the 1940 Act, funds should continuously monitor for events that might necessitate the use of fair value prices. Funds also should establish criteria for determining whether market quotations are readily available.

Whether a particular event is a significant event depends on whether the event will affect the value of a fund's portfolio securities. Such events may relate to a single issuer or to an entire market sector. Moreover, significant fluctuations in domestic or foreign markets may constitute a significant event. Significant events also may stem from occurrences not tied directly to the securities markets, such as natural disasters, armed conflicts, or significant governmental actions.<sup>11</sup>

Recent advances in communications technology have increased the availability of financial and other news sources that funds can use to monitor for significant events.<sup>12</sup> Some funds have established milestones or trigger points which also may signal that significant events have occurred since the close of the foreign exchange or market on which their portfolio securities trade, such as a certain percentage rise or fall in the value of a basket of foreign securities that trade on another market, or a certain percentage change in a foreign futures index.<sup>13</sup>

More generally, funds should assess the availability of market quotations for their portfolio securities each day by reviewing various factors, including whether the securities are thinly traded, sales have been infrequent, or other data exist that may call into question the reliability of the market quotations.<sup>14</sup> Funds that automatically use market quotations to calculate their NAVs, without first verifying that the market quotations are readily available, cannot be assured that the resulting NAVs are accurate.

<sup>13</sup> In the 1999 Letter, we identified certain factors that boards may wish to consider when determining the fair values of fund portfolio securities. We believe that these same factors can assist funds in determining whether a significant event has occurred. *See* the 1999 Letter, *supra* n. 1, at text accompanying n. 14.

<sup>14</sup> See, e.g., ASR No. 118, supra n. 4.

<sup>&</sup>lt;sup>11</sup> See the 1999 Letter, supra n. 1 (providing guidance with respect to pricing portfolio securities in certain emergency or unusual situations).

<sup>&</sup>lt;sup>12</sup> In our view, such monitoring generally should not be unduly burdensome because funds and their investment advisers typically monitor such data on a continuous basis in determining whether to buy, sell, or continue to hold portfolio securities.

### E. Disclosure of Pricing Policies

In 1997, some investors complained that they were unaware that funds could fair value price their portfolio securities. In response to these complaints, we reviewed the disclosure documents of a number of different funds and determined that the funds generally disclosed their valuation practices, including their ability to use fair value pricing. We further determined, however, that the disclosure would be enhanced if the funds followed the principles of plain English.<sup>15</sup>

In early 1998, the Commission adopted amendments to Form N-1A, the registration form for mutual funds.<sup>16</sup> In doing so, the Commission decided to retain the requirement that funds explain the method used to value their portfolio securities (*i.e.*, market value, fair value, or amortized cost). In light of our review of certain funds' disclosure relating to fair value, however, the Commission added an instruction to Form N-1A clarifying that funds that contemplate using fair value pricing also must briefly explain the circumstances and effects of its use.

We believe that funds and their shareholders would benefit from enhanced plain English disclosure of the use of fair value pricing and its effects. We also believe that funds that are more likely to use fair value pricing should consider providing additional information to their shareholders (*e.g.*, in shareholder reports) about the circumstances and effects of using fair value pricing.<sup>17</sup> Such disclosure may result in fewer shareholder complaints and also may discourage arbitrage activity.

I6 Id.

<sup>17</sup> A fund, for example, could explain that it is required by law to use the fair values of its portfolio securities to calculate its NAV under certain circumstances, and could illustrate the effects of fair value pricing in a hypothetical situation. Such disclosure could help to educate shareholders about the effects of significant events on the fund's NAV, and explain why the fund's NAV may not correlate with the prevailing direction or magnitude of market movements on certain days.

<sup>&</sup>lt;sup>15</sup> See Investment Company Act Release No. 23064 (Mar. 13, 1998), at text accompanying n. 152 (adopting amendments to Form N-1A).

# II. ADDITIONAL MATTERS RELATING TO VALUATION

We also believe that it is appropriate to address the following valuation-related issues:

### A. Ongoing Pricing Responsibilities

As the Commission previously has stated, boards must "continuously review the appropriateness of the method used in valuing" portfolio securities.<sup>18</sup> Funds should regularly evaluate whether their pricing methodologies continue to result in values that they might reasonably expect to receive upon a current sale. Funds should assess the availability and reliability of market quotations, and should regularly test the accuracy of their fair value prices by comparing them with values that are available from other sources, including actual trade prices, as well as quotations from pricing services and dealers. Funds also should make any appropriate adjustments to their fair valuation methodologies.<sup>19</sup> In addition, funds should evaluate the appropriateness of their fair value methodology for foreign securities by reviewing next-day opening prices or actual sales of the securities on the foreign exchange or market.<sup>20</sup>

#### B. The Good Faith Requirement

In the 1999 Letter, we discussed the requirement that fund boards must determine, in "good faith," the fair value of portfolio securities for which market quotations are not readily available.<sup>21</sup> We stated our view that the good faith requirement is a flexible concept that can accommodate many different considerations, and that the specific actions that a board must take will vary, depending on the nature of the particular fund, the context in which the board must fair value price, and the pricing procedures adopted by the board.<sup>22</sup>

<sup>18</sup> ASR No. 118, *supra* n. 4.

<sup>19</sup> Funds also should implement appropriate measures to ensure that when they use fair value prices provided by pricing services to calculate their NAVs, those prices reflect what the funds might reasonably expect to receive upon a current sale of the securities.

<sup>20</sup> We recognize that the fair value prices of securities determined in accordance with a fund's fair valuation methodology may be different from the next-day opening or actual sales prices of the securities. Such discrepancies do not necessarily indicate that the fund's fair value prices are inappropriate. Instead, the fund should reevaluate its fair value methodology to determine what, if any, adjustments should be made to that methodology.

See supra n. 1.

<sup>22</sup> In providing this guidance, we also stated that "different fund boards, or funds in the same complex with different boards, when fair value pricing identical securities, could reasonably

Since we issued the 1999 Letter, we have been requested to provide additional guidance concerning the good faith requirement. In our view, a board acts in good faith when its fair value determination is the result of a sincere and honest assessment of the amount that the fund might reasonably expect to receive for a security upon its current sale, based upon all of the appropriate factors that are available to the fund.<sup>23</sup> Furthermore, we believe that a board acts in good faith when it "continuously review[s] the appropriateness of the method used" in determining the fair value of the fund's portfolio securities.<sup>24</sup> Compliance with the good faith standard generally reflects the directors' faithfulness to the duties of care and loyalty that they owe to the fund.

We believe, however, that a fund board generally would not be acting in good faith if, for example, the board knows or has reason to believe that its fair value determination does not reflect the amount that the fund might reasonably expect to receive for the security upon its current sale. In addition, a fund board generally would not be acting in good faith if it acts with reckless disregard for whether its fair value determination reflects the amount that the fund might reasonably expect to receive for the security upon its current sale. The Commission has instituted several enforcement actions against fund directors under these circumstances.<sup>25</sup>

arrive at prices that were not the same, consistent with the boards' obligations to fair value price in good faith." See the 1999 Letter, supra n. 1.

<sup>23</sup> Consistent with the good faith requirement, boards may appoint persons to assist them in determining fair values and to make actual fair value calculations under the boards' direction. *See* ASR No. 118, *supra* n. 4. *See also* the 1999 Letter, *supra* n. 1.

<sup>24</sup> See ASR No. 118, supra n. 4.

In one action, for example, the fund's directors continued to fair value a portfolio security 25 at its last available NASDAQ market quotation for a significant period of time, notwithstanding that the directors knew, among other things, that the security had been de-listed from the NASDAQ, the issuer had experienced continuing losses and repeatedly failed to meet income projections, and actual sales prices during the period were lower than the fair value used by the directors to calculate NAV. Parnassus Investments, et al., Initial Dec. No. 131 (Sept. 3, 1998), initial dec. final (Oct. 8, 1998). In another action, a fund's directors, among other things, fair valued certain of the fund's restricted portfolio securities as if they were not restricted. In the Matter of the Rockies Fund, Inc., et al., Initial Dec. No. 181 (Mar. 9, 2001), Order Granting Petitions for Review (Apr. 10, 2001). See also In the Matter of Lloyd Blonder, Investment Company Act Release No. 19755 (Sept. 30, 1993) (director approved fair values of portfolio securities while knowing that they were insupportable, and without considering any of the factors that the board was required to consider); In the Matter of Daniel D. Weston, Investment Company Act Release No. 19754 (Sept. 30, 1993) (same); In the Matter of Brewster B. Gallup, Investment Company Act Release No. 20267 (May 3, 1994); and In the Matter of William P. Hartl and Eric P. Lipman, Investment Company Act Release No. 19840 (Nov. 8, 1993).

### C. Trading Limits on Individual Foreign Securities

We also have been asked to address the valuation of certain foreign securities that are subject to trading limits, or "collars," on the exchanges or markets on which they primarily trade. Certain foreign securities exchanges have mechanisms in place that confine any one day's price movement in an individual security to a pre-determined range, based on that day's opening price. The mechanisms prevent the price for that security from moving outside of two, pre-determined prices ("limit down" and "limit up") on any given day. These limitations may effectively end trading in a security on a given day because they restrict the price of the security from rising or falling beyond the limit up or limit down price.<sup>26</sup> The collars could prevent a security from trading for days or even weeks.

Under these circumstances, we believe that funds must determine the fair values of their portfolio securities if the limit up or limit down prices of those securities have been reached, and no trading has taken place at those prices. We believe that the fact that trading has not yet resumed and that no two-sided market exists demonstrates that market quotations are not readily available. If trading has taken place at the limit down or limit up price, funds should consider whether market quotations are readily available for those securities by evaluating, among other things, the frequency of those trades and other factors that may call into question the validity and reliability of the prices at which those trades occurred.<sup>27</sup>

## D. The Inappropriate Use of Fair Values when Market Quotations are Readily Available

We also wish to set forth our views on the obligation of funds to value their portfolio securities for which market quotations are readily available. In such circumstances, funds are not permitted to ignore these quotations and fair value price the securities. This would not be consistent with a fund's obligation under the 1940 Act and could result in an incorrect NAV.

<sup>27</sup> See ASR No. 118, supra n. 4.

<sup>&</sup>lt;sup>26</sup> For example, if the foreign issuer released a report announcing poor financial results, the price of the issuer's securities might fall to the limit down price. If buyers believed that the limit down price did not reflect the security's market value, *i.e.*, that price was still too high, trading in that security would effectively end for the day. On the following day, trading in the security would open at the previous day's limit down price. If that price was still too high to attract buyers, the price would then drop to that day's limit down price. This scenario would be repeated until each day's incremental change allowed the price to fall to a level at which buyers would return to the market and normal trading could resume.

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We believe that funds must exercise reasonable diligence to obtain market quotations for their portfolio securities before they may properly conclude that market quotations are not readily available. If, for example, a fund obtains market quotations for a portfolio security from one source and determines that they are unreliable, the fund should diligently seek to obtain market quotations from other sources, such as other dealers or other pricing services, before concluding that market quotations are not readily available.

We hope that this letter will assist funds and their directors to fulfill their valuation-related responsibilities under the 1940 Act. We would appreciate your sharing this letter with your members. If you have any questions, please contact me, Elizabeth Osterman, Evan Geldzahler, or Lily Chiu, at (202) 942-0660.

Very truly yours,

Douglas Acterias

Douglas Scheidt Associate Director and Chief Counsel

Attachment

Exhibit 1

### EXAMPLE: FAIR VALUE PRICING

The following example illustrates how fair value pricing can safeguard long-term mutual fund investors. It is based entirely on hypothetical facts and does not take any fees into account. All numbers have been rounded off.

Assume that two different foreign-stock mutual funds – Fund A and Fund B – both own securities that are traded primarily on the same Asian foreign exchange. Both funds generally use closing market prices to value their portfolio securities, but Fund B determines the fair value of its portfolio securities if a significant event that would affect the value of those securities occurs after the close of the foreign exchange but before its NAV calculation. Each fund has total assets of \$50 million, with 5 million shares outstanding and an NAV of \$10 per share.

# Day 1: Foreign market declines and investors buy fund shares

On Day 1, the Asian market closes (at 3:00 a.m. Eastern Time) significantly lower, causing the value of the securities held by both funds to decrease approximately 10 percent. During Day 1 in the United States, trading in other instruments (such as financial futures, depositary receipts, exchange-traded funds, and closed-end country funds) indicates a countervailing increase in value of approximately 10 percent, which strongly suggests that stock prices in the Asian market, when it opens, will increase to the same level as before the previous day's decrease. Knowing this, investors buy \$10 million worth of shares of each fund to try to take advantage of potentially undervalued fund shares. At the end of Day 1, Fund A, using the share prices at the close of the Asian market, calculates its NAV at \$9 per share. This is the price at which the investors buy shares of the fund. Fund B's NAV remains at \$10 per share because, using fair value pricing, Fund B took into account the likely increase in share prices in the Asian market by evaluating the trading in other instruments.

# Day 2: Foreign market recovers and investors redeem their shares

On Day 2, the Asian market rebounds to equal its original level before Day 1. The market closes on Day 2 at this level. The valuation of the securities in Fund A, using closing market prices, increases and offsets the losses from the previous day. The valuation of the securities in Fund B remains the same as it was at the end of Day 1.

# Result: Investors profit at expense of long-term investors in Fund A

If the investors who bought fund shares on Day 1 redeem their shares on Day 2, the investors who bought shares of Fund A (which used closing market prices) have a profit of \$911,110, which reflects their purchase of undervalued fund shares at \$9 per share on Day 1. This profit is at the expense of long-term investors in Fund A, whose share value is reduced by \$0.18 per share (even though the value of the fund's underlying assets is unchanged). This \$0.18 represents profits taken by the short-term, redeeming investors. By contrast, the investors who bought shares of Fund B (which used fair value pricing) break even, because the value at which they redeem their shares on Day 2, \$10 per share, is the same as the value at which they bought the shares on Day 1. The share value of long-term investors of Fund B also remains the same, and there is no loss to these investors.

The chart below illustrates this hypothetical example:

	Beginning	<u>Day 1</u>	Day 2	After Redemption By Investors
Fund A Closing Market Prices Total Assets Fund Shares Net Asset Value <sup>5</sup> Profit taken by invest Loss to long-term inv	\$50 million 5 million <b>\$10/share</b> fors estors	\$45 million <sup>1</sup> 5 million <b>\$9/share</b>	\$60 million <sup>2</sup> 6.11 million <sup>4</sup> <b>\$9.82/share</b>	\$49.09 million <sup>3</sup> 5 million <b>\$9.82/share</b> <b>\$911,110<sup>6</sup></b> <b>\$911,110</b>
<u>Fund B</u> <u>Fair Value Pricing</u> Total Assets Fund Shares Net Asset Value Profit taken by invess Loss to long-term inv	\$50 million 5 million <b>\$10/share</b> tors vestors	\$50 million <sup>7</sup> 5 million <b>\$10/share</b>	\$60 million <sup>8</sup> 6 million <sup>10</sup> <b>\$10/share</b>	\$50 million <sup>9</sup> 5 million <b>\$10/share 0</b> <b>0</b>

<sup>1</sup> Total assets (\$50 million) minus decrease in value of approximately 10 percent of securities held by the fund (\$5 million).

<sup>2</sup> Day 1 total assets (\$45 million) plus increase in value of approximately 10 percent of securities held by the fund (\$5 million) plus amount invested by investors (\$10 million).

Day 2 total assets (\$60 million) minus amount of assets redeemed by investors (\$10.91 million = 1.11 million shares invested at \$9.82 per share).

<sup>4</sup> Day 1 fund shares outstanding (5 million) plus shares issued to investors (1.11 million = \$10 million divided by \$9 per share).

 $^{5}$  NAV = total assets divided by number of fund shares.

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<sup>6</sup> Beginning total assets (\$50 million) minus total assets after redemption by investors (\$49.09 million).

<sup>7</sup> Total assets (\$50 million) minus decrease in value of approximately 10 percent of securities held by the fund (\$5 million) plus likely increase in value of approximately 10 percent of securities held by the fund under fair value pricing (\$5 million).

Day 1 total assets (\$50 million) plus amount invested by investors (\$10 million).

<sup>9</sup> Day 2 total assets (\$60 million) minus amount of assets redeemed by investors (\$10 million = 1 million shares invested at \$10 per share).

<sup>10</sup> Day 1 fund shares outstanding (5 million) plus shares issued to investors (1 million = 10 million divided by 10 per share).