Benchmarking Insights
PwC’s asset management perspectives and analysis

PwC’s Asset Management Benchmarking Study for Traditional Asset Managers

Spring 2014
Dear clients and friends,

PwC's asset management practice is delighted to publish the results of our Traditional Asset Management benchmarking survey designed to gather, analyze, and share information about key industry trends and metrics. In the fall of 2013, we gathered data covering industry practices related to fund boards and governance, business resource models, product development, NAV calculation, valuation, corporate action processing, financial reporting, shareholder transaction processing and tax compliance. This document represents the summarization of that data and includes key takeaways by area to assist you with your review.

The need for such information is clear and present. While 2013 was a successful year for many asset management firms with assets under management eclipsing pre-crisis levels for some, asset management firms continue to face a challenging environment amidst pressure from the competition, regulators and investors.

To help asset managers respond effectively to these demands, PwC conducted this survey to explore trends that would help asset management executives and management teams benchmark their practices against the asset management industry as a whole. We hope that you find our the results and analysis helpful.

Yours sincerely,

PwC
# Table of contents

**Section 1**  Benchmarking overview  4

**Section 2**  Fund oversight  7

**Section 3**  Fund accounting and valuation  13

**Section 4**  Fund reporting  25

**Section 5**  Shareholder transactions  31

**Section 6**  Tax filing and distribution  35
Section 1

Benchmarking overview
Benchmarking highlights and objectives

Objective
In the fall of 2013, PwC conducted interviews, and collected and analyzed data from the top Traditional Asset Managers with the objective of identifying and analyzing key trends and industry metrics. While not every fund complex participated, we obtained significant coverage with respect to the largest players and believe that the data contained herein is representative of the industry. PwC is a leader working with companies in the Asset Management industry and this document leverages that leading position to provide you with key insights and analysis.
Benchmarking highlights and objectives (cont’d)

**Scope**

- The study was limited to 1940-Act US funds.
- The charts depict the profile of the managers included in our survey. Generally, the largest firms participated in the survey and we obtained 80% coverage across the top 20 firms as measured by AUM. Note that not every participant responded to all areas of the survey.

**Comparison of strategies profiled to the industry average**

<table>
<thead>
<tr>
<th>Managers profiled</th>
<th>Industry *</th>
</tr>
</thead>
<tbody>
<tr>
<td>60%</td>
<td>50%</td>
</tr>
<tr>
<td>17%</td>
<td>23%</td>
</tr>
<tr>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td>16%</td>
<td>19%</td>
</tr>
</tbody>
</table>

Section 2  
Fund oversight

“The pace of change affecting the boardroom has never been greater. Changing views on board composition, increased engagement from stakeholders, calls for more transparency into governance practices, and an active regulatory and legislative environment are accelerating.”

John Griffin  
Asset Management Assurance Partner
Summary of findings – Fund oversight

Governance
• Fund Boards utilize a number of subcommittees to fulfill their responsibilities. Of particular note, nearly all respondents held audit committee meetings on a quarterly basis, and over 60% held valuation committee meetings on at least a quarterly basis.
• Fund board non-interested directors come from varied backgrounds, with most having a business background as opposed to academics. For those with a business background, half tended to be from the financial services industry versus other industries according to the respondents.

Business resourcing models
• Over 70% of respondents had at least one fund accounting and administration function insourced. The function that was most commonly insourced was tax, and the function most commonly outsourced was NAV calculation.

Product development
• Over half of respondents indicated that operations and technology are engaged in the new product development process prior to board approval.
• The average time to launch a fund in 2012 was 149 days. The most common challenges cited related to delays in fund launches were resources, funding, and servicing capabilities.

Results summary

<table>
<thead>
<tr>
<th>Business resourcing models</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Most commonly retained in-house function</td>
<td>Tax distributions</td>
</tr>
<tr>
<td>Most commonly outsourced function</td>
<td>Fund accounting</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product development</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>% of respondents with net fund launches</td>
<td>59%</td>
</tr>
<tr>
<td>% of respondents with net fund closures</td>
<td>29%</td>
</tr>
<tr>
<td>% of respondents that were net neutral</td>
<td>12%</td>
</tr>
<tr>
<td>Average launch cycle time</td>
<td>149 days</td>
</tr>
</tbody>
</table>
Committee meeting frequency

Key takeaways

- Fund Boards employ various sub-committees to best utilize the skillsets of the board members and fulfill their responsibilities efficiently. The chart to the right indicates the various sub-committees in place across the participant group and their respective meeting frequency.

- Of particular interest is the frequency of Audit Committee meetings, with 92% of respondents conducting meetings on at least a quarterly basis.

- Fund Boards have also become increasingly focused on valuation, with 63% of respondents conducting Valuation Committee meetings on at least a quarterly basis.
Composition and management style

Average board composition

- Representative from the advisor: 17.8%
- Legal advisors: 4.3%
- Consultants: 1.3%
- Others: 1.3%
- Non-interested directors (academics): 10.9%
- Non-interested directors (financial backgrounds): 30.2%
- Non-associated directors: 34.2%

Board management style

- Detailed management of all decisions: 10%
- High-level oversight: 90%

Key takeaway

- Highly effective boards include a mix of directors with the requisite skill set, experience, and expertise to fulfill their oversight role. Accordingly, general industry/business and financial backgrounds are highly sought after for fund boards.
Business resourcing models

Key takeaways

• The function most commonly supported by an in-house model was tax distributions.
• The function most commonly outsourced to a third-party administrator was NAV calculation.

Distribution of sourcing models by function

<table>
<thead>
<tr>
<th>Function</th>
<th>Fully outsourced</th>
<th>Fully insourced</th>
<th>Hybrid</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAV calculation</td>
<td>35%</td>
<td>65%</td>
<td></td>
</tr>
<tr>
<td>Financial statement preparation</td>
<td>53%</td>
<td>47%</td>
<td></td>
</tr>
<tr>
<td>Tax filings</td>
<td>41.2%</td>
<td>17.6%</td>
<td>41.2%</td>
</tr>
<tr>
<td>Tax distribution calculations</td>
<td>71%</td>
<td>29%</td>
<td></td>
</tr>
<tr>
<td>Shareholder transactions (TA)</td>
<td>19%</td>
<td>50%</td>
<td>31%</td>
</tr>
<tr>
<td>Corporate actions processing</td>
<td>47%</td>
<td>47.1%</td>
<td>5.9%</td>
</tr>
</tbody>
</table>

Note: Managers with hybrid models have some functions outsourced while keeping some functions in-house.

Fully outsourced: managers that used a third-party administrator for all 40-Act fund accounting and administration functions. In-house team performed oversight only.

Fully insourced: managers that performed all 40-Act fund accounting and administration functions with employees from in-house functions. No third-party administrator was used for 40-Act funds.

Hybrid: managers with at least one function outsourced to a third-party and one function supported in-house using employees.
Time to launch a new fund

Average days needed to launch a new fund

- 29% of respondents were able to launch a new fund on average in 100 days or less, and 18% of respondents reported an average of over 200 days.
- Over 53% of respondents indicated that the time to launch a new fund typically takes between 101-200 days.

What are some of the top reasons for delays in fund launches

- Resource/funding/capability: 50%
- Timing of internal/external approvals: 42%
- Product complexity: 33%
- Lack of familiarity with strategy or product type: 17%

Note: Multiple responses were permitted
“A well designed valuation function needs to have the appropriate controls and oversight in place given the impact on the funds and the various external and internally entities involved in the process. Responsibility for valuation extends all the way from the accountant to the valuation committee and ultimately the fund board.”

Frank Serravalli
Financial instruments, Structured Products and Real Estate Partner
Summary of findings – Fund accounting and valuation

Valuation and security pricing

- Most participants have established pricing or valuation committees that are responsible for making the final decision on pricing variances.
- Most participants review stale pricing on a weekly basis.
- 60% of the managers indicated they do not need to issue a pricing challenge to switch between approved pricing sources.
- 80% of managers indicated they won 50% or more of their pricing challenges in 2012.

NAV calculation

- NAV errors: Our analysis indicated that 98% of the variance in the number of NAV errors per incident could be explained by (1) the average number of days an incident went undetected; (2) the total number of share classes; and (3) the total number of funds.

Corporate action processing

- During our qualitative interviews, we determined the following reasons were associated with higher corporate action errors:
  - Election interpreted incorrectly;
  - Manual processing error;
  - Revision of corporate action terms; or
  - Late notification of corporate action by custodian.

Results summary

<table>
<thead>
<tr>
<th>NAV calculation</th>
<th>99.63%</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAV accuracy</td>
<td></td>
</tr>
<tr>
<td>Valuation and security pricing</td>
<td>2.7 errors per 1M securities</td>
</tr>
<tr>
<td>Pricing errors per million securities priced</td>
<td></td>
</tr>
<tr>
<td>Corporate action processing</td>
<td>4 errors</td>
</tr>
<tr>
<td>Total corporate action errors</td>
<td></td>
</tr>
</tbody>
</table>
Pricing and valuation levels

CUSIPs by valuation level (averages)

Key takeaways

- The average participant classified 70% of the assets held in 40-Act funds as level 2 securities. Level 2 securities represented the most commonly used valuation level.

- There was some positive correlation between the number of unique CUSIPs and the total US 40-Act AUM managed by each participant, indicating that firms with more AUM held more unique CUSIPs on average.

CUSIPs by pricing sources

Do you use any third-party valuation models to price securities in your funds?

- Yes: 25%
- No: 75%

PwC
Broker quotes

Classification of broker quotes in the ASC 820 fair value hierarchy

Securities priced using broker quotes – percentage of quotes from multiple sources

Key takeaways

- Respondents indicated that for 63% of securities priced by a broker, only one quote is received.
- 6% of managers indicated they typically receive broker quotes on T+1 (day after the NAV is struck).
- Of those managers receiving multiple quotes, 83% of managers indicated they take an average of the sources.
Valuation and security pricing controls

How often do you review stale pricing?

- Daily: 18%
- Twice weekly: 5%
- Weekly: 72%
- Twice monthly: 5%

What types of controls are in place for pricing?

- High standard of authorization required for price overrides: 100% Yes, 0% No
- Sampling methodologies: 59% Yes, 41% No
- Multiple levels of QA pre and post production: 94% Yes, 6% No
- Unchanged price reviews: 100% Yes, 0% No
- Review to market trade data: 100% Yes, 0% No
- Reconciliation of primary and secondary vendor: 100% Yes, 0% No
Valuation governance model

Who is making the day-to-day decisions on what to do with the pricing variances?

- Pricing oversight group: 47%
- Portfolio manager/trading desk: 24%
- Fund accounting supervisor/manager: 35%

Managers were allowed to provide more than one response.

How long has the current model been in place?

- 1 -5 years: 18%
- 5 - 10 years: 35%
- More than 10 years: 47%

Who is highest point of escalation on decisions related to pricing variances?

- Pricing / Valuation Committee: 88%
- Chief Compliance Officer: 6%
- Portfolio Manager / Trading Desk: 6%

Managers were allowed to provide more than one response.
Valuation approaches and ASU 2011-4 disclosures

Client utilizes third-party pricing exception to disclosures about significant inputs:

Client includes the weighted average input disclosure in their 2011-4 table:

Which of the following best describes the disclosure of multiple valuation methodologies for a given investment in the 2011-04 table?

- Discloses methods and weights in table
- Discloses methods, but not weights in table
- Discloses methods, but not in table
- N/A – Client does not use multiple valuation methods

Valuation approaches used

- Market approach: 69%
- Recent transaction: 54%
- Income approach: 46%
- Expected recovery: 38%
- Appraisal value: 23%
- Consensus pricing: 23%
- Adjusted net assets: 15%
- Option pricing model: 8%
Most common inputs disclosed in 2011-4 table

When using the market approach, the most common inputs were:

<table>
<thead>
<tr>
<th>Input</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>EV/EBITDA multiple</td>
<td>38%</td>
</tr>
<tr>
<td>Price/NAV</td>
<td>38%</td>
</tr>
<tr>
<td>Broker quote</td>
<td>38%</td>
</tr>
<tr>
<td>Discount rates</td>
<td>31%</td>
</tr>
<tr>
<td>Revenue multiple</td>
<td>15%</td>
</tr>
</tbody>
</table>

When using the income approach, the most common inputs were:

<table>
<thead>
<tr>
<th>Input</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discount rates</td>
<td>38%</td>
</tr>
<tr>
<td>Weighted average cost of capital</td>
<td>15%</td>
</tr>
<tr>
<td>Yield</td>
<td>15%</td>
</tr>
<tr>
<td>Others</td>
<td>8%</td>
</tr>
</tbody>
</table>

Key takeaways

- It is not surprising that the most common inputs under the market approach for Registered Investment Companies are EV/EBITDA multiple, Broker Quote and Price/NAV, considering the profile of Level 3 securities held in these types of funds (e.g. private placements, broker-priced fixed income securities). As a comparison, in our Alternatives Benchmarking Study, the most common inputs under the Market Approach were EV/EBITDA Multiple and Discount Rate for Hedge Funds, and EV/EBITDA Multiple and Revenue Multiple for Private Equity.

- For the Income approach, Discount Rate and WACC were the most common inputs across Traditional Asset Management, Hedge Funds and Private Equity.
**NAV incidents: Common sources NAV errors**

NAV incidents are defined as the primary reason, or the root cause, behind one or more NAV errors.

During our interviews with participants, we found:

- **Pricing errors** were the root cause of NAV errors most often.
- Other causes for NAV errors were **corporate action, accounting, trade settlement errors**.

**Most common reasons for NAV incidents**

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pricing Errors (Manual)</td>
<td>94%</td>
</tr>
<tr>
<td>Trading and Transaction Errors</td>
<td>71%</td>
</tr>
<tr>
<td>Accounting Entry Errors</td>
<td>29%</td>
</tr>
<tr>
<td>Corporate Action Errors</td>
<td>18%</td>
</tr>
</tbody>
</table>

Note: The graph above depicts the top reasons cited for NAV incidents.

**Key takeaways**

**Quality and control measures**

- Managers consistently reported having the following daily reviews in place to prevent NAV errors:
  - NAV movement relative to a benchmark and/or the market
  - NAV component evaluation and root cause analysis
  - Share class movement within the fund
- In addition, monthly/quarterly scorecards would routinely track and measure:
  - NAV accuracy and timeliness metrics
  - Reconciliations to custodian
  - Defaulted securities
  - Aged receivables and invoice payments
- In addition, a special committee reviews summaries of NAV errors and restatements, including actions taken, how the fund has been made whole, control improvements, etc.
Drivers of NAV incidents and NAV errors

We found that the time it took to detect an NAV incident was the single biggest factor in the number of NAV errors that a firm generated.

1. **Detection time:** There were differences in the average time it took each participant to identify a NAV incident.
   - Longer detection times had a profound impact on NAV error rates. We found that for each day an incident went outstanding, it caused ~3.8 additional NAV errors.

2. **Share classes per fund:** A secondary reason was the average number of share classes per fund that a manager had. This factor only impacted a manager negatively when their ratio of share classes to fund was greater than 4.

**Other observations**
- Factors such as security pricing sources, (e.g., broker quotes, vendor priced, etc.) and security valuation levels, (e.g., level 1, 2, and 3) did not show any significance with respect to the differences in NAV error rates.
- Similarly, factors based on size, strategy mix, and number of funds failed to generate a significant relationship with NAV errors per incident.
**Are NAV errors most often attributed to the manager or to the administration function?**

**NAV error attribution**

<table>
<thead>
<tr>
<th></th>
<th>Admin responsible for &gt;50% of NAV errors</th>
<th>Manager responsible for &gt;50% of NAV errors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insource model</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Outsource model</td>
<td>80%</td>
<td>20%</td>
</tr>
</tbody>
</table>

- NAV errors were most often attributed to administrators (or equivalent functions for in-house models).
- There was no statistically significant difference in NAV accuracy and error rates between the in-source and outsource models or single vs. multiple administration functions.

**Key takeaways**

- Reductions in incident detection times will have the largest impact on NAV error rates.
- Firms predisposed to higher levels of NAV errors per incident should consider risk-based control measures, to the extent these do not exist already.
- Firms might also consider:
  - Back-testing and NAV guard railing measures to more quickly identify incidents.
  - Conducting root cause analysis on NAV incidents (to the extent this isn’t done currently) to determine if the incidents have common attributes that can be better detected with new or enhanced controls, (e.g., security types or asset classes with disproportionately higher levels of manual pricing).
  - For quicker identification of NAV errors, consider instituting a risk based approach to proactively monitor incidents, particularly those which occur most often, to prevent prolonged periods of non-detection.
Corporate action processing

Is your corporate actions processing done in-house or outsourced?

- In-house: 53%
- Outsourced: 40%
- Hybrid: 7%

Do you track interested securities?

- Yes: 62%
- No: 38%

Number of sources used to identify corporate actions and confirm details

- 1 source: 46%
- 2 sources: 46%
- More than 2 sources: 8%

Top sources for corporate action errors

- Manual processing error: 53%
- Election interpreted incorrectly by custodian: 73%
- Revision of CA terms: 20%
- Late notification of CA by custodian: 20%

Participants were allowed to provide more than one response.
Section 4

Fund reporting
Summary of findings – Fund reporting

Processes and efficiency

- Financial statement cycle time varied widely across managers.
- Our analysis indicated that 79% of the variance in financial statement cycle time between managers was attributable to:
  - **Workload balancing**: as measured by the average number of holdings in the largest fiscal year-end period close.
  - **Complexity**: as measured by the percentage of total securities that were fair valued.
  - **Process efficiency**: as measured by the number of iterative drafts.

Financial statement disclosure

- Some of the challenges from a financial reporting standpoint stem from new and emerging disclosure requirements. Many asset managers establish thresholds that dictate which disclosures are most meaningful for a given fund strategy. In the slides that follow, we have included the most common areas where thresholds are applied, and the average thresholds utilized.

<table>
<thead>
<tr>
<th>Processes and efficiency (averages)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial reporting cycle time</td>
</tr>
<tr>
<td>Workload balancing (holdings in the largest fiscal year-end close)</td>
</tr>
<tr>
<td>Complexity (% of securities that are fair valued)</td>
</tr>
<tr>
<td>Process efficiency (number of iterative drafts)</td>
</tr>
</tbody>
</table>
### Financial reporting cycle times

**What causes participants to have different financial reporting cycle times?**

We found three reasons why firms had different financial reporting cycle times – Workload balancing, complexity, and process efficiency. *Financial statement cycle time ends at receipt of an audit opinion.*

### Results

**Processes and efficiency (average)**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Average result</th>
<th>Cycle time impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workload balance</td>
<td>18k holdings</td>
<td>2.0 days</td>
</tr>
<tr>
<td>Complexity</td>
<td>0.46%</td>
<td>3.5 days</td>
</tr>
<tr>
<td>Process efficiency</td>
<td>4 drafts</td>
<td>12.0 days</td>
</tr>
</tbody>
</table>

Our analysis indicated that 79% of the variance in financial statement cycle time was attributable to:

### Key takeaways

Firms with cycle times on the high end should consider:

- *The feasibility of moving funds to different FYE dates in order to institute a more equitable distribution of workload.*
- *The impact on financial reporting of adding new funds launched to FYE periods already considered to be high volume.*
- *Instituting process efficiency initiatives, such as increased automation, to reduce the number of iterative drafts.*
Financial reporting cycle times

Our qualitative interviews identified the drivers impacting financial statement timing, most of which are related to the causes identified in the quantitative analysis.

Top factors that impact the timing of financial statement preparation ... ... and their alignment to contributing factors

<table>
<thead>
<tr>
<th>Factor</th>
<th>Percentage</th>
<th>Description</th>
<th>Workload balancing</th>
<th>Complexity</th>
<th>Process inefficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timing &amp; Volume of Auditor Comments</td>
<td>71%</td>
<td></td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>New / Enhanced Disclosures</td>
<td>59%</td>
<td></td>
<td></td>
<td>YES</td>
<td></td>
</tr>
<tr>
<td>Timing &amp; Volume of Internal Comments</td>
<td>47%</td>
<td></td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Tax Adjustments</td>
<td>41%</td>
<td></td>
<td>YES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complexity (Instruments, Transactions)</td>
<td>35%</td>
<td></td>
<td></td>
<td>YES</td>
<td></td>
</tr>
<tr>
<td>GAAP and Regulatory Changes</td>
<td>29%</td>
<td></td>
<td>External</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Availability &amp; Integrity Issues</td>
<td>24%</td>
<td></td>
<td></td>
<td>YES</td>
<td></td>
</tr>
<tr>
<td>Late Changes</td>
<td>24%</td>
<td></td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Confirmation Process Timing / Issues</td>
<td>24%</td>
<td></td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
</tbody>
</table>

Note: Graph above depicts the most common reasons cited
## Risk disclosures

**Threshold as a percentage of net assets used in making the following risk disclosures**

<table>
<thead>
<tr>
<th>Risk disclosure</th>
<th>0%</th>
<th>1-5%</th>
<th>&gt;5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment concentration</td>
<td>44%</td>
<td>56%</td>
<td></td>
</tr>
<tr>
<td>International investments</td>
<td>67%</td>
<td>33%</td>
<td></td>
</tr>
<tr>
<td>Securities lending</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TBAs</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restricted securities</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shareholder concentration</td>
<td>50%</td>
<td>10%</td>
<td>40%</td>
</tr>
<tr>
<td>Municipal bonds</td>
<td>89%</td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>Fixed income/structured securities</td>
<td>78%</td>
<td>22%</td>
<td></td>
</tr>
<tr>
<td>Interest rate risk</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market risk</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sector risk</td>
<td>78%</td>
<td>22%</td>
<td></td>
</tr>
<tr>
<td>Investment strategy</td>
<td>89%</td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>Fund of funds</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short sales</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exchange rate</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Counterparty</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investment in loans</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Threshold as a percentage of net assets used for disclosures relating to**

<table>
<thead>
<tr>
<th>Other disclosures</th>
<th>0%</th>
<th>0-1%</th>
<th>1-5%</th>
<th>&gt;5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description (i.e. impact) of book to tax differences</td>
<td>67%</td>
<td>33%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-October losses</td>
<td>80%</td>
<td>20%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital loss carry-forward</td>
<td>80%</td>
<td>10%</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Level 3 roll-forward</td>
<td>18%</td>
<td>73%</td>
<td>9%</td>
<td></td>
</tr>
<tr>
<td>Beneficial ownership</td>
<td>18%</td>
<td>27%</td>
<td>55%</td>
<td></td>
</tr>
</tbody>
</table>

**Key takeaway**

- The majority of participants applied a threshold of less than 1% for their risk disclosures. Note that firms that do not make the disclosures as a matter of policy are not reflected in the table as no threshold would be in place.
**Derivative activity disclosures**

**Benchmark used to calculate disclosure of volume of derivative activity**

- Unrealized balanced: 25%
- Number of derivative contracts: 33%
- Notional amounts: 42%

**How is volume of derivative activity calculated for disclosure**

- Avg of end-of-month balances: 33%
- Avg of end-of-quarter balances: 33%
- End-of-year balance: 9%
- Other: 25%

**Evaluation of payment/performance risk**

- Credit ratings: 73%
- Credit spreads: 55%
- Value: 45%
- Other: 9%

**Key takeaway**

- There is a wide distribution of methods to comply with the requirement to provide readers of financial statements with information on a fund’s use of derivatives. The most popular methods used by managers are the average of end-of-month end and the average of end-of-quarter amounts. Collectively, these accounted for two-thirds of the methodologies applied by managers.
Section 5

Shareholder transactions

“Straight through processing is no longer an option – it’s a necessity. The ability to process transactions across multiple entities and organizations in a timely and effective manner is critical for mutual funds.”

Kevin O’Connell
Asset Management Risk Assurance Partner
Summary of findings – Shareholder transactions

• The industry holds itself to a high standard regarding the accuracy of shareholder transaction processing – the average rating was 97.5%.

• The industry has also achieved high-levels of straight through processing (STP) rates with shareholder transaction processing, as the average STP rate was 93.3%.
Transfer agency operating models

Do you outsource the TA function or perform internally?

- Outsource: 50%
- Insource: 19%
- Hybrid*: 31%

*Indicates record keeping is performed by the TA service provider while the firm maintains an in-house call center

Do you use multiple TAs?

- Yes: 29%
- No: 71%

What are the top reasons for using multiple TAs?

- Support different products: 50%
- Support different segments: 25%
- From Legacy Acquisitions: 25%
**Shareholder transactions – Errors and controls**

**What are the top reasons for transaction errors?**

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>New account opening</td>
<td>7%</td>
</tr>
<tr>
<td>Non-standard transactions</td>
<td>27%</td>
</tr>
<tr>
<td>Manual transaction errors</td>
<td>100%</td>
</tr>
</tbody>
</table>

Managers were allowed to provide more than one response

**Do any particular work types generate higher error rates?**

<table>
<thead>
<tr>
<th>Work Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>New account opening</td>
<td>60%</td>
</tr>
<tr>
<td>Recurring transactions failures</td>
<td>40%</td>
</tr>
<tr>
<td>Manual transaction errors</td>
<td>30%</td>
</tr>
</tbody>
</table>

Managers were allowed to provide more than one response

*Examples of non-standard transactions include: distributions due to death, distribution reinvestment into another fund, distribution reinvestment into another family member's account, etc.*

**What types of controls do you have in place for shareholder transaction processing?**

<table>
<thead>
<tr>
<th>Control</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tiered quality assurance reviews (4-eyes)</td>
<td>79%</td>
</tr>
<tr>
<td>Back-end reporting</td>
<td>71%</td>
</tr>
<tr>
<td>Dual blind entry</td>
<td>43%</td>
</tr>
<tr>
<td>Call monitoring</td>
<td>50%</td>
</tr>
<tr>
<td>Sampling</td>
<td>50%</td>
</tr>
<tr>
<td>Pre-approvals of transactions/reports</td>
<td>29%</td>
</tr>
</tbody>
</table>

Managers were allowed to provide more than one response
“Tax function effectiveness continues to be a hot topic in client conversations. The level of automation in place, the type of operational model employed, and the unique challenges facing mutual funds are all items that should be considered in designing a more efficient tax function.”

Shawn Baker
US Asset Management Traditional Funds Tax Leader
Summary of findings – Tax filing and distribution

- Most firms used a hybrid sourcing model for their tax function. Firms were classified as one of the following: 1) insource, 2) limited outsourcing, 3) mostly outsourced, 4) fully outsourced.

- Tax operating models that were partially automated produced an average of ~53 additional tax work items per tax FTE versus operating models that are based on manual processing environments.

- The average number of tax items per tax FTE was 102.8 for partially automated models and 49.4 for manual models.

- Insourcing firms with higher total volumes of tax items appear to have invested in automation to achieve improved productivity.

- Firms with fully outsourced models appear to benefit from a combination of higher automation at the service provider and less complexity relative to firms which utilize mostly outsourced models.

- Firms with limited outsourced models still retained the majority of their tax functions in-house. As such, their degree of automation was determined by the in-house capabilities in place.
**Process automation**

*Why does the size of the tax organization differ between participants?*

- Work output per tax FTE was correlated with the degree of automation in the tax function.
- We found that firms with manual processing environments needed an additional 7 FTEs (on average) in their tax function, when holding volumes constant.
- We found that firms with manual processing environments produced 34 fewer filings & work items per tax FTE as compared to firms with partially automated models.

We assessed the degree of automation for each tax filing and determined an overall process automation score for the overall tax function.

<table>
<thead>
<tr>
<th>Filing area</th>
<th>Manual</th>
<th>Partially automated</th>
<th>Mostly automated</th>
<th>Fully automated</th>
</tr>
</thead>
<tbody>
<tr>
<td>1120-RIC Filing</td>
<td>69%</td>
<td>8%</td>
<td>0%</td>
<td>23%</td>
</tr>
<tr>
<td>Shareholder Tax</td>
<td>62%</td>
<td>23%</td>
<td>0%</td>
<td>15%</td>
</tr>
<tr>
<td>8613 Filing</td>
<td>62%</td>
<td>15%</td>
<td>0%</td>
<td>23%</td>
</tr>
<tr>
<td>Distribution Calculation</td>
<td>46%</td>
<td>46%</td>
<td>8%</td>
<td>0%</td>
</tr>
<tr>
<td>Tax Qualification Test</td>
<td>8%</td>
<td>38%</td>
<td>0%</td>
<td>54%</td>
</tr>
</tbody>
</table>

**Key takeaways**

- We found that the degree of automation in the tax function explained 67% of the variability in the overall size of the participants’ tax organizations.
- Firms with higher levels of output per tax FTE had higher levels of automation in their tax function, allowing them to be less headcount dependent.
Qualification and equalization

Who performs qualification testing?

- Both: 8%
- Insourced: 69%
- Outsourced: 23%

If performed internally, what function is running the test?

- Compliance: 30%
- Tax: 60%
- Fund accounting: 10%

Who reviews qualification testing?

- Tax: 77%
- Compliance: 23%

Is the review performed by a different functional group?

- Different function: 38%
- Same function: 62%
Qualification and equalization (cont’d)

What are the top reasons resulting in a qualification test failure?

- Market appreciation: 2
- Other diversification issues: 2
- Complexity of the instruments: 1

Participants were allowed to provide more than one response.

Do you use tax equalization in the ordinary course to manage distribution amounts?

- Yes: 46%
- No: 54%

Have you obtained Private Letter Rulings?

- Yes: 31%
- No: 69%

Have you ever entered into a closing agreement with the IRS?

- Yes: 38%
- No: 62%

Have you ever changed accounting method?

- Yes: 33%
- No: 67%
Redistributions and return of capital

What are the top reasons for errors that led to redistributions or return of capital (ROC)?

- Foreign Exchange: 5
- Intentional distributions: 4
- Late dividends or corporate actions (occur after distribution made): 3
- Tax related issues: 3

Participants were allowed to provide more than one response.

Top reasons for errors in which funds failed to distribute at least 98% & 98.2%?

- Unexpected dividends and late corporate actions: 9
- Intentional payment of excise tax: 6
- Estimated incorrectly: 4

Participants were allowed to provide more than one response.
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