Real Return Recommendations
February 23–24, 2017

Presenters: Tom Masthay, Eddie Schultz, Rachel Cleak, Mark White (Albourne)
**Agenda**

I. Timeline & Allocation Objectives
II. Manager Search Process
III. Portfolio Construction
IV. Manager Selection & Recommendation
V. Requested Board Action

*Names used in this presentation are a shortened version that is used for ease of communication purposes throughout this document. The formal recommendations to the Board on the last page of this presentation reflect the full legal names of the investments.*
Section I

TIMELINE & ALLOCATION OBJECTIVES
Dec 2015
• TMRS staff presented and Board Approves the 2016 Real Return Pacing Plan recommending a commitment of up to $800 million of net new real return exposure.
• Board approved 3 real return managers totaling $800 million in new real return investments. Managers selected include two diversified liquid real return strategies and an energy focused private investment mandate.

1H 2016
• Board approves 3 private real return managers totaling $450 million in commitments. Managers selected include Global Infrastructure, Minerals and Mining, and Agricultural based mandates.

2H 2016
• Board approves Liquid Real Return Rebalancing transaction, increasing exposures to two existing liquid real return managers by $775 million cumulatively, and a net increase in real return asset class exposure by $450 million.
• Board approves 2017 pacing plan with up to $1 billion in real return investments for 2017

Q1 2017
• Staff & Albourne recommend 2 mandates: i) Actis, an emerging markets power infrastructure focused manager; and ii) Sprott, a manager focused on senior lending to mining companies.
Real Assets

Common Opportunity Sets among Real Estate & Real Return

- Real Estate & Real Return share the commonality that they represent opportunities across the entire capital structure (i.e. senior debt to leveraged equity positions all exist as opportunities).

- Each Asset Class represents sectors of the economy – real estate may be considered its own sector but draws on the economic drivers of real estate utilizing businesses. Real return taps into a variety of sectors, including energy, agriculture, mining, infrastructure, timber, etc.

- The IPS includes both benchmarks and long term goals of “CPI plus” for each asset class (CPI + 500 for real estate; CPI + 400 for real return).

Real Assets require decisions at the institutional level regarding relative value of sectors and opportunity sets. Our investment processes are designed to make these relative value decisions.
Section II

MANAGER SEARCH PROCESS
Manager Search Process

Manager Screen & Universe Analysis Scoring

<table>
<thead>
<tr>
<th>Scoring Category</th>
<th>Score / Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manager Screen</td>
<td></td>
</tr>
<tr>
<td>- Is vehicle consistent w/ TMRS' objectives?</td>
<td>Yes - Take Meeting; No - Don't Take Meeting</td>
</tr>
<tr>
<td>Manager Analysis</td>
<td></td>
</tr>
<tr>
<td>- Does vehicle have adequate capacity and timeline?</td>
<td>1 - Advance; 2 - Stop Research</td>
</tr>
<tr>
<td>- PPPPT* Preliminary Review</td>
<td></td>
</tr>
</tbody>
</table>

Semi-Finalist Scoring Matrix

<table>
<thead>
<tr>
<th>Scoring Category</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finalist Manager Review</td>
<td></td>
</tr>
<tr>
<td>- Questionnaire Review</td>
<td></td>
</tr>
<tr>
<td>- Detailed PPPPT* Review</td>
<td></td>
</tr>
<tr>
<td>- In-depth Manager Qualifications Review</td>
<td></td>
</tr>
<tr>
<td>- Compliance with TMRS IPS</td>
<td></td>
</tr>
<tr>
<td>- Verification of Research, References, Further Market Research</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A - Prioritize for Final Due Diligence</td>
</tr>
<tr>
<td></td>
<td>B - Perform More Research</td>
</tr>
<tr>
<td></td>
<td>C - Stop Research / Manager not Selected</td>
</tr>
</tbody>
</table>

Final Due Diligence Scoring Matrix*

<table>
<thead>
<tr>
<th>Scoring Category</th>
<th>Possible Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>People (Firm &amp; Team)</td>
<td>0 - 40 points</td>
</tr>
<tr>
<td>Philosophy (Attractiveness of Opportunity / Portfolio Fit)</td>
<td>0 - 40 points</td>
</tr>
<tr>
<td>Process (Sourcing, Underwriting and Managing)</td>
<td>0 - 40 points</td>
</tr>
<tr>
<td>Performance (Historical / Expected)</td>
<td>0 - 40 points</td>
</tr>
<tr>
<td>Terms (Fees, Liquidity, etc.)</td>
<td>0 - 20 points</td>
</tr>
<tr>
<td>Total</td>
<td>100†</td>
</tr>
</tbody>
</table>

†Selected managers standardized to a score of 100 to allow comparability among selected managers.
Manager Search Process

- 136 Real Return Manager Meetings
- 85 distinct Real Return Managers
- 7 on-site manager meetings (8.2% of 85)
- 2 manager recommendations (2.3% of 85)
## Final Selected Managers Scoring Matrix

### Final Due Diligence Scoring Matrix Aggregated Results

<table>
<thead>
<tr>
<th>Recommended Manager/Fund</th>
<th>Selected Manager</th>
<th>Comp 1</th>
<th>Comp 2</th>
<th>Comp 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actis</td>
<td>100.0</td>
<td>91.0</td>
<td>83</td>
<td>n/a</td>
</tr>
<tr>
<td>Sprott</td>
<td>96.0</td>
<td>100.0**</td>
<td>96.0</td>
<td>83.5</td>
</tr>
</tbody>
</table>

**Existing TMRS Manager**
Section III

PORTFOLIO CONSTRUCTION
Manager Mapping

Ex-Ante Risk Return Expectations: The Traditional Model

Higher (E)Return

Newly Proposed Mandates: February 2017

Brookfield (Private Infrastructure)
Nuveen (Traded Infrastructure, REITS)
Cohen & Steers (Diversified Public Markets)
Orion (Private Mining)
AMERRA (Private Agriculture)
Magnetar (Private Energy)
Sprott (Private Mining/Lending)
Actis (Private Infrastructure/Emerging Market Power)
Colchester (GILBS)

The traditional Efficient Frontier emerges when mapping on long-term risk-return assumptions.
Manager Mapping based on Portfolio Objectives
Absolute Return vs. Inflation Protection Expectations

Value of Optionality emerges when looking at it through lens of portfolio objectives.

- Absolute Return has been emphasized but various mandates are designed to respond to specific inflationary regimes.

*This figure is substantially similar to what appeared in the 2016 annual asset class review as presented to the TMRS Board on June 23, 2016*
Higher levels of implementation and more diversity has been introduced to the TMRS portfolio over the course of the last 15 months.
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Section IV

MANAGER SELECTION & RECOMMENDATION
Actis LLP is one of the leading pan-emerging market private equity firms with $6.3 billion of funds under management across the private equity, real estate and energy sectors. In 2004, Actis LLP spun out of the CDC Group plc. The CDC Group was founded in 1948 by the UK government to invest in developing countries.

Actis will invest in power generation and distribution in growth markets across Latin America, Africa and Asia. Actis will use their expertise within international power markets and with regulators to create scalable platforms where power generation and distribution assets can be aggregated for sale into larger regional energy companies or on occasion sold through public offering.

### Top Candidate Characteristics – Actis

**$75 million Recommendation**

<table>
<thead>
<tr>
<th>Category</th>
<th>Actis</th>
<th>Power Comp 1</th>
<th>Power Comp 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>People</td>
<td>24</td>
<td>20</td>
<td>21</td>
</tr>
<tr>
<td>Philosophy</td>
<td>25</td>
<td>24</td>
<td>20</td>
</tr>
<tr>
<td>Process</td>
<td>20</td>
<td>18</td>
<td>17</td>
</tr>
<tr>
<td>Performance</td>
<td>19</td>
<td>17</td>
<td>12</td>
</tr>
<tr>
<td>Terms</td>
<td>12</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td><strong>Total Points</strong></td>
<td><strong>100</strong></td>
<td><strong>91</strong></td>
<td><strong>83</strong></td>
</tr>
</tbody>
</table>

*Scoring matrices utilize difference calibrations depending on the strategy being utilized.
†Selected managers standardized to a score of 100 to allow comparability among selected managers.*
Top Candidate Characteristics – Actis
$75 million Recommendation

**Investment Case**
- Longstanding presence and network in target markets.
- Focus on existing end user demand rather than having to underwrite growth.
- Heavy focus on risk mitigation through long term Power Purchase Agreements (PPA’s), US dollar denominated exposures, and employing insurance where necessary.
- Seeded platform focus which mitigates operational risk.

**Issues to Consider**
- Time & Scale to exit
- Emerging market risk
- Environmental, Social, & Governance ("ESG") Risk
**Top Candidate Characteristics – Sprott**

*$80 million Recommendation*

<table>
<thead>
<tr>
<th>Category</th>
<th>Orion*</th>
<th>Sprott</th>
<th>Comp. Mgr. 2</th>
<th>Comp. Mgr. 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>People</td>
<td>25</td>
<td>22.5</td>
<td>20</td>
<td>22.5</td>
</tr>
<tr>
<td>Philosophy</td>
<td>25</td>
<td>22</td>
<td>23.5</td>
<td>21</td>
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<tr>
<td>Process</td>
<td>25</td>
<td>24</td>
<td>25</td>
<td>22.5</td>
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<tr>
<td>Performance</td>
<td>15</td>
<td>15</td>
<td>17.5</td>
<td>10</td>
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<tr>
<td>Terms</td>
<td>10</td>
<td>12.5</td>
<td>10</td>
<td>7.5</td>
</tr>
<tr>
<td><strong>Total Points</strong></td>
<td><strong>100</strong></td>
<td><strong>96</strong></td>
<td><strong>96</strong></td>
<td><strong>83.5</strong></td>
</tr>
</tbody>
</table>

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†Selected managers standardized to a score of 100 to allow comparability among selected managers.

Sprott Investment Corporation is a Toronto, Canada based publically traded company focused on resource investing in both public and private markets.

The Fund is seeking to lend at targeted gross IRRs in excess of 15% to: (a) companies with producing or near term production assets; (b) special situations and opportunities where there is the potential for the Fund to assist a borrower in advancing its development project to the next stage; and (c) companies requiring short- to mid-term project financing.
Top Candidate Characteristics – Sprott
$80 million Recommendation

Investment Case
- Stable & Cohesive team with substantial technical resources available.
- Risk mitigated approach to lending with high levels of cash income and strong upside potential through equity participations.
- Active loan management, limited credit loss history, and senior approach to lending.
- Complementary to existing TMRS real return portfolio mining sector exposure.

Issues to Consider
- First Institutional Fund
- Complicated Corporate Structure
- Canadian Dollar loan originations
Section v

REQUESTED BOARD ACTION
Approval of Recommendation

- TMRS Staff and Albourne recommend that the Board of Trustees approve the selection of the following funds as detailed in the Board Communication Memo:

**Recommendations:**
- Actis Energy Fund IV LP $75 million
- Sprott Resource Lending Fund LP $80 million
DISCLOSURES

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