Real Estate Recommendations
October 25, 2017

Presenters: Tom Masthay, Eddie Schultz, Rachel Cleak, Mike Murphy (Courtland)
I. Executive Summary
II. Portfolio Construction
III. Manager Selection & Recommendation
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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
EXECUTIVE SUMMARY
Manager Recommendations

Executive Summary

<table>
<thead>
<tr>
<th>Recommended Manager/Fund</th>
<th>Strategy Classification</th>
<th>Target Return</th>
<th>Recommended Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>TPG</td>
<td>Opportunistic Real Estate</td>
<td>15%+ Net IRR</td>
<td>Up to $100 million</td>
</tr>
<tr>
<td>Madison</td>
<td>Value-Add Real Estate</td>
<td>11-14% Net IRR</td>
<td>Up to $100 million</td>
</tr>
</tbody>
</table>

**Total Approximate Recommended Investments/Commitments**: Up to $200 million
2017 YTD Real Estate Search Processes have cumulated $300 million of closed or recommended investments, in line with the $200–400 million pacing model goal for the year.
Multi-Year Pacing Model
Expectations vs. Experience

Pacing Model: Expected Real Estate Market Value
(By Dollar Value [left axis]; by % of Total Portfolio [right axis])

Experience: Below Expectation Level of Real Estate Capital Deployed (8.4% of portfolio as of June 30, 2017)

Net Core Commitments (left axis)
Non-Core Commitments (left axis)
Strategic Target for Real Estate (right axis)
Assumed Return 75th Percentile (right axis)
Assumed Return 6.75% Deterministic (right axis)

Explanations for Shortfall
• Strong Public Equity Returns
• Slower than Expected Capital Deployment
• High Levels of Capital Returned
• Credit/Substitution Facility Usage

Actions Taken
• Pacing Model Reassessment
• Credit/Substitution Facility Research
• Increased Allocation Activity

*Chart originally appeared in March 2016 Board Materials
Section II

PORTFOLIO CONSTRUCTION
The TMRS portfolio is tracking within policy statement goals for strategy allocation levels.

2017 activity levels represent roughly 20% of TMRS’ total non-core real estate allocation, in-line with pacing model goals.
Proposed investments are expected to increase east coast exposure and European Exposure.

*Source: Courtland Partners; as of Dec. 31, 2016*
Proposed investments are not expected to meaningfully shift property type weightings.

*Source: Courtland Partners; as of Dec. 31, 2016*
Section III

MANAGER SELECTION & RECOMMENDATION
TPG Real Estate Fund III is focused on opportunistic platform real estate investments in the United States and Europe. The team leverages their private equity expertise as well as real estate knowledge to source companies and real estate portfolios that are either a value investment or have some operational turnaround opportunity. The fund will implement a buy and build strategy, acquiring assets in inefficient and fragmented markets, while utilizing its deeply experienced team to improve operations at the company level.

TPG is targeting a $3 billion fundraise to pursue opportunistic returns in the 15%+ net IRR 1.7x net MOIC (multiple of invested capital) range.

Top Candidate Characteristics – TPG
$100 million Recommendation (re-up)

TPG Process Summary

Date of First TMRS Meeting
3/03/15 (call)

Dates of Subsequent Meetings
4 additional 2015 meetings
3 2016 Meetings (Austin)
  1/16/17 (London)
  10/6/17 (NYC)

Dates of Diligence Advancement
‘B’ Rating – 3/08/17
‘A’ Rating – 8/04/17

Date of Consultant Report
October 2016

Legal Negotiation Initiated
Not yet started.

Comparable Strategies Reviewed
53 (Opportunistic RE)
32 (European RE)
4 (Platform Strategies)
Top Candidate Characteristics – TPG

$100 million Recommendation (re-up)

Investment Case

- **Platform/Bi-Continental Approach** – Invests at scale and creates opportunity to add value through buy and build method. It is also among only a few products that invests in both the US and Europe.

- **Experienced & Background Diverse Team** – The key partners have history in building businesses and also have deep industry experience in real estate investment.

- **Exceptional performance** – Fund II is performing in the top quartile amongst its peers and returned substantial capital to date.

### Issues to Consider

- Scalable Acquisition Model Dependent Strategy
- Terms
- Global Macro Environment Uncertainty

#### TPG Pro-Forma Return Bridge

<table>
<thead>
<tr>
<th>Component</th>
<th>Multiple of Money</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial cost basis</td>
<td>0.00</td>
</tr>
<tr>
<td>Add on cost</td>
<td>0.50</td>
</tr>
<tr>
<td>Total Basis</td>
<td>1.00</td>
</tr>
<tr>
<td>Income Growth</td>
<td>1.50</td>
</tr>
<tr>
<td>Platform / Valuation Premium</td>
<td>2.00</td>
</tr>
<tr>
<td>Gross</td>
<td>2.50</td>
</tr>
<tr>
<td>Total Fees</td>
<td></td>
</tr>
<tr>
<td>Net</td>
<td></td>
</tr>
</tbody>
</table>
Top Candidate Characteristics – Madison

$100 million Recommendation

Madison Realty Capital is a vertically integrated real estate debt investment firm with in–house property management, leasing and design, development and construction expertise. Madison Realty Debt Fund IV intends to originate and acquire commercial real estate loans, real estate mezzanine loans, preferred equity investments and acquire liens that are mostly backed by real estate located in the tri–state New York City area.

Madison is currently raising a $1 billion private real estate fund that targets 11–14% net IRR returns and a 1.4–1.7x MOIC.

Madison Realty Process Summary

<table>
<thead>
<tr>
<th>Date of First TMRS Meeting</th>
<th>1H 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dates of Subsequent Meetings</td>
<td>1/17/2014 (Call)</td>
</tr>
<tr>
<td></td>
<td>7/28/14 (Austin)</td>
</tr>
<tr>
<td></td>
<td>7/28/15 (Austin)</td>
</tr>
<tr>
<td></td>
<td>8/11/16 (Austin)</td>
</tr>
<tr>
<td></td>
<td>12/12/16 (Austin)</td>
</tr>
<tr>
<td></td>
<td>2/21/17 (NYC)</td>
</tr>
<tr>
<td></td>
<td>7/20/17 (NYC)</td>
</tr>
<tr>
<td>Dates of Diligence Advancement</td>
<td>‘B’ Rating – 12/16/16</td>
</tr>
<tr>
<td></td>
<td>‘A’ Rating – 8/04/17</td>
</tr>
<tr>
<td>Date of Consultant Report</td>
<td>October, 2017</td>
</tr>
<tr>
<td>Legal Negotiation Initiated</td>
<td>Not yet started. October 2017 (est.)</td>
</tr>
<tr>
<td>Comparable Strategies Reviewed</td>
<td>56 (Real Estate Debt)</td>
</tr>
</tbody>
</table>
Top Candidate Characteristics – Madison
$100 million Recommendation

Investment Case
- **Sourcing and performance are cycle robust** – The Manager sources through both loan origination and acquisition which has created a consistent return profile over time.
- **Fund structure encourages recycling of capital** – Madison employs a fund structure which helps them fully utilize the fund investment period by recycling capital.
- **Background of Investment Team** – The team is both vertically integrated and entrepreneurial.

Issues to Consider
- Concentrated Geographic Footprint
- Manager Ambition
- Contract Intensive Business Model/Use of Leverage
Section IV

REQUESTED BOARD ACTION
Approval of Recommendation

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

  Recommendations:
  - TPG Real Estate Partners III, LP  $100 million
  - Madison Realty Capital Debt Fund IV, LP  $100 million
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