Nebraska Investment Council
Fixed Income Review – Update and Overview of Planned Structure Recommendations

March 2021
Project Timeline

- The Fixed Income Blank Sheet review began in October 2019. JoLynn and Chris asked 13 investment managers to participate and share their ideas for our fixed income portfolio. Meetings were held with all of the investment managers.

- NIC received the manager’s presentations by January 2020.

- January –September 2020: JoLynn and Chris reviewed the presentations, meetings were held for the managers to present their ideas, and the manager’s final portfolio recommendations were received.

- Follow-up meetings were held with each manager so they could present their solution to the entire NIC staff.

- NIC staff met and discussed each fixed income presentation. The team summarized the key takeaways and outlined several ideas/topics that fit the portfolios.

- Council staff forwarded their thoughts along with the 13 manager submissions to Aon in late October.

- Aon reviewed the manager submissions and drafted discussion materials that included responses to the issues raised by Council staff and a preliminary structure recommendation; materials were reviewed in January 2021.

- A second meeting was organized in February to address follow-up items from January’s discussion; an agreement was reached on a proposed fixed income structure to present to the Council.

- Structure to be previewed (high level) at the March Council meeting; final recommendations to be brought to the June Council meeting, including any adjustments as needed, driven by Council feedback.
Themes from Investment Manager Presentations

- Consider multi-sector / multi-asset credit mandates instead of discreet allocations to HY, Global bonds, etc. for better efficiency in “plus” (return-seeking) fixed income sectors
  - Contemplate adding exposure to CLOs, EMD, ABS, etc.
- Consider increasing fixed income component duration for better downside protection
  - Add a dedicated allocation to Long Duration U.S. Treasuries
- Increase allocation to return-seeking fixed income
  - Reflects a bearish view on U.S. Treasuries / high-quality bonds given current yield levels
- Add a dedicated private market / private credit allocation to increase return potential
- Disaggregate fixed income allocation; move to an objective-based framework
  - Consider moving away from the BB Universal Bond Index, at least for “risk-reducing” fixed income
- Increase usage of active management
The DB Plans target a 30% allocation to fixed income. A breakdown of the exiting fixed income component target structure is provided above:
- Mandate type / sub-asset class components
- Risk-Reducing fixed income vs. Return-Seeking fixed income (Aon classifications)
NIC DB Plans – Proposed Fixed Income Component Structure

- A breakdown of the proposed fixed income component target structure is provided above
  - Mandate type / sub-asset class components
  - Risk-Reducing fixed income vs. Return-Seeking fixed income
### Comparing Current Structure to Proposed – 10 Year Return and Volatility Forecasts* for Fixed Income Component

<table>
<thead>
<tr>
<th>Risk Reducing</th>
<th>Current Exposure (% of Total DB Plan)</th>
<th>Recommended Exposure (% of Total DB Plan)</th>
<th>Annualized Return (10 Year Forecast)</th>
<th>Standard Deviation (10 Year Forecast)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core / Core+ Bonds</td>
<td>20.0%</td>
<td>20.0%</td>
<td>1.2%</td>
<td>4.0%</td>
</tr>
<tr>
<td>Liquid Return-Seeking</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>International (Sovereign)</td>
<td>1.5</td>
<td>--</td>
<td>1.0</td>
<td>10.0</td>
</tr>
<tr>
<td>High Yield Corporate</td>
<td>1.5</td>
<td>--</td>
<td>3.8</td>
<td>12.0</td>
</tr>
<tr>
<td>Bank Loans</td>
<td>5.0</td>
<td>--</td>
<td>4.0</td>
<td>7.0</td>
</tr>
<tr>
<td>Multi-Asset Credit**</td>
<td>--</td>
<td>5.0</td>
<td>4.1</td>
<td>9.2</td>
</tr>
<tr>
<td>Illiquid Return Seeking</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opportunistic***</td>
<td>2.0</td>
<td>1.25</td>
<td>6.5</td>
<td>11.9</td>
</tr>
<tr>
<td>Direct Lending</td>
<td>--</td>
<td>3.75</td>
<td>6.5</td>
<td>16.5</td>
</tr>
<tr>
<td><strong>Total Fixed Income -- Current</strong></td>
<td>30.0%</td>
<td>--</td>
<td>2.3%</td>
<td>4.1%</td>
</tr>
<tr>
<td><strong>Total Fixed Income – Rec.</strong></td>
<td>--</td>
<td>30.0%</td>
<td>2.7%</td>
<td>5.0%</td>
</tr>
</tbody>
</table>

- As shown, the proposed structure increases both forecasted returns and volatility relative to the existing structure.

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*Based on Aon 3Q 2020 CMAs // **Modeled as 1/3 HY, 1/3 Bank Loans, 1/3 EMD// ***Modeled as 50% Multi-asset credit / 50% Distressed Debt. We are modeling the existing target exposure to the PIMCO BRAVO II and Oaktree Real Estate Debt Funds as “Opportunistic.” We would note that these two strategies, as well as any future allocations to “Opportunistic” mandates, are exceedingly difficult to model.
Comparing Current Structure to Proposed – 10 Year Forecasts* for FI Component

<table>
<thead>
<tr>
<th>Component</th>
<th>Long-Term Policy Allocation w/ Current FI Structure</th>
<th>Annualized Return (10 Year Forecast)</th>
<th>Standard Deviation (10 Year Forecast)</th>
<th>Long-Term Policy Allocation w/ Proposed FI Structure</th>
<th>Annualized Return (10 Year Forecast)</th>
<th>Standard Deviation (10 Year Forecast)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Equity</td>
<td>27.0%</td>
<td>6.0%</td>
<td>17.4%</td>
<td>27.0%</td>
<td>6.0%</td>
<td>17.4%</td>
</tr>
<tr>
<td>Non-U.S. Equity</td>
<td>11.5</td>
<td>7.6</td>
<td>20.5</td>
<td>11.5</td>
<td>7.6</td>
<td>20.5</td>
</tr>
<tr>
<td>Global Equity</td>
<td>19.0</td>
<td>6.8</td>
<td>18.5</td>
<td>19.0</td>
<td>6.8</td>
<td>18.5</td>
</tr>
<tr>
<td>Fixed Income</td>
<td>30.0**</td>
<td>2.3**</td>
<td>4.1**</td>
<td>30.0***</td>
<td>2.7***</td>
<td>5.0***</td>
</tr>
<tr>
<td>Private Equity</td>
<td>5.0</td>
<td>8.4</td>
<td>25.0</td>
<td>5.0</td>
<td>8.4</td>
<td>25.0</td>
</tr>
<tr>
<td>Real Estate</td>
<td>7.5</td>
<td>6.0</td>
<td>17.4</td>
<td>7.5</td>
<td>6.0</td>
<td>17.4</td>
</tr>
<tr>
<td>Total Fund</td>
<td>100.0%</td>
<td>5.76%</td>
<td>12.34%</td>
<td>100.0%</td>
<td>5.90%</td>
<td>12.53%</td>
</tr>
</tbody>
</table>

- The proposed fixed income structure would lead to incremental increases in forecasted return and volatility at the Total Fund level
  - There may also be additional implementation benefits associated with the proposed structure that do not show up in capital markets modeling
    - E.g., additional alpha potential, outsourcing the fixed income sub-sector allocation timing decision to active managers, etc.

*Based on Aon 3Q 2020 CMAs /// **Current Fixed Income Structure /// ***Proposed Fixed Income Structure
Comparing Current Structure to Proposed – What Would Change?

1) Fixed income component would be formally sub-divided into “risk-educing” and “return-seeking” sub-components to enhance risk-control and monitoring / enable better performance measurement
   – Return-seeking fixed income component further divided into “liquid return-seeking” and “illiquid return-seeking”

2) 20% “risk-reducing” fixed income component goes from 18.5% core / core+ bonds + half of the 3% Global Agg mandate to 20% core+ bonds
   – Current thinking is for this allocation to be 100% actively managed rather than a mix of active and passive.

3) Discreet “plus sector” mandates – e.g., Global Bond and Bank Loan – would be replaced by multi-sector / multi-asset credit mandate(s)
   – Expanded opportunity set, ability for managers to make relative valuation judgments amongst fixed income sub-asset classes

4) Opportunistic / Illiquid allocation would be expanded and made a permanent part of the fixed income component
   – Recommended structure of the illiquid credit component aligns with what was presented to the Council in 2018
What are Multi-Asset Credit Strategies?

- A Multi Asset Credit (MAC) strategy is a fixed income strategy that seeks to add value by capturing the credit premium across different credit sectors.
  - Credit sectors exhibit different risk and return characteristics. Combining these may result in superior risk/return characteristics while potentially offering reduced volatility per unit of return on the portfolio.
Council Feedback Sought

- Are there any “non-starters” included in the proposed fixed income structure outlined on the previous slides?

- Are there topics that the Council would like to see covered in depth during the June meeting before voting on any recommended changes to the current fixed income structure?
  - Possible examples:
    - Active vs. Passive in fixed income
    - Core vs. Core-plus
    - The case for multi-sector / multi-asset credit mandates vs. single sector “plus” sector mandates
    - Direct Lending
    - Duration / performance expectations in different interest rate environments
    - Other?
Q&A

Q: What percentage of the DB Plan’s fixed income component would be managed by new managers if the proposed structure were to be adopted?
A: New managers would be sought for approximately half of fixed income component assets.

Q: That sounds like a lot of change – is our current structure broken?
A: No, it is not, but we do think it can be improved. A few additional items to mention regarding the amount of change being contemplated:
   – Some of the proposed turnover is not necessarily structure related; there have been a couple of managers that have seen their Aon research rating downgraded in the last 18-24 months; we elected to hold off addressing these issues until the fixed income component review.
   – Not all of this change would be immediate. Any allocation to illiquid fixed income strategies (e.g., Direct Lending) would need to be phased-in over time.
   – The allocations to PIMCO BRAVO II and Oaktree RE Debt have effectively wound down; that targeted allocation would need to be re-deployed irrespective of any restructuring activity.

Q: How much might it cost to transition from the current structure to the proposed structure?
A: This will be dependent on numerous factors and is difficult to estimate. But a ballpark estimate for transactions costs is roughly 30 bps* on the portion of the portfolio that is traded, or roughly 6 bps at the total portfolio level.

Q: What about ongoing costs? Would the new structure be more or less expensive from an investment management fee perspective than the existing structure?
A: Our expectation is that investment management fees would go up. It is difficult to provide an estimate for the amount by which they will go up, but our best guess is fixed income component fees will go up by approximately 10 bps at the fixed income component level, or approximately 3 bps at the total fund level. The increase would be driven by eliminating passive bonds from the risk-reducing fixed income allocation and the introduction of private market credit. We do expect that the increased management fees to be more than offset by increased returns.

*Assumes no in-kind activity and excludes private credit. (Private credit would be funded through drawdown vehicles.)
Q&A (Cont’d)

Q: What about benchmarking?
A: We expect to include benchmarking recommendations as a part of our presentation in June. The biggest contemplated change is formally separating the “risk-reducing” fixed income allocation (i.e., 20% in core-plus bonds) from return-seeking fixed income allocation and establishing separate benchmarks for each component. The recommended benchmark for the risk-reducing fixed income allocation would be the BB Aggregate or Universal Index; the benchmark for the return-seeking fixed income allocation would likely be one of these benchmarks + a premium or a mix of benchmarks that best approximates the underlying market exposure of the allocation.

Q: This material discusses the DB Plans’ fixed income allocation – what about the endowments?
A: We understand that the Council prefers to maintain the existing fixed income structure within the Health Care endowment. Within the General Endowments, we would be inclined to recommend a similar construct as is contemplated in these materials, though it may be worth tilting more toward “return-seeking” fixed income given 1) the General Endowments’ need for yield and 2) their lower allocation to equities. A recommended structure for the General Endowments will be included in our June materials.

Q: It appears the proposed changes increase portfolio risk – would adopting the proposed structure lead to poorer performance in market sell-offs?
A: Yes, most likely; but only at the margin. Our stress testing indicates that total portfolio results would be 30-40 bps worse with the proposed fixed income allocation vs. the current allocation in the most extreme equity market environments. This is the “cost” of a structure that increases average expected returns. We could build a fixed income structure that offered better downside protection vs. the current structure, but the result would be a lower forecasted average return.
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