ACES Conference – Pay For Success

DC Water’s Environmental Impact Bond: Overview, lessons and the implications on PFS

December 7, 2016
Quantified Ventures is organized principally around three verticals, with a focus on matching impact capital to solutions that work.

<table>
<thead>
<tr>
<th>Vertical</th>
<th>Active Transactions</th>
<th>Details</th>
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</thead>
</table>
| Healthcare                     | 10                  | - 10 active transactions  
- Focused on population health, social determinants of health, Medicare, Medicaid and payment reform  
- 40% of current pipeline |
| Environment                    | 5                   | - 5 active transactions  
- Focused on green infrastructure, Ag BMPs and stormwater management  
- 40% of current pipeline |
| Education and Workforce        | 2                   | - 2 active transactions  
- Focused on ed tech, charter schools, K-12 and job placement  
- 20% of current pipeline |

**DC Water green infrastructure pay for success deal closed in Sept 2016**

- Advised, structured DC Water’s Green Infrastructure PFS Project
- Largest PFS project in US ($25 million)
- Fastest PFS transaction closed in US
- Lowest PFS transaction cost in US
- Highly customizable financial structure
- Impact investors (Goldman Sachs, Calvert Foundation) “betting” on outcomes of green infrastructure
Along with 772 communities, DC Water faces a combined sewer overflow (CSO) challenge due to antiquated stormwater infrastructure.
Despite the evidence base behind green infrastructure, we were confronted with the same problem: “What if it doesn’t work?”

I’m a steward of public funds…

…what if it doesn’t work?
Through our touchpoints with key stakeholders, we have heard consistent feedback preventing broader adoption of PFS.

The challenge...

**Investors**
- Not enough deals
- Bespoke transactions
- High transaction costs
- Difficult due diligence

**Government payors**
- Measuring outcomes is hard
- Investor return concerns
- Dis-incentived to innovate
- Lack of legislative frameworks

**Foundations and philanthropy**
- Unclear role
- Balancing evaluation approaches

**Service providers**
- Lack resources and capital to scale
- Lack strong data

We were intentional in structuring DC Water’s impact bond to address these challenges.

The resulting DC Water impact bond was recently recognized by Bond Buyer as an innovative tool for municipal financing.
We structured the DC Water impact bond with real bond characteristics while maintaining a PFS / outcomes-oriented success measure.

<table>
<thead>
<tr>
<th>Tenure</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial flows</td>
<td>$25M principal issued</td>
<td>Interest payments @ 3.43%</td>
<td>$25M principal repaid</td>
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**Core project work (DC Water)**
- Flow meters inserted to develop baseline
- Green infrastructure implemented (i.e., sites identified, interventions constructed)
- Flow meters re-inserted to measure impact
- Evaluation validated to trigger payments

**GI outperforms:**
- Additional $3.3M payment
- Accelerate scale, deployment of GI

**GI as expected:**
- No additional payment
- Continue orig. plan, with confidence

**GI underperforms:**
- $3.3M claw back from investors
- Scale back GI, deploy grey infra
The DC Water transaction helps us solve the challenges in impact investing (especially for environmental) that we have heard to date.

<table>
<thead>
<tr>
<th><strong>Investors</strong></th>
<th><strong>The challenge...</strong></th>
<th><strong>The solution from DC Water EIB...</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Not enough deals</td>
<td>• Replicable structure with &gt;700 communities to go</td>
</tr>
<tr>
<td></td>
<td>• Bespoke transactions</td>
<td>• It’s a bond… with real bond features</td>
</tr>
<tr>
<td></td>
<td>• High transaction costs</td>
<td>• 3 months to transaction close with investors</td>
</tr>
<tr>
<td></td>
<td>• Difficult due diligence</td>
<td>• Technical memo circulated for investors to validate, same process as other asset classes</td>
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<tr>
<td></td>
<td>• Measuring outcomes is hard</td>
<td>• Financed a proxy, with established link to outcome</td>
</tr>
<tr>
<td></td>
<td>• Investor return concerns</td>
<td>• Investors negotiated on bond terms</td>
</tr>
<tr>
<td></td>
<td>• Dis-incentived to innovate</td>
<td>• Implicitly structured as free insurance policy to innovate</td>
</tr>
<tr>
<td></td>
<td>• Lack of legislative frameworks</td>
<td>• No legislation required, but consent decrees can drive demand for EIBs</td>
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<td>• Unclear role</td>
<td>• No role required beyond initial EIB Feasibility Assessment, but demonstrates opportunity they can play to enable fast followers</td>
</tr>
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<td>• Balancing evaluation approaches</td>
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<th><strong>Service providers</strong></th>
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<td></td>
<td>• Lack resources and access to capital to scale</td>
<td>• Competitive market already exists, but firms are waiting for the demand from public sector</td>
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<td>• Lack data infrastructure</td>
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We believe the PFS industry will need to evolve to attract and retain market interest to be truly sustainable

- **PFS 1.0**
  - Philanthropy seeds nonprofits to do deals
  - Academia heavily engaged
  - Little focus on efficiency
  - Focus on high-evidence programs
  - Significant investment in PFS community and awareness building

- **PFS 2.0**
  - True market competition amongst intermediaries who are paid for outcomes, and not by philanthropic subsidies
  - Government lifts not-for-profit requirement for intermediaries
  - Focus on transaction efficiencies and cost reduction
  - Repeatability and scalability
  - Focus on tools and technologies to productize

- **PFS 3.0**
  - Payor outcome rate cards established
  - Federal and State outcome success pools established
  - Intermediary brokerage models
  - Automated transactions