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# HOW IS WATER INFRASTRUCTURE FINANCED?

MARCH 2008  
ARD, INC.

The background of the slide is a vibrant blue with a pattern of light, shimmering ripples, resembling water or a digital fluid effect. The ripples are more pronounced in the center and fade towards the edges.

**INTRODUCTION:  
ALTERNATIVE FINANCIAL  
MECHANISMS**

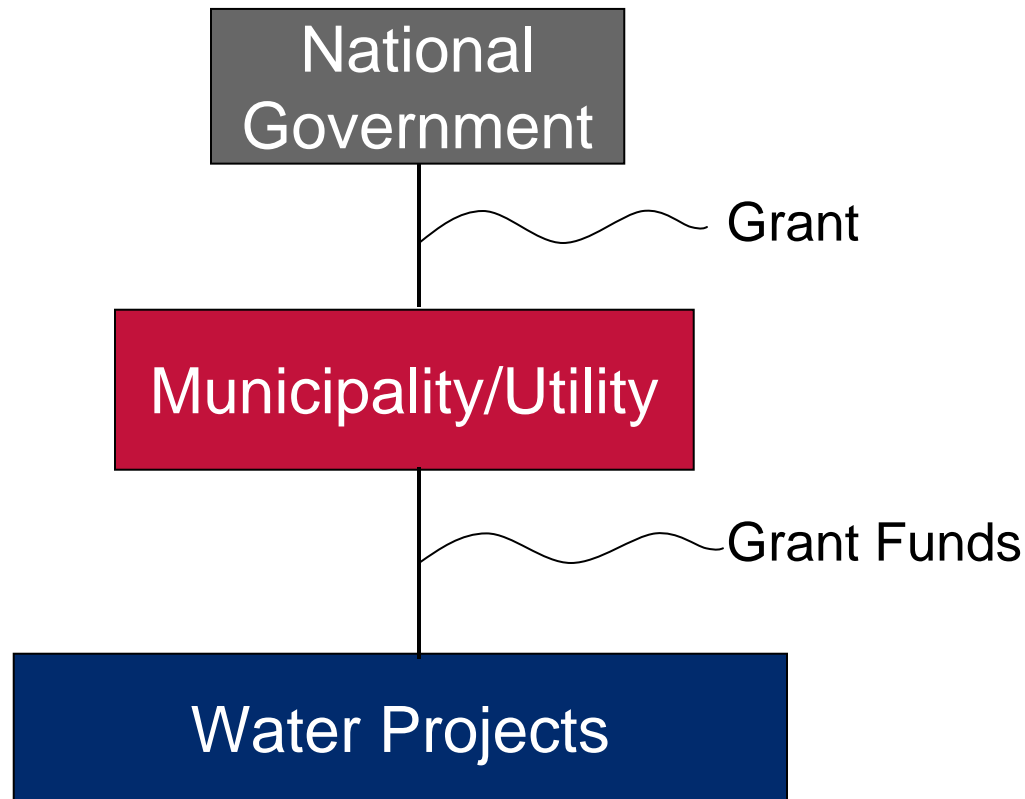
# WATER INFRASTRUCTURE FINANCED IN A VARIETY OF WAYS...

- Traditional
  - Grants,
  - Loans, and
  - Bonds.
- Less Traditional
  - Pooled financing, and
  - Microfinance.

Improving and expanding water infrastructure requires efficiently using all of these methods and more

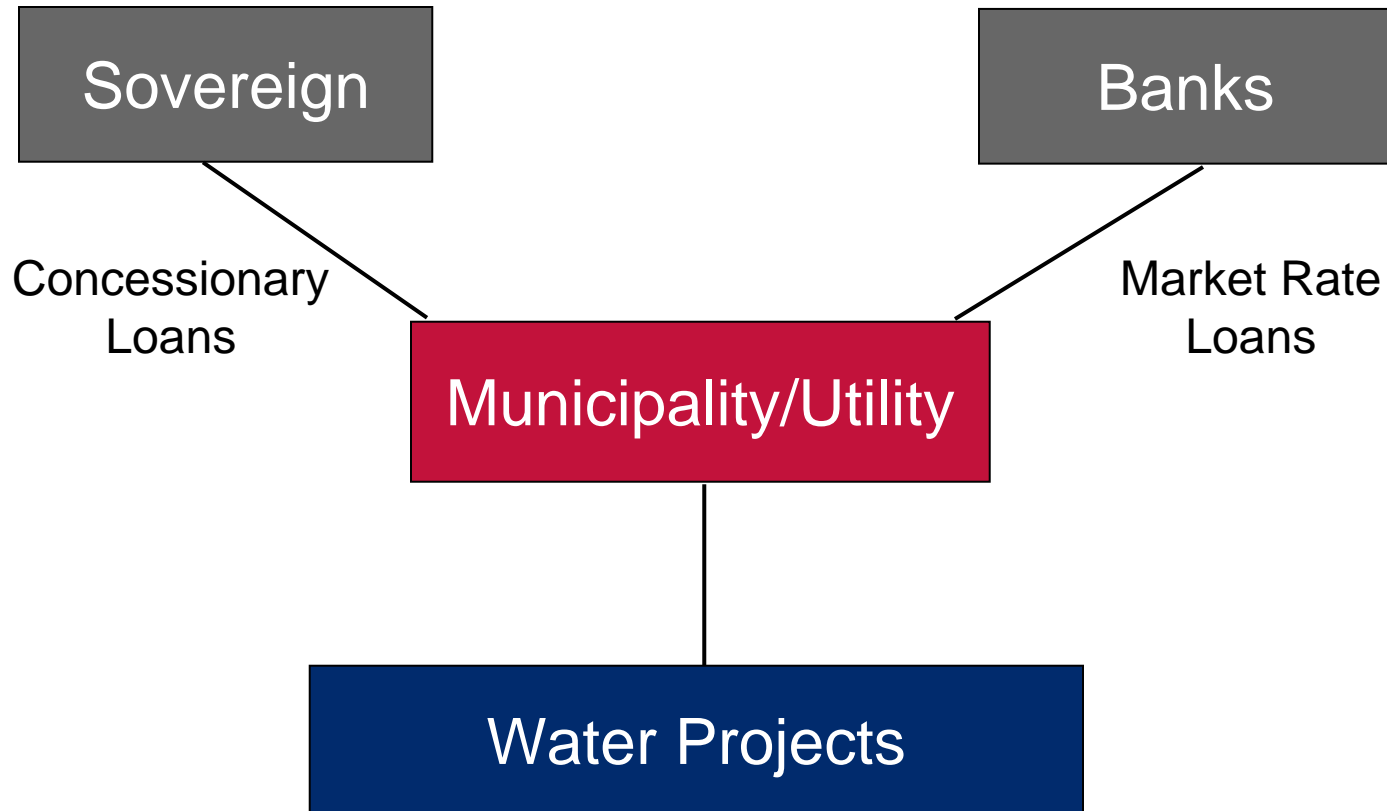
# TRADITIONAL FINANCING—GRANTS

## Grant Financing



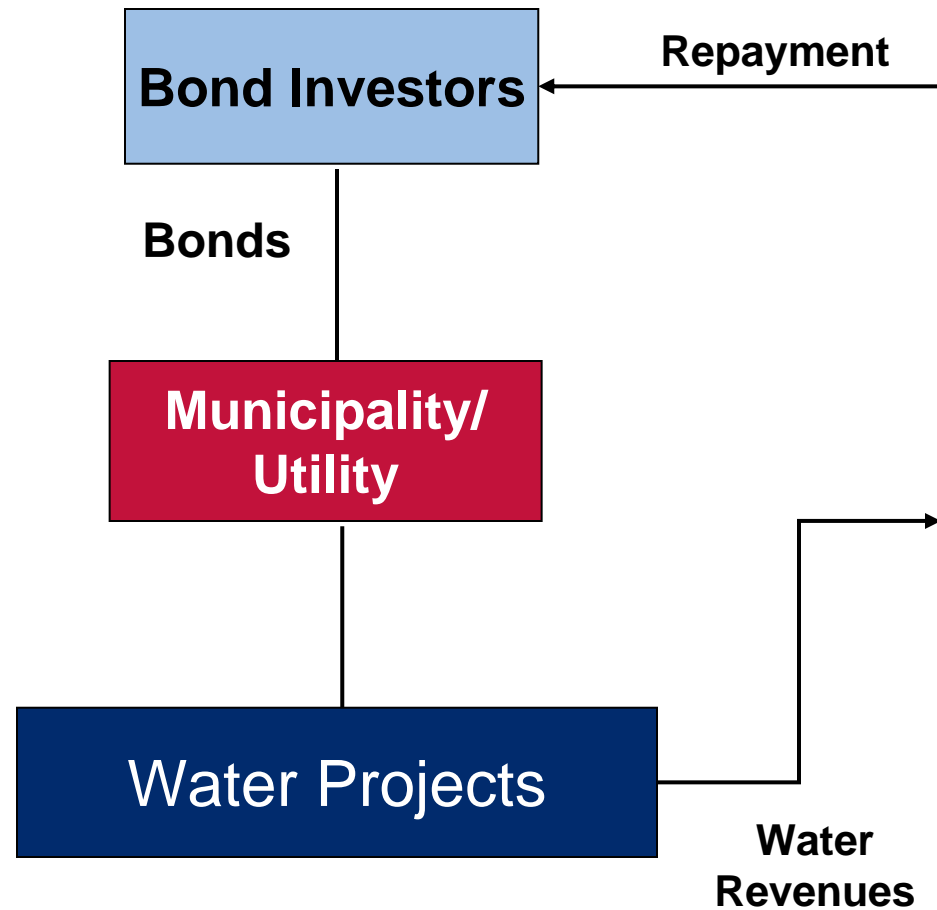
# TRADITIONAL FINANCING—LOANS

## Loan Financing



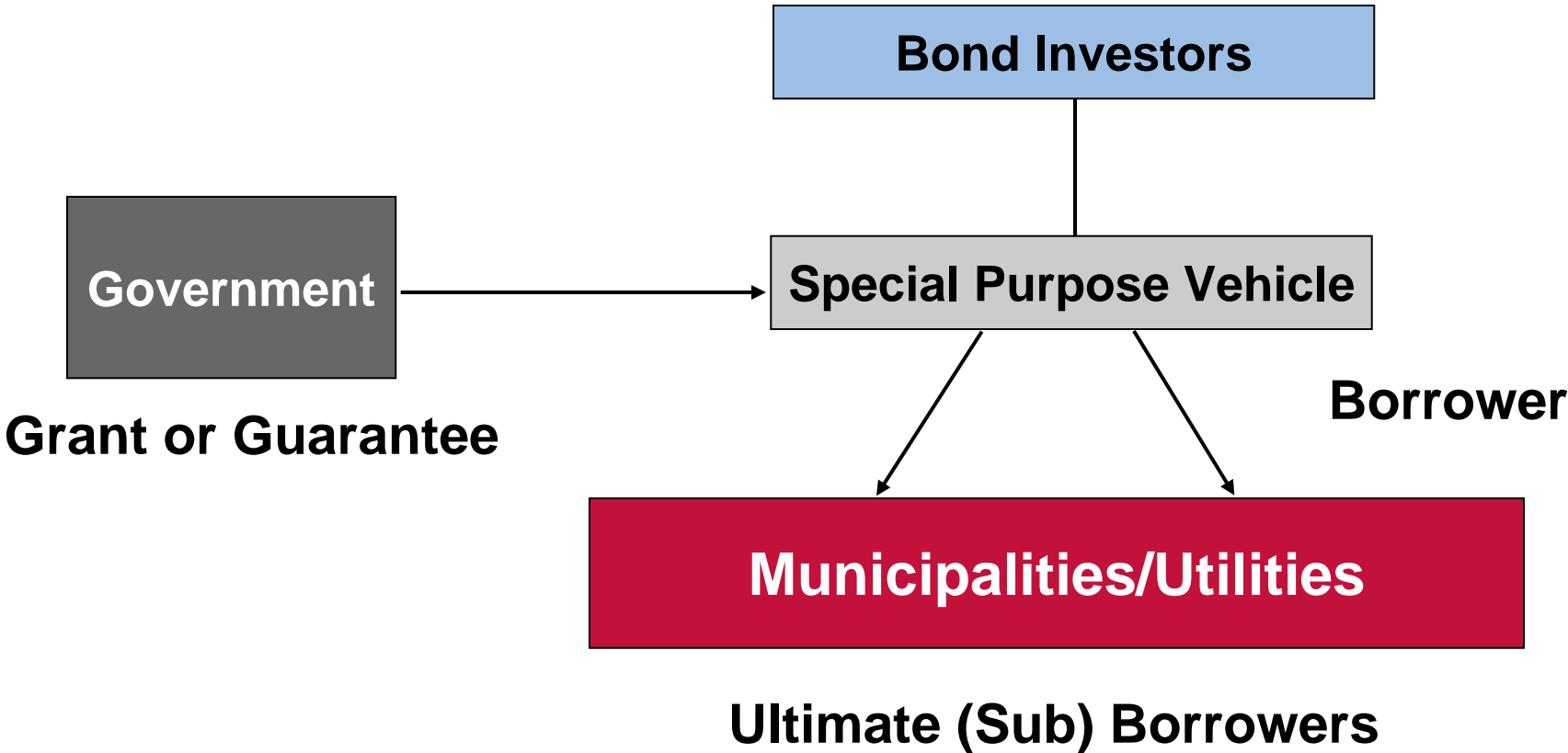
# TRADITIONAL FINANCING—BONDS

## Bond Finance



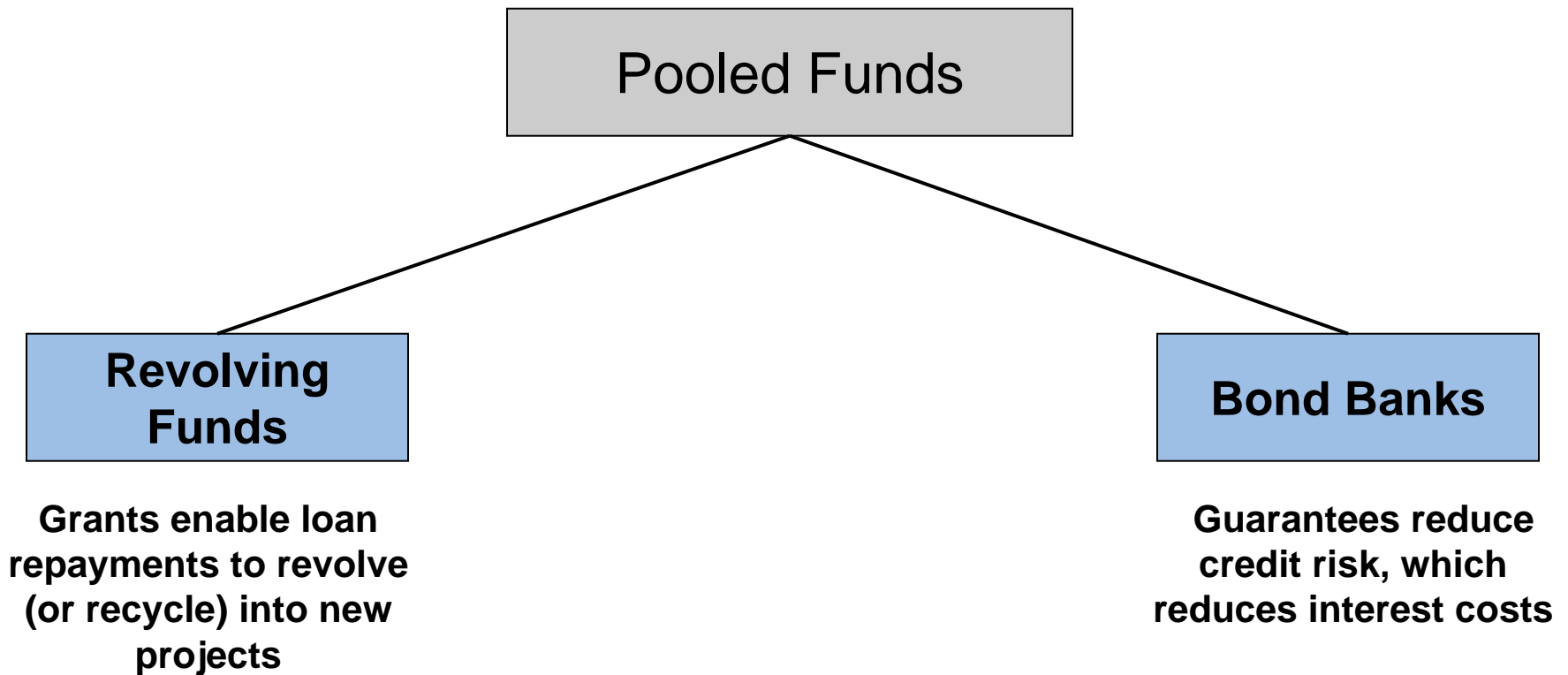
# LESS TRADITIONAL FINANCING—POOLED FINANCE

## Pooled Finance



# LESS TRADITIONAL FINANCING—POOLED FINANCE

There are essentially two types of “Pooled Funds”

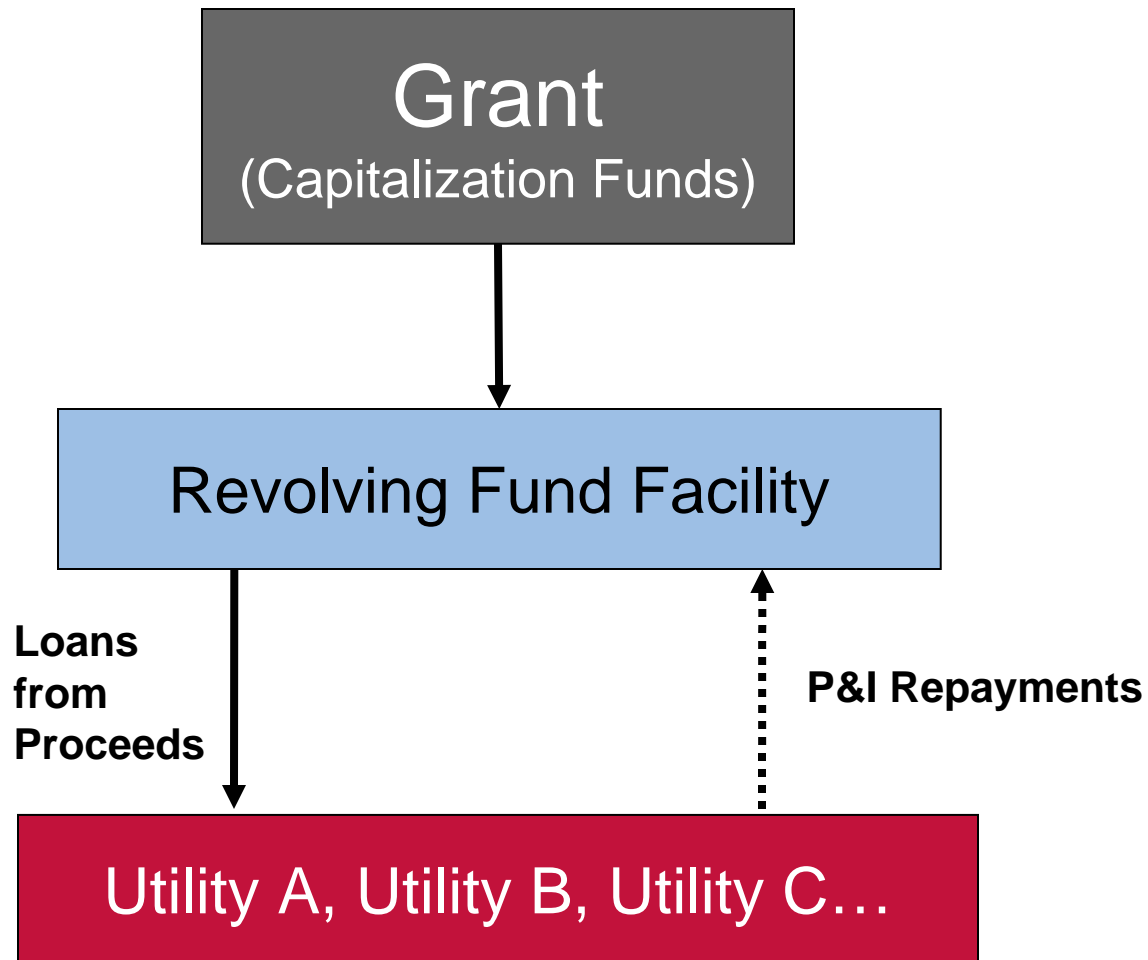




# LESS TRADITIONAL FINANCING—POOLED FINANCE

## REVOLVING FUND: NON-LEVERAGED

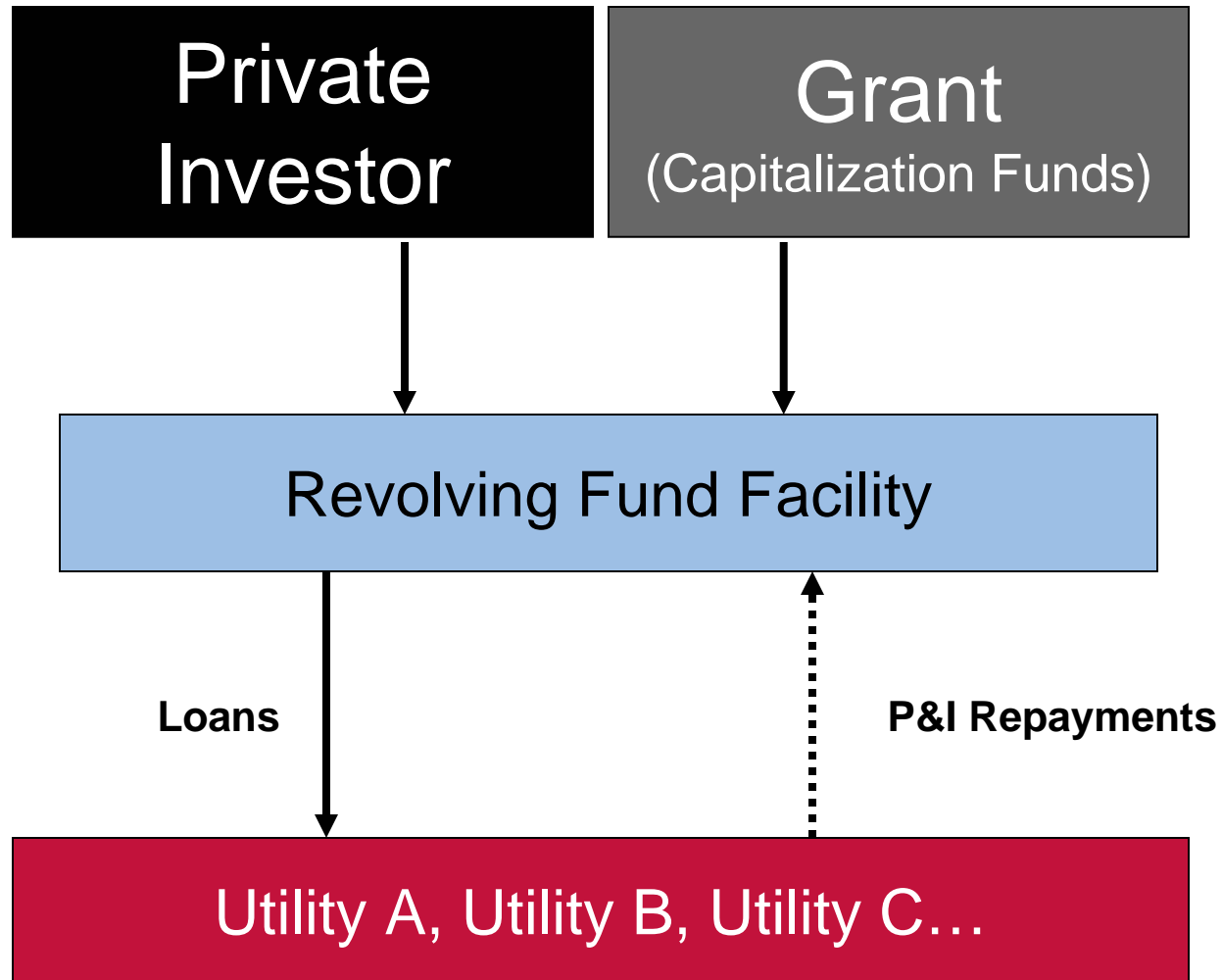
A revolving fund enables a grant to be used continuously



# LESS TRADITIONAL FINANCING—POOLED FINANCE

## REVOLVING FUND: LEVERAGED

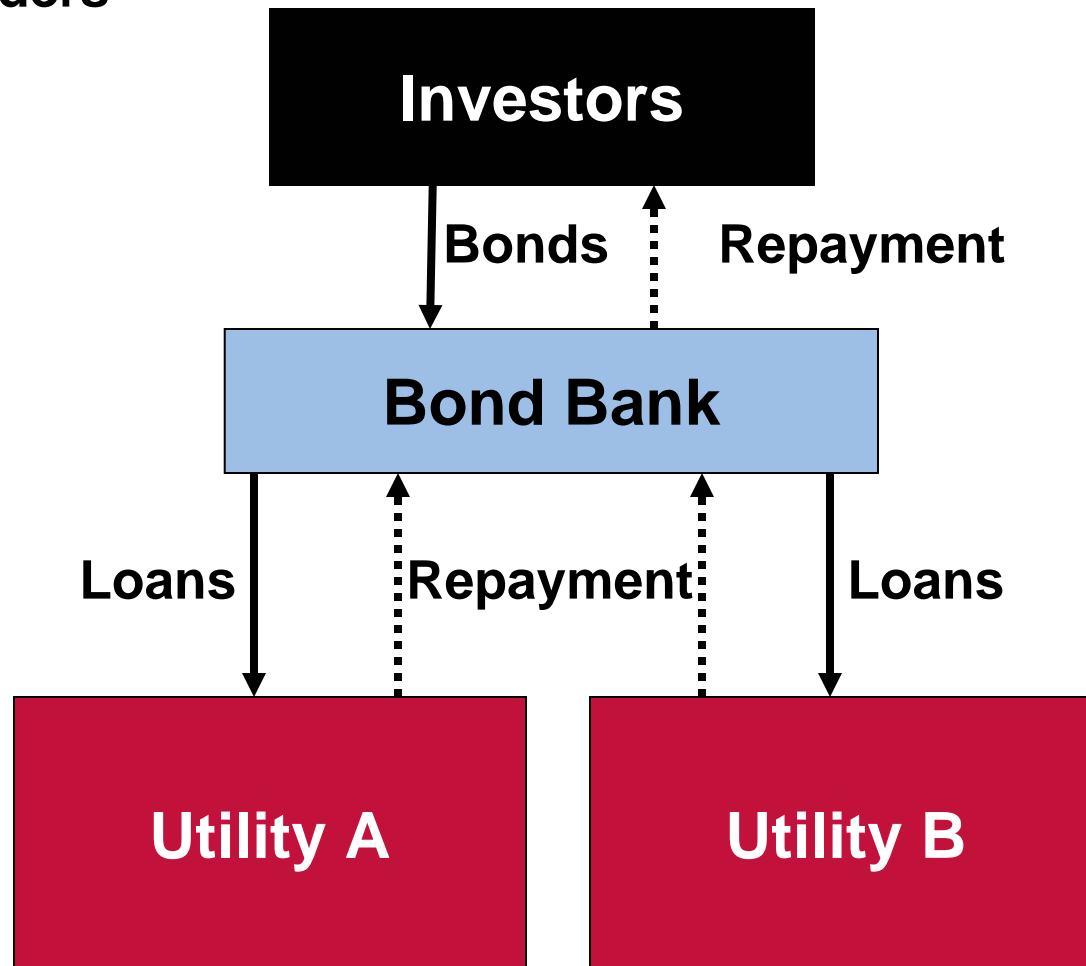
A revolving fund can use the grant to attract private investors



# LESS TRADITIONAL FINANCING—POOLED FINANCE

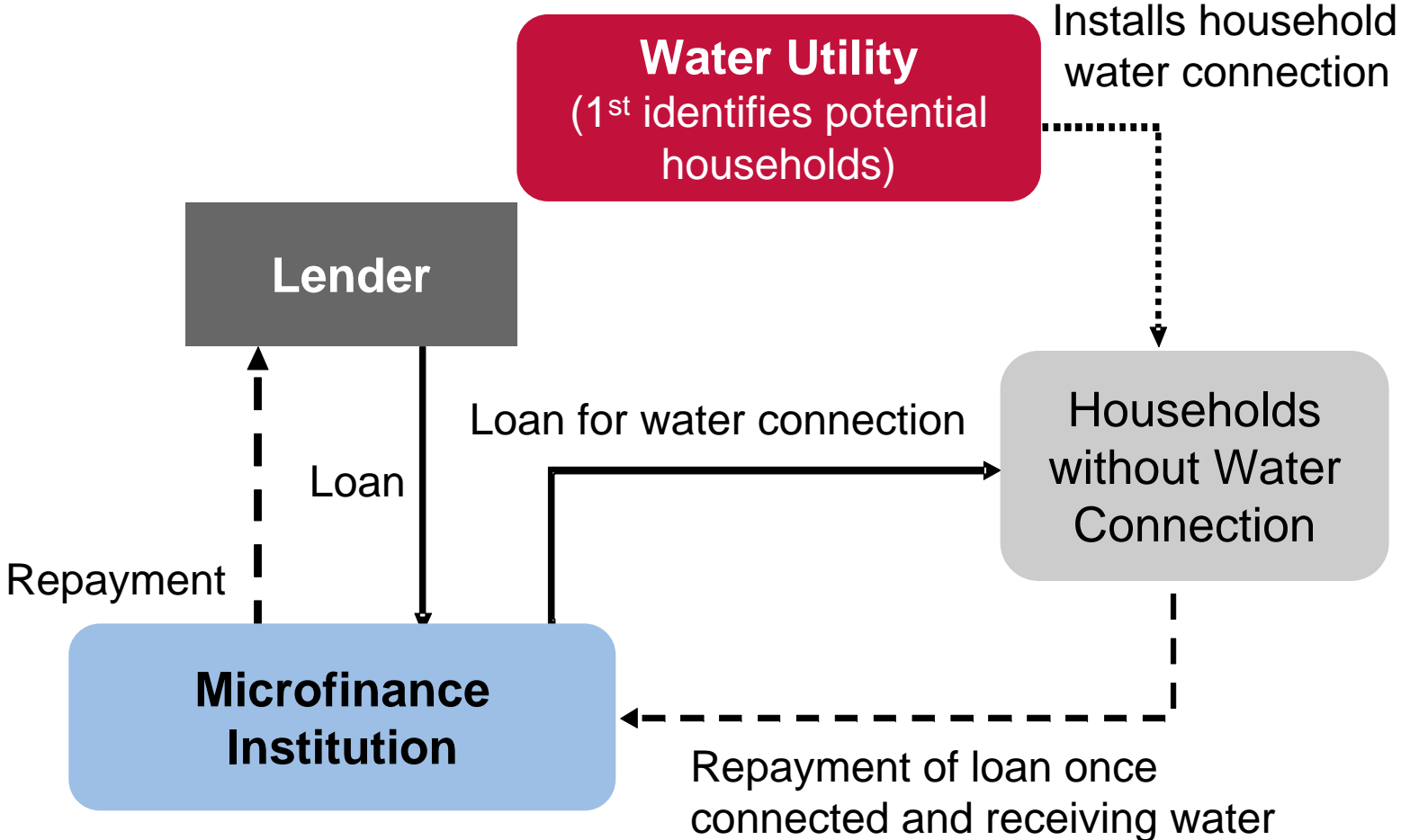
## BOND BANK

A bond bank pools the needs of borrowers and diversifies the risk to lenders



# LESS TRADITIONAL FINANCING—MICROFINANCE

## Example: Microfinancing Household Water Connections





**WATER UTILITIES  
AND THE ROLE OF CREDIT  
ENHANCEMENT**

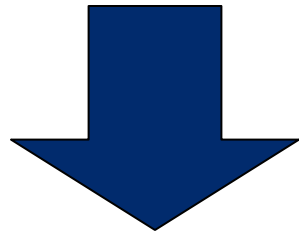
# LENDERS FACE A NUMBER OF CONSTRAINTS

- The need to match liabilities with assets
- Lack of financial transparency
- Unreliable legal and regulatory environment
- Construction risk
- Political intervention risk
- Few bankable projects

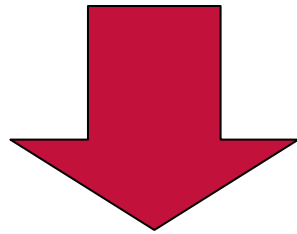
# WHY USE CREDIT ENHANCEMENT FOR INFRASTRUCTURE FINANCE?

- Perception of political risk
- Lack of borrowing history
- Lack of financial transparency
- Long-term needs
- Public good
  
- **Bottom Line: Lenders don't trust public sector management**

# IMPACT OF CREDIT ENHANCEMENTS



**Risk Perception**



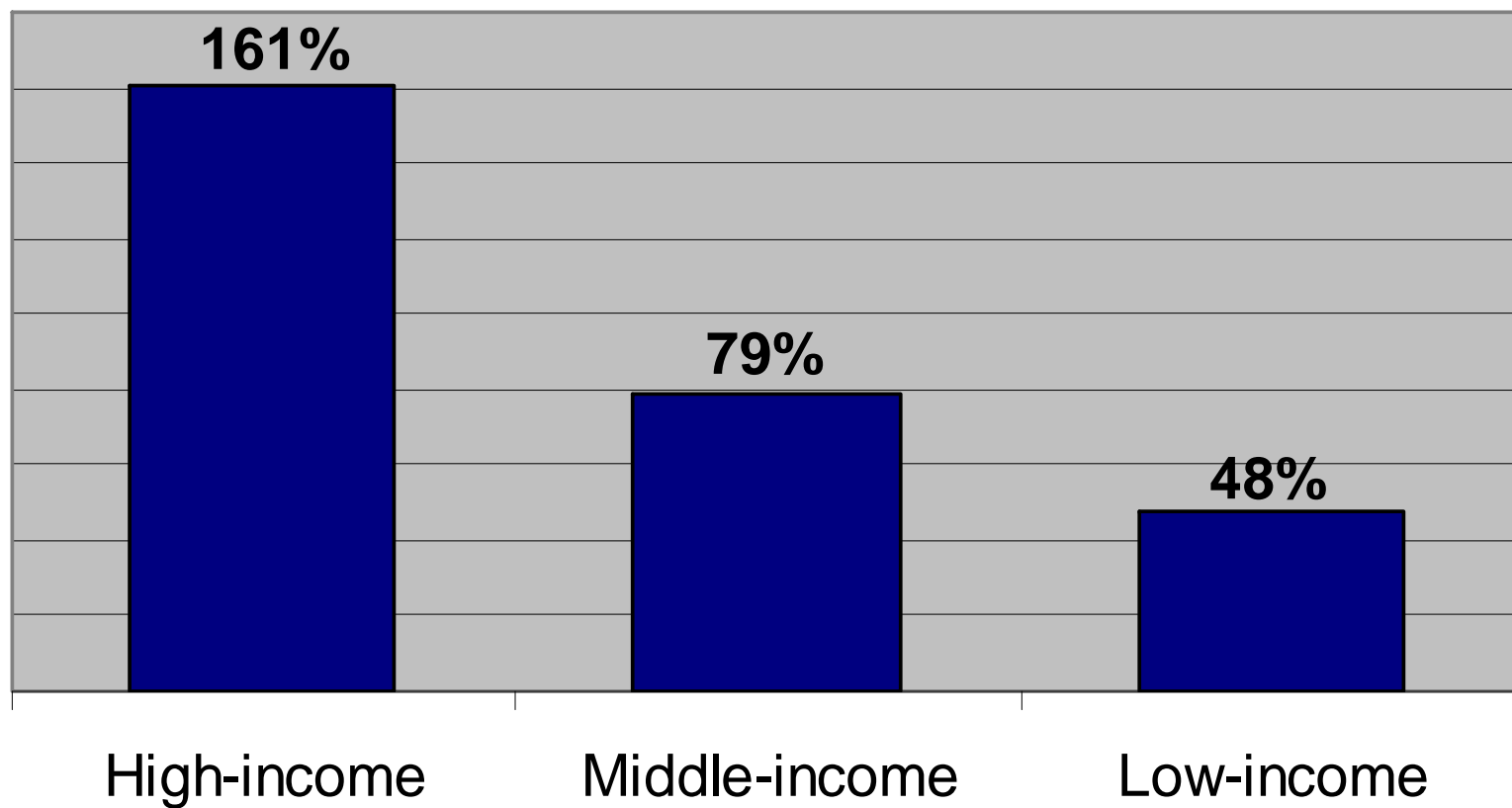
**Collateral Requirements**

**Longer-term Financing**





# DOMESTIC CREDIT PROVIDED BY THE BANKING SECTOR (AS A PERCENTAGE OF GDP)



# CREDIT ENHANCEMENT EXAMPLE: DCA

**USAID's Development Credit Authority (DCA) mobilizes private capital by:**

- Sharing risk with the private sector
- Demonstrating to lenders the potential of certain players in particular markets
- Demonstrating to borrowers the potential to successfully secure needed capital
- Providing a sustainable source of capital to borrowers



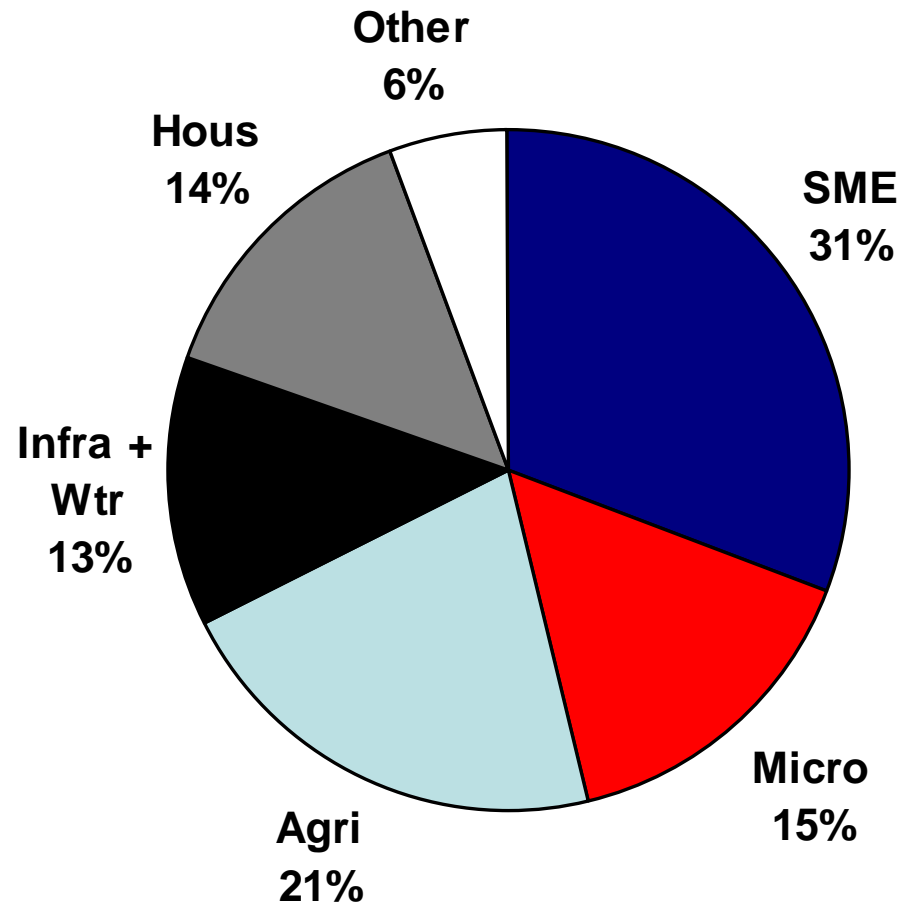
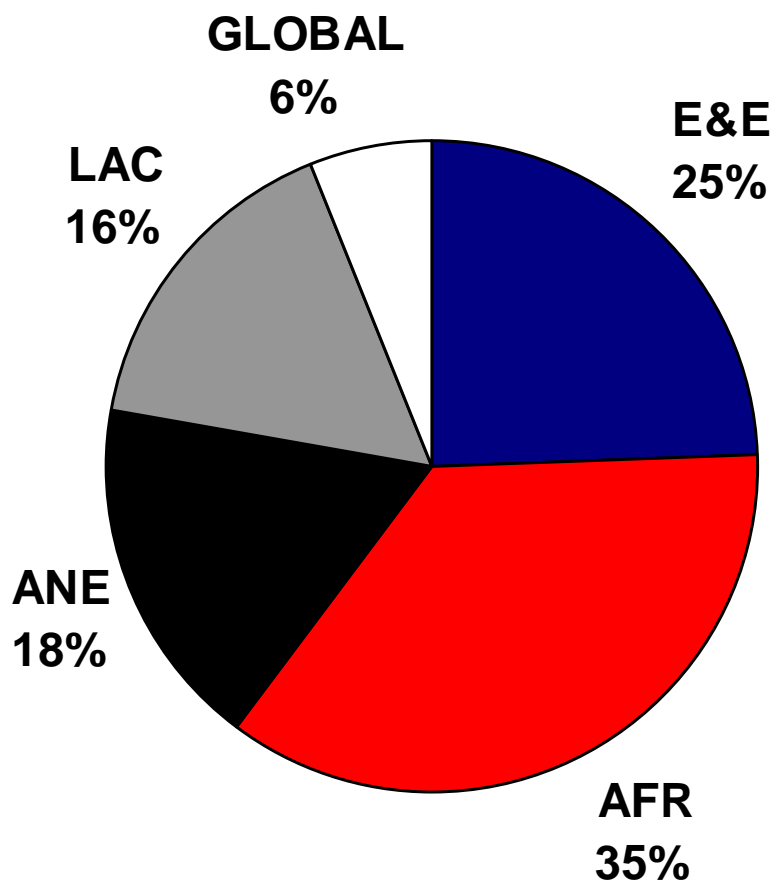
# CREDIT ENHANCEMENT EXAMPLE: DCA

## Development Credit Authority guiding principles:

- Additionality; guarantor of last resort
- 50% guarantees reduce moral hazard
- Demonstration effect
- DCA most effective when linked to TA or policy reform

# DCA PORTFOLIO—BY REGION AND BY SECTOR

Founded in 1999, DCA has facilitated 185 guarantees in 54 countries, leveraging over \$1.3 billion in private sector resources



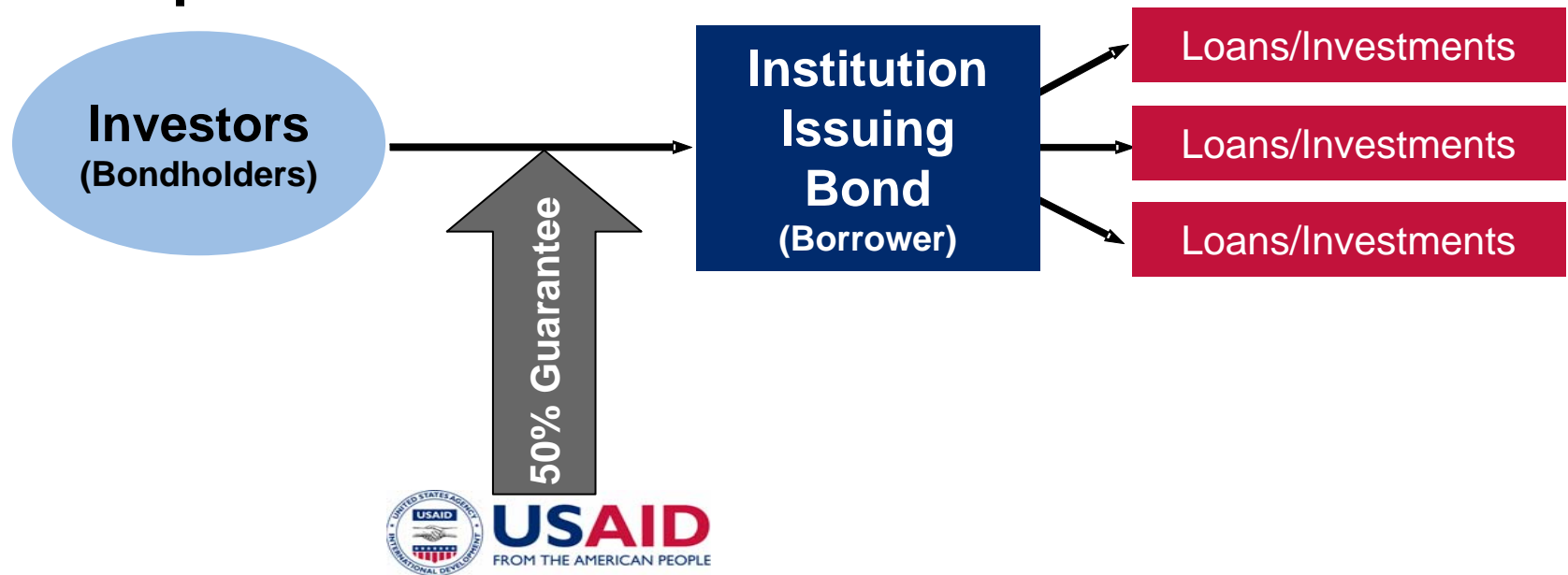
# DEVELOPMENT CREDIT AUTHORITY

## Four Tools

1. Bond Guarantee (BG)
2. Portable Guarantee (PG)
3. Loan Guarantee (LG)
4. Loan Portfolio Guarantee (LPG)

# DCA BOND GUARANTEE—EXAMPLE

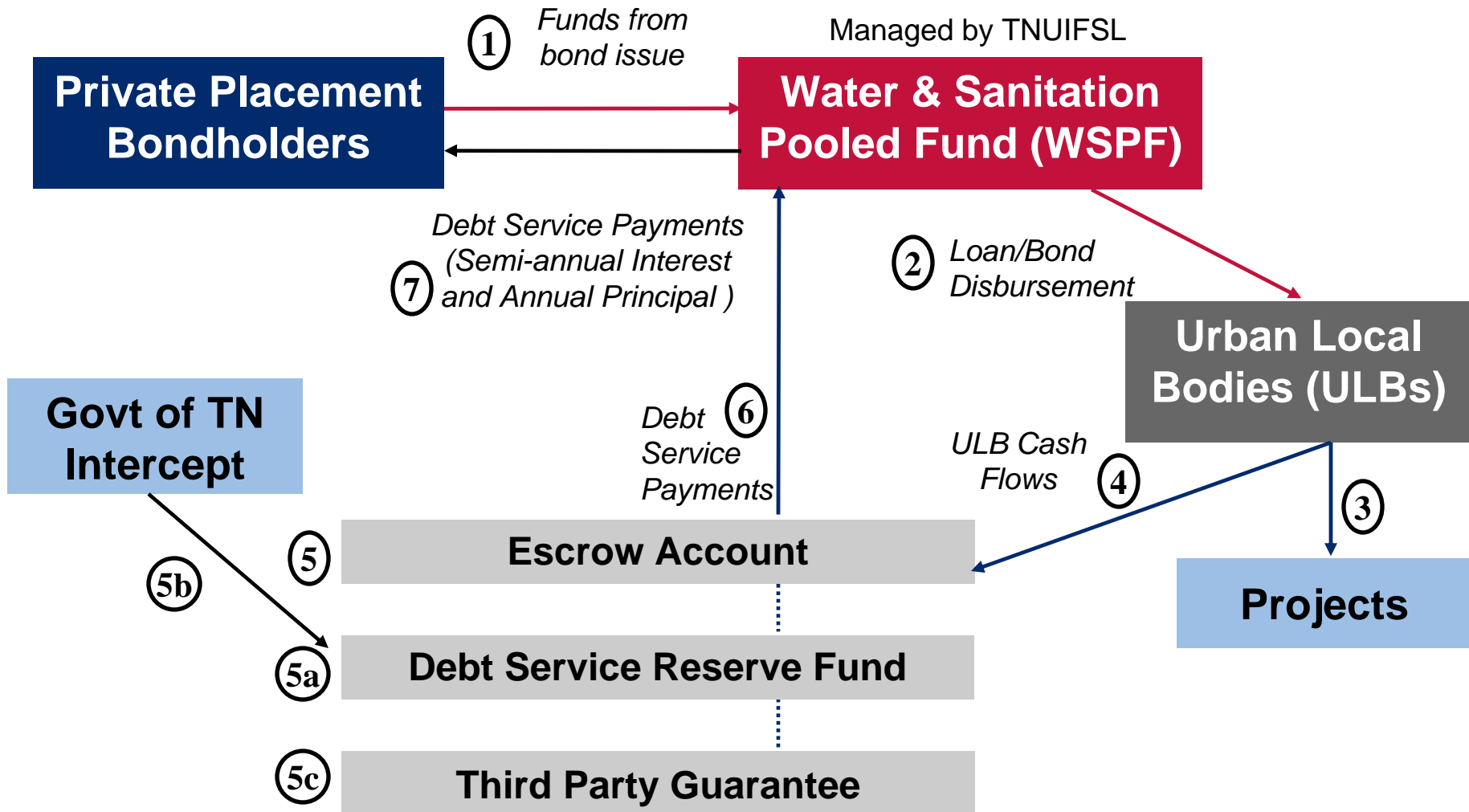
## Development Need—India



Fourteen small- and medium-sized towns in Tamil Nadu, India require water and sanitation service improvements/expansions. The scale of each individual project prohibits them from gaining access to capital market financing.

# STRUCTURE

## TAMIL NADU STRUCTURE



# DCA BOND GUARANTEE—EXAMPLE

## BOND GUARANTEE—IMPACT

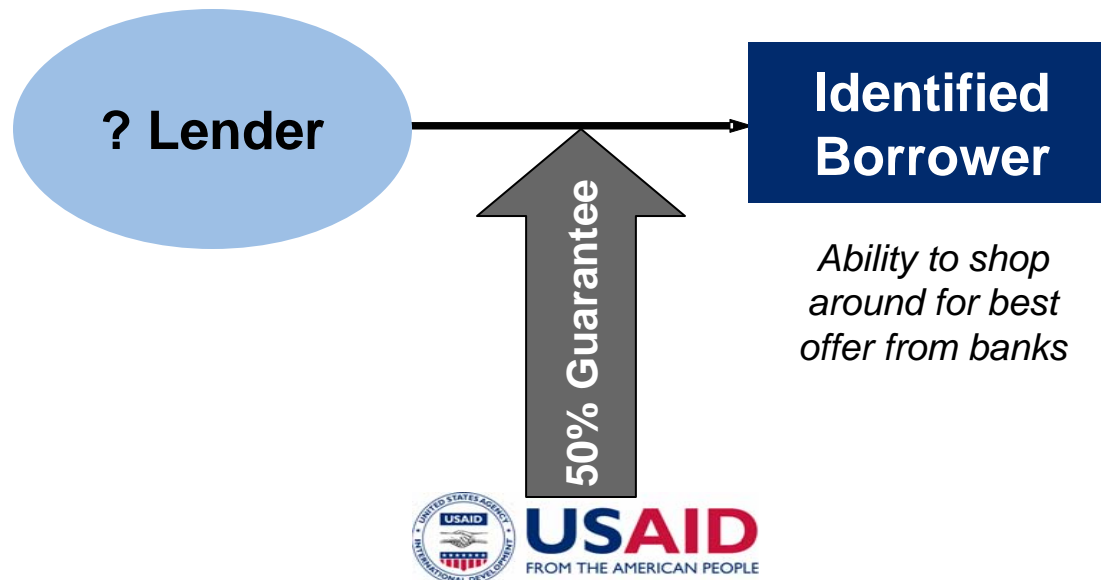
- WSPF achieves adequate credit rating for market interest at the desired terms—interest cost and repayment duration/tenor
- Small municipalities are able to continue to develop projects to expand/improve water and sanitation services
- Market demonstration effect for future pooled financing structures



# DCA PORTABLE GUARANTEE - EXAMPLE

## PORTABLE GUARANTEE

### Development Need—South Africa



Large segments of the urban population of Johannesburg do not receive financing water, electricity, sanitation, or other urban services. The city government lacks adequate financing for further infrastructure investments to improve these services.

# DCA PORTABLE GUARANTEE - EXAMPLE

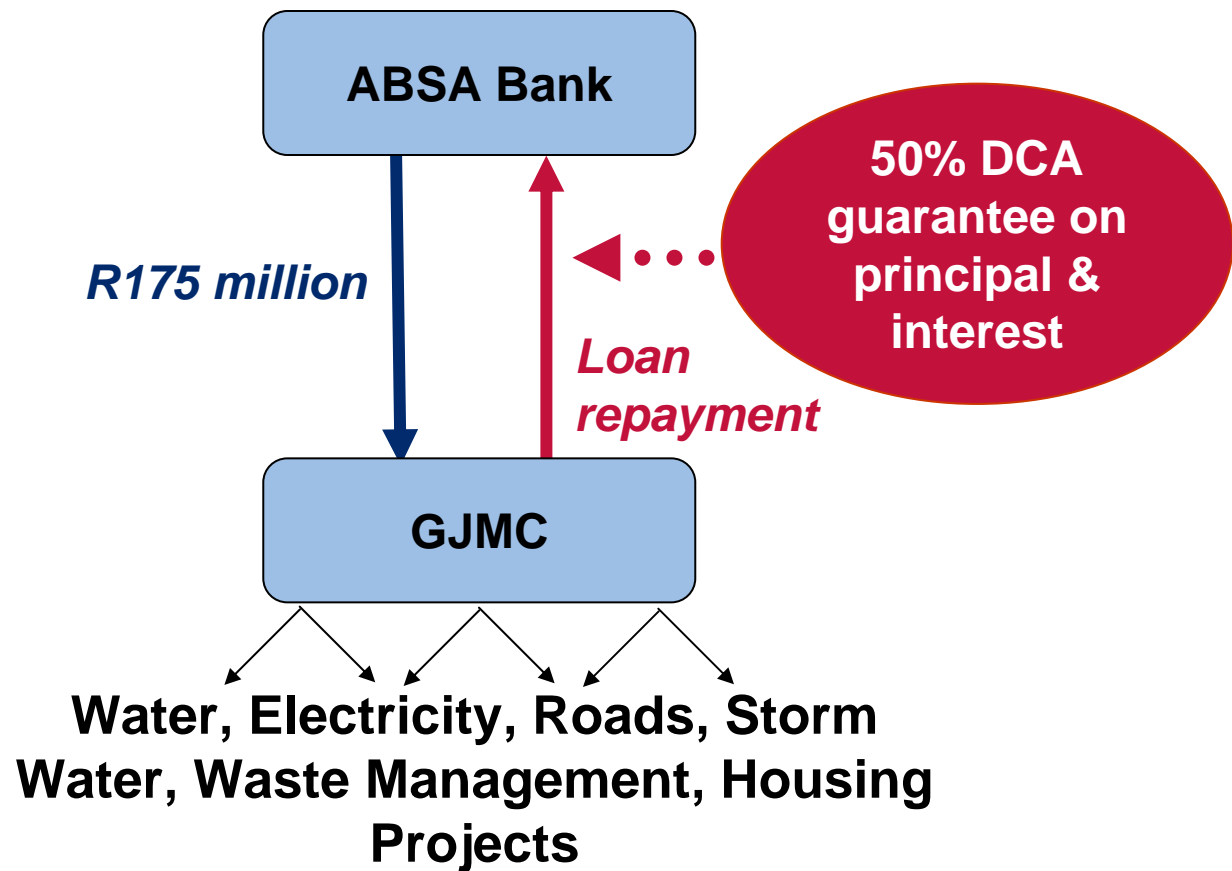
## PORTABLE GUARANTEE—SOUTH AFRICA

**Step 1:** USAID provides guarantee commitment to GJMC.

**Step 2:** GJMC solicits loan proposals and selects ABSA Bank.

**Step 3:** USAID signs guarantee with ABSA Bank.

**Step 4:** GJMC uses loan to finance urban services.



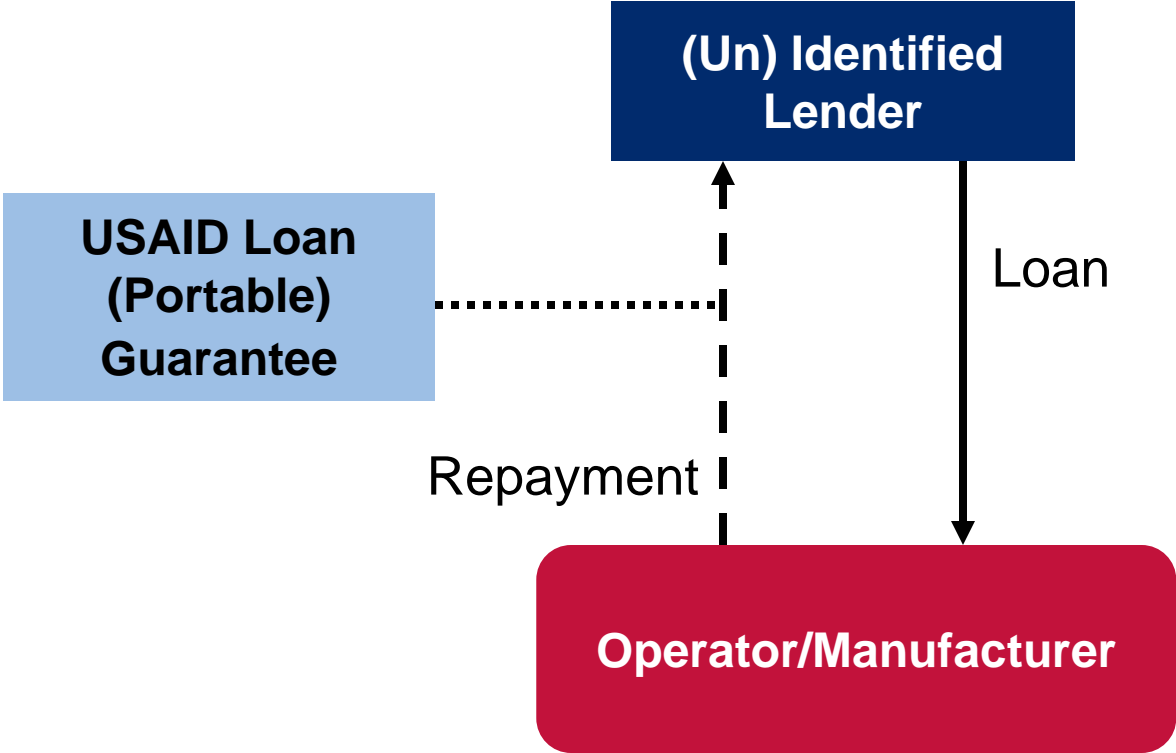
# DCA PORTABLE GUARANTEE—EXAMPLE

## PORTABLE GUARANTEE—IMPACT

- City government obtained private capital to invest in its infrastructure and improve the quality of life of its inhabitants
- City government developed and demonstrated adequate planning and budgeting to private commercial banks
- In June 2004, halfway through the loan repayment, GJMC obtained cheaper financing from capital markets and pre-paid its debt to ABSA Bank

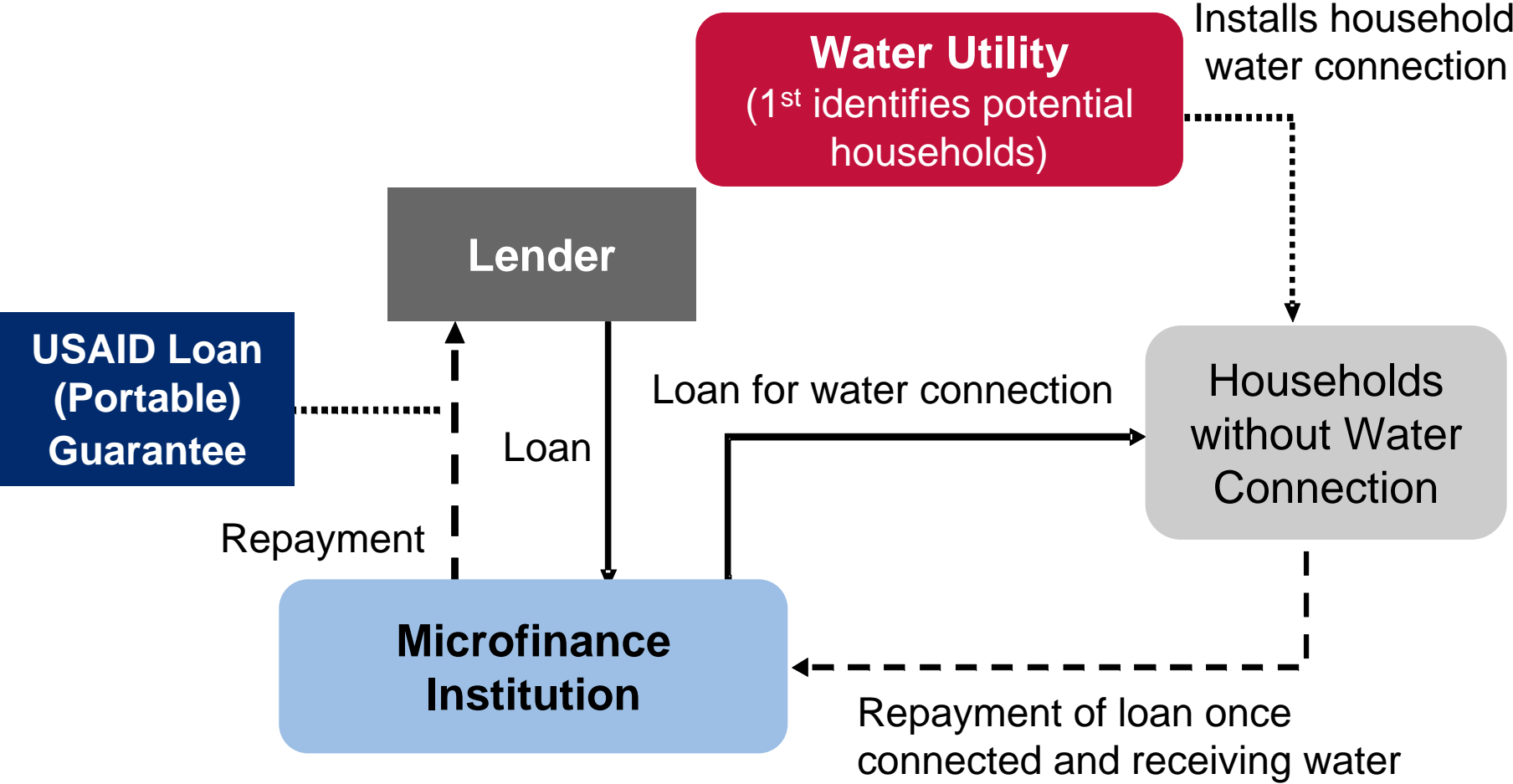
# DCA PORTABLE GUARANTEE – CONCEPTUAL EXAMPLE

## Concessionaire or Water Treatment Manufacturer



# DCA PORTABLE GUARANTEE—CONCEPTUAL EXAMPLE

## Microfinancing Household Water Connections

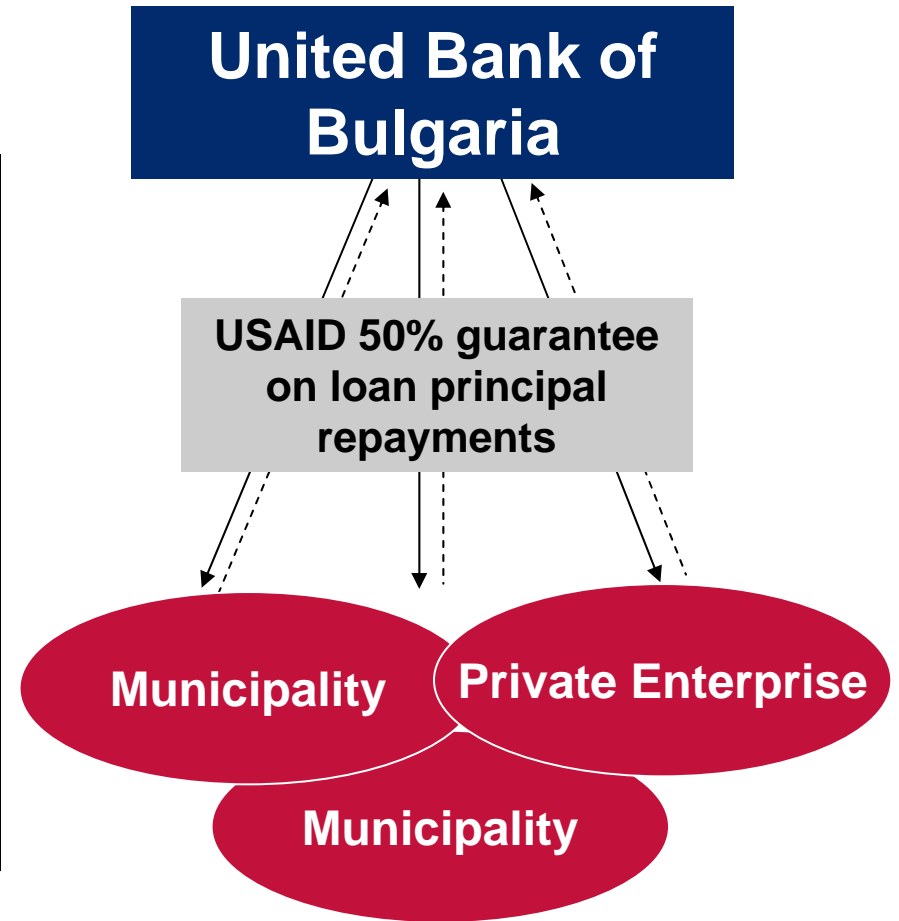


# DCA LOAN PORTFOLIO GUARANTEE—EXAMPLE

## Loan Portfolio Guarantee

### Bulgaria

<b>Partner Bank</b>	United Bank of Bulgaria
<b>Total Loan Amount</b>	\$10 million
<b>Guaranteed Portion</b>	\$5 million
<b>No. of Years</b>	11
<b>Purpose</b>	Facilitate long-term financing to municipalities and private enterprises to invest in energy efficient technologies



# CONCLUSION

- Financing is the final hurdle
  - Critical precursor: Reliable revenue flow
  - Utilities must improve management, governance and political support for tariffs
- Financing must allocate risks efficiently

Grants and subsidized interest loans are not ends, but means to supporting sustainable access to financing