

# Issuing Revenue Bonds in China



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# Scope of Financial Advisory Services Project



- Prepare grantee business plan
- Prepare debt management mechanism
- Finalize 5 year Capital Investment Requirements
- Prepare 5 year Capital Investment Financing Program
- Prepare plan of revenue adjustments
- Identify and collect legal and regulatory issues
- Design Bond Issuance Program
- Financial sector development information

# United States Experience With Infrastructure Revenue Bonds



- United States has seen relatively little privatization (broadly defined) and the privatization record is spotty.
- A major factor is the discipline exerted through the need to comply with bond covenants – coverage, restricted reserves etc.
- Even with the existence of revolving funds and other sources, long duration revenue bonds are the primary financing vehicle.
- Bond maturity periods reflect a concern with intergenerational equity.

# U.S. Long Term Debt Data – Wastewater Agencies



- Survey of 126 wastewater agencies serving 88 million:
  - Long Term debt per capita - \$415 (\$36+ trillion for 119 agencies)
  - Annual Debt Service per capita - \$31 (\$2.7+ trillion)
  - Annual debt service/revenues – 21.13%

# U.S. Long Term Debt Data – Water Utilities



- Survey of 647 utilities serving 127+ million:
  - Long Term debt Per Capita - \$171 (\$22+trillion)
  - Annual Debt Service Per Capita - \$15
  - Annual debt service as % revenue – 17%



# Impact of Indebtedness

- Tariffs must be sufficient to recover operating costs, debt service requirement and coverage (in some cases funding of required reserves)
- Transparency
- Symmetry – some issuers issue bond compliance reports, annual operating reports track coverage etc.



# What Is a Bond?

- A Pledge to Repay Debt With Interest
- Revenue Bonds – the ability to repay is based on project or system generated debt



# How Is Debt Structured?

- Budget Considerations – Capital Acquisition
- Long Term vs. Short Term – Life of Assets Financed
- Interest Rates – Charge for the use of money
- Security Pledged – Coverage or adequacy of Collateral
- Call Provisions – Early Redemption of Debt
- Maturity Schedule – Investment Considerations
- Computing Interest Cost – Serial/term maturities
- Default implications – investors/access to outside capital funding in the future unlikely





# Legal Considerations

- Has the government validly issued the bonds?
  - Invalid governmental acts are void
- Are there limitations on the issuance of bonds?
  - Referendum
  - Legislative authorization
  - Maximum amount or maturity of bonds
  - Limits on purpose of the bond issues
  - Public notice of borrowing

# What Happens If the Government Does Not Repay The Bonds?



- Will a court order the government to pay over the charges pledged to the bonds?
- Will a court order the government to raise tariffs?
- Will a court order a Receiver to take over governmental property to repay bonds?
- When can government property be taken and sold to pay off bonds?

# Is The Information About The Bonds Given to Investors True?



- Public Investors need to be know the facts to make intelligent investment decisions
  - Some types of investors may have to do their own investigation
- Underwriters of bonds may have to investigate the information in bond offerings
- Full disclosure by the bond seller lowers investment risk making bonds more saleable and lowering interest rates



# Sales and Marketing

Who will buy?

- Individuals
- Banks
- Insurance companies
- Pension funds
- Others

Marketing – who will sell the bonds?



# Trading

- Purpose of secondary markets
- Trading terminology – “making a market”, “blocks” of bonds, short/long positions
- Trading considerations
  - Name
  - Ratings
  - Maturity
  - Price/yield
  - Call features
  - Size
- Municipal futures
- Sources of information – Bond Buyer, Bloomberg, etc.



# Specific Credit Factors

- Security and structure
  - Purpose, size, maturity, redemption
  - Legal documents – lien status, flow of funds, rate covenants, additional bonds test, debt service reserve
  - Rates/user fees – rate/tariff methodology and project/system economics
- Management
  - Experience, commitment
  - Policies, goals, objectives
  - Ties to other agencies/ governmental units



## Specific Credit Factors - continued

- Service area
  - Location of facilities, demand for service, potential growth
  - Demographics – wealth, income, employment, competing facilities
- Operations
  - Historical trends in usage
  - Age of facilities, operating and maintenance expenses
  - Efficiency
- Finances
  - Gross revenues, expenses
  - Factors affecting user fee collection
  - Debt service burden, debt service coverage
- Capital program

# Financial Planning – The Operating Budget



- Provides spending guidelines
  - Comprehensive plan for program priorities
  - Requires issuer to match spending with revenues
  - Provides a legal spending framework
- Requires Plan for the Future
  - Projection of financial condition
  - Anticipation of events which may affect financial stability
- Requires Issuer to be Dynamic
  - Constant evaluation and adjustment
  - Communication at all levels





## Financial Planning – Capital Planning

- Provides multiyear spending plan
- Combines planning and budget process
  - Capital budget forecasts first year of plan
  - Considers all proposed projects simultaneously
  - Considers both financing and timing
  - Measures impact of capital spending on issuer's financial position

# Financial Planning – Accounting and Reporting



- Meets compliance with local law
- Provides credibility with investors and public
- Imposition of standards limits “creative” accounting
- Allows comparison of local results to benchmarks



# Participants in Bond Issues

- Issuer
- Bond Counsel
- Financial Advisor
- Underwriter
- Underwriter's counsel
- Rating agencies
- Trustee/paying agent
- Printer



# Bond Issuance Process

- Capital Planning
  - Capital planning and priorities
  - Feasibility and reasonableness
  - Sources of capital
  - Timing
  - Debt management policy
- Project Identification
  - Cost
  - Asset life
  - Revenue stream
  - Permittina



# Bond Issuance Process

- Plan of finance
  - Revenue projections
  - Cost estimates
  - Construction cost and draws
  - Model assumptions
- Finance Structure
  - Budget considerations
  - Inflation
  - Long term vs. short term
  - Security pledge/flow of funds
  - Current interest or zero coupon
  - Call provisions
  - Maturity schedule (serial and term bonds)



# Bond Issuance Process

- Investors – who has the money?
- Marketing – who will sell the bonds?
- Paying sellers for distributing the issue
- How will sellers distribute the bonds
- Cost of issuing the bonds
- Pricing
  - Preliminary interest rate levels
  - Offering issue to investors
  - Tracking bond orders
  - Final pricing agreed to by underwriter and issuer



# Bond Issuance Process

- Closing
  - Execution of bond purchase agreement
  - Final documents and signatures
  - Transfer of funds
- After sale
  - Maintaining current information
  - Planning and timing of further financings
  - Secondary market for issue
- Documents
  - Authorizing resolution
  - Official statement
  - Bond purchase agreement
  - Blue sky memorandum

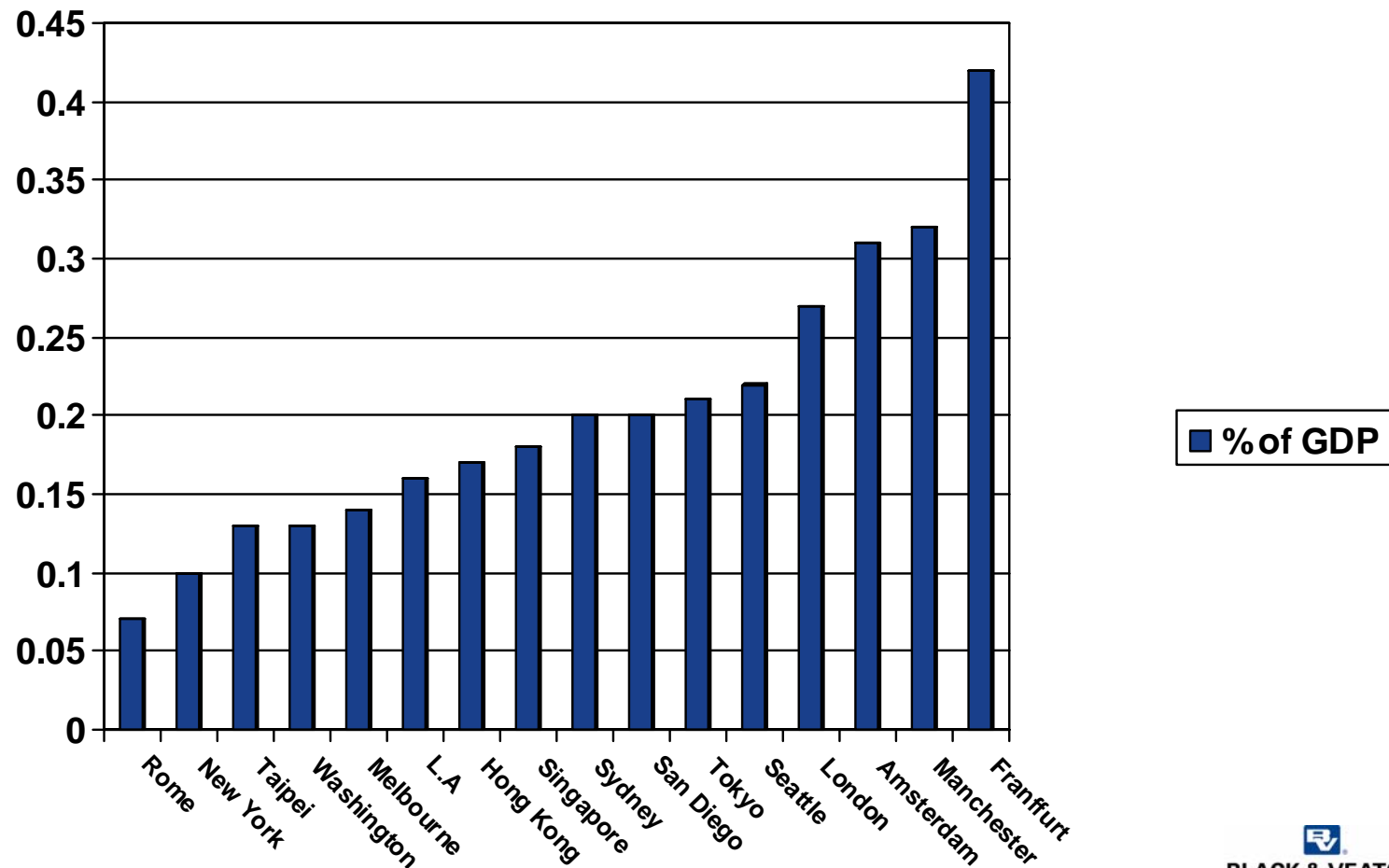


# Issues in China

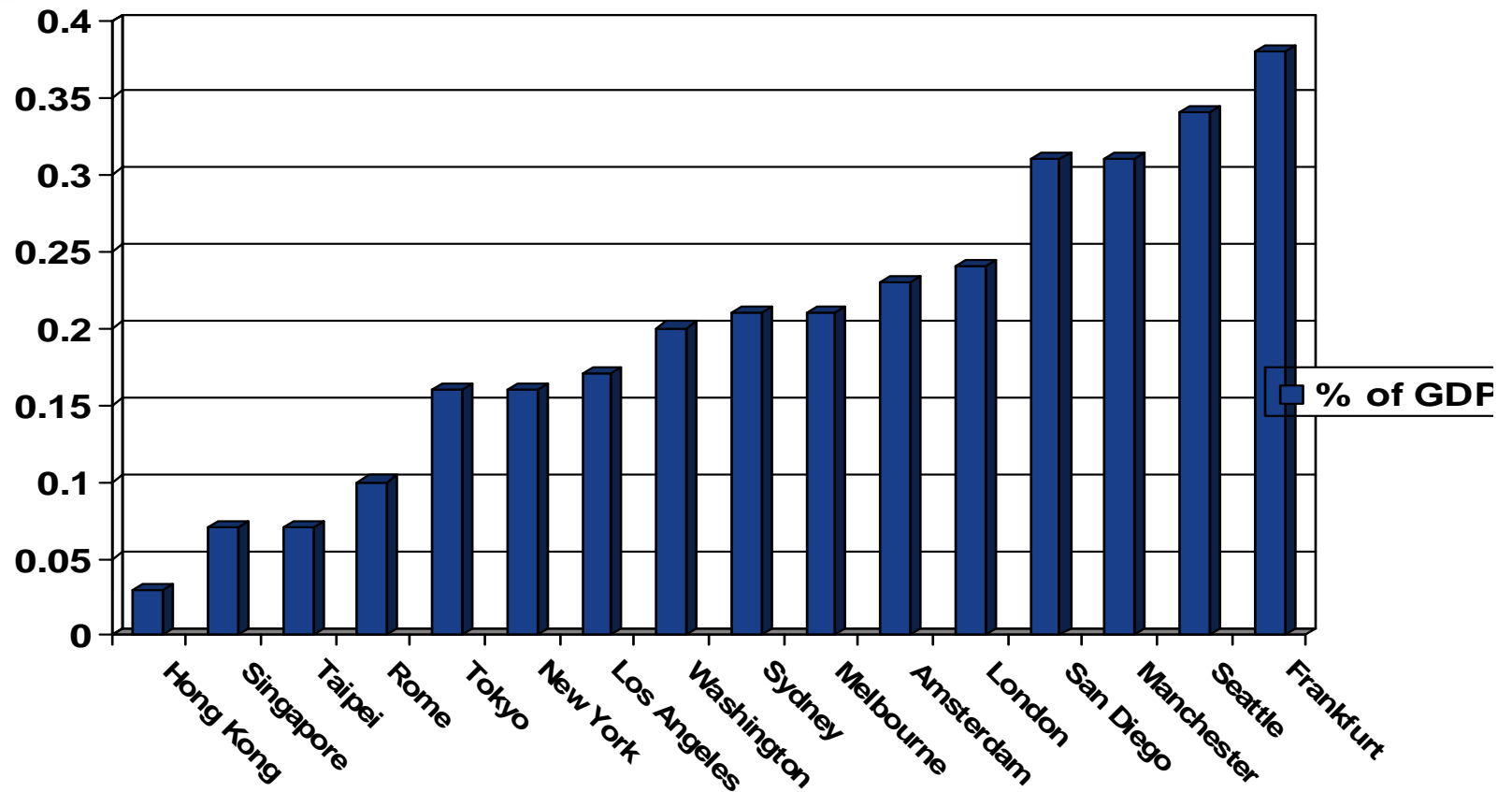
- Multiple lines of regulatory authority
- Planning originates at the local, not national, level (per S&P)
- Fragmentation of ownership, responsibility and authority – the issuer may not be the owner or operator
- Tariff setting and budgeting not structured to support use of bond funding. Tariff levels are set first and system is operated to revenues.
- Short operating history of issuing entities
- Limited legal protection for bondholders
- Little experience with typical bondholder protections
- Fiscal reporting, accounting standards and transparency
- Affordability of Tariffs



# Per Capita Annual Water Charges as % of Per Capita Annual GDP



# Per Capita Annual Wastewater Charges As % of Per Capita Annual GDP





## Some Plusses

- Competence
- Large urban centers are likely to grow
- International support network
- Good national credit
- Financially creative and sophisticated culture