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Private Sector Engagement

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PPP Project Dilemma



Public Sector

- A method of procuring and delivering both public assets and public services



Private Sector

- A method of investing capital to capture above average risk-adjusted return



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PRIVATE SECTOR'S VIEW

PPP Project Looks Like:

Government Guarantee

- 5% return of asset (ROA) per annual

Profit Entitlement

- Project partner share up side of the project.

Buy Back Option

- Government can buy back the project at a fixed amount of money

PPP Project Looks Like:

Bond Component

- 5% return of asset (ROA) per annual
- Maturity 15 Year

Convertible Option

- Project partner share upset of the project.
- Expired in 15 Year

Buy Back Option

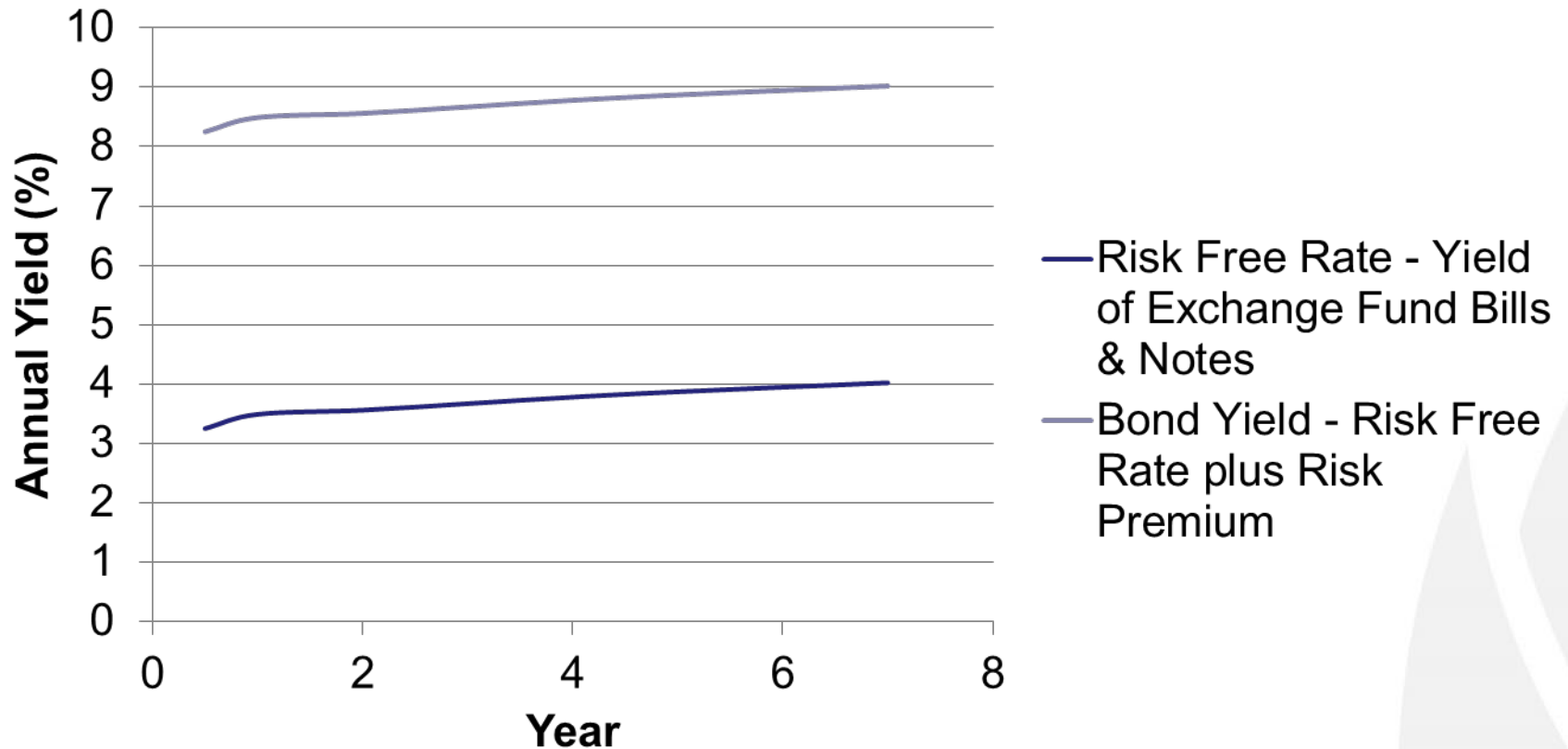
- Government can buy back the project at a fixed amount of money
- Expired in 15 Year

PPP Project Looks Like:

- PPP Project looks like a financial instrument (such as: convertible bond) from the private sector's view.
- PPP Project is about Bond Component Value, Convertible Option Value, Buy Back Option Value, and their correlation matrices.

Bond Component Value

Risk Free Rate vs. Bond Yield



Bond Component Value



Bond Price Formula

$$= C \times \frac{1 - (1+r)^{-n}}{r} + \frac{F}{(1+r)^n}$$



Derivative Value

Black-Sholes-Merton Model

- Continuous Model

Binomial Model

- “Discrete – Time” Model
- Flexible
- Suitable for dividends, and other specific situation

Monte Carlo Model

- Path Dependent Option Pricing
- Suitable for valuating option with large number of parameters



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HOW TO IMPROVE THE VALUATION?

Reduce Risk & Improve Upside

- Make Payment On Time
- Reduce Policy Ambiguity
- Exercise Financial Prudence
- Foster Economic Growth
- Etc...

Thank you!

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