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**THE ADVISORY GROUP ON APEC FINANCIAL SYSTEM**  
**CAPACITY-BUILDING**  
A Public-Private Sector Initiative

**Fourth Meeting 2010**  
10 November 2010  
10:15 AM – 12:15 PM  
Seiryu I/II, Yokohama Bay Sheraton Hotel & Towers  
Yokohama, Japan

**Meeting Paper 6-A**  
**Role of International Project Finance for**  
**Economic Development**

*Dr. Hidefumi Yamagami, Kinki University*

**Role of International Project Finance**  
**for Economic Development**

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Fourth Meeting 2010  
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Capacity-Building  
November 10, 2010 – Yokohama Bay Sheraton

## Overview: Role of International Project Finance for Economic Development

### (Key Points)

- When Priority of each Project is frequently decided by the government of developing countries, there exists risk of disorder in the priority from the view point of both economic efficiency and public fairness.
- If technique of International project finance is applied, the government can maximize public fairness (or external effect), while securing economic efficiency.
- Role of international project finance will be addressed in this report by reviewing basic structure of public-private partnership through case study of Asia infrastructure debt fund scheme and public revenue bond.

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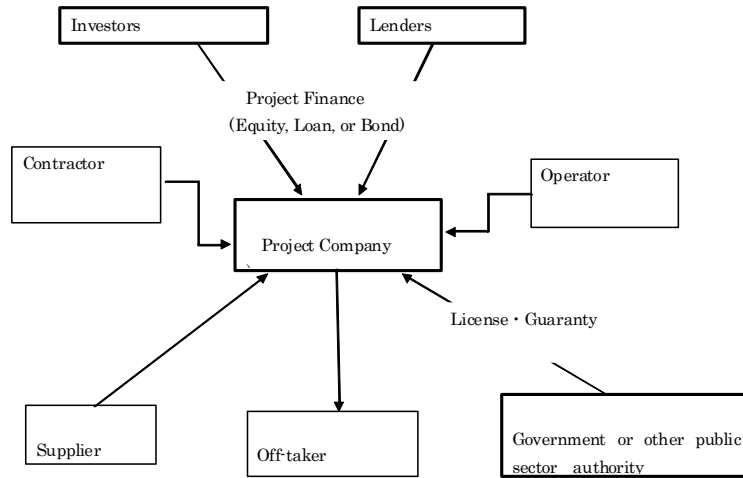
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### Basic Structure and Public-Private Partnership in International Project Finance



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### Net Cash Flow of International Project Finance

$$NPV = \sum_{t=1}^n \frac{FV_t}{\prod_{j=1}^t (1+i(j))}$$

Where NPV= Net Present Value of the entire project  
 FV<sub>t</sub>=Net Cash Flow of the project in period t  
 i(j)=interest rate or discount rate for each period 1~t  
 n=total number of periods (Usually 1 period=6months)

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## Track Record: International Project Finance -Purpose of Fund(1996-2009-PFI)

### Project finance loans and bond issues (by sector)

| US\$ millions           | 1996          | 1997          | 1998          | 1999          | 2000           | 2001           | 2002          | 2003           | 2004           | 2005           | 2006           | 2007           | 2008           | 2009           |
|-------------------------|---------------|---------------|---------------|---------------|----------------|----------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Infrastructure *        | 5,037         | 7,436         | 9,006         | 12,673        | 16,755         | 2,430          | 7,081         | 9,993          | 8,016          | 3,758          | 6,780          | 10,308         | 6,940          | 539            |
| Leisure and property    | 290           | 465           | 369           | 1,573         | 1,638          | 6,530          | 4,879         | 4,435          | 7,008          | 13,282         | 17,766         | 22,759         | 20,836         |                |
| Social Infrastructure** |               |               |               |               |                |                |               | 2,130          | 3,066          | 5,021          | 8,574          | 6,115          |                | 877            |
| PPP                     |               |               |               |               |                |                |               |                |                |                |                |                |                | 7,474          |
| Transportation **       |               |               |               |               |                | 11,279         | 13,592        | 14,988         | 23,509         | 28,732         | 44,596         | 44,027         | 54,789         | 25,451         |
| Waste & Recycling       |               |               |               |               |                | 764            | 157           | 284            | 968            | 726            | 320            | 2,989          | 550            | 1,194          |
| Water & Sewerage **     |               |               |               |               |                |                |               | 1,043          | 2,169          | 3,727          | 3,821          | 4,181          | 2,933          | 4,699          |
| <b>Infrastructure</b>   | <b>5,327</b>  | <b>7,901</b>  | <b>9,375</b>  | <b>14,246</b> | <b>18,393</b>  | <b>21,003</b>  | <b>27,056</b> | <b>32,873</b>  | <b>44,736</b>  | <b>55,246</b>  | <b>81,857</b>  | <b>90,379</b>  | <b>86,048</b>  | <b>40,233</b>  |
| Mining                  | 1,234         | 6,307         | 2,694         | 1,377         | 629            | 2,323          | 997           | 1,110          | 3,734          | 3,175          | 3,987          | 4,607          | 11,486         | 4,071          |
| Oil & gas               | 3,417         | 15,386        | 10,666        | 7,792         | 12,552         | 12,638         | 9,073         | 16,049         | 27,680         | 33,713         | 35,445         | 34,311         | 42,960         | 31,137         |
| Petrochemicals          | 4,100         | 4,603         | 3,129         | 5,356         | 3,337          | 3,898          | 5,708         | 5,880          | 9,534          | 7,366          | 20,860         | 17,514         | 13,413         | 2,797          |
| Natural Resources       | 8,751         | 26,296        | 16,489        | 14,525        | 16,518         | 18,859         | 15,778        | 23,039         | 40,948         | 44,254         | 60,292         | 56,432         | 67,859         | 38,005         |
| Power                   | 18,283        | 18,717        | 21,663        | 37,262        | 56,512         | 64,528         | 24,517        | 36,417         | 46,633         | 51,683         | 59,559         | 76,518         | 90,236         | 57,642         |
| Telecoms                | 13,296        | 19,864        | 16,275        | 24,929        | 36,735         | 25,445         | 7,286         | 5,849          | 7,341          | 10,193         | 3,137          | 5,556          | 6,260          | 8,118          |
| Agriculture & Forestry  |               |               |               |               |                |                | 250           | 365            | 70             | 112            | 210            | 452            | 61             |                |
| Industry                | 1,964         | 2,144         | 2,641         | 1,396         | 3,538          | 3,646          | 1,074         | 3,178          | 5,358          | 4,129          | 4,227          | 17,473         | 11,979         | 3,454          |
| Other                   | 1,964         | 2,144         | 2,641         | 1,396         | 3,538          | 3,646          | 1,324         | 3,543          | 5,428          | 4,241          | 4,437          | 17,925         | 12,040         | 3,454          |
| <b>Total</b>            | <b>47,621</b> | <b>74,922</b> | <b>66,443</b> | <b>92,358</b> | <b>131,696</b> | <b>133,481</b> | <b>75,961</b> | <b>101,721</b> | <b>145,086</b> | <b>165,617</b> | <b>209,282</b> | <b>246,809</b> | <b>262,442</b> | <b>147,452</b> |

\* bonds only

\*\* loans only; included in infrastructure until 2001

Figures from Project Finance International issue -

|           |           |           |           |           |           |           |           |           |           |           |          |           |           |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|-----------|-----------|
| 113       | 137       | 161       | 185       | 209       | 233       | 257       | 281       | 305       | 329       | 353       | 376      | 400       | 424       |
| 29-Jan-97 | 28-Jan-98 | 27-Jan-99 | 26-Jan-00 | 24-Jan-01 | 23-Jan-02 | 22-Jan-03 | 21-Jan-04 | 21-Jan-05 | 25-Jan-06 | 24-Jan-07 | 9-Jan-08 | 14-Jan-09 | 13-Jan-10 |

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## Track record: International Project Finance -Purpose of Fund(2005-2009-Dealogic)

| (US\$ bn)                     | 2005       | 2006       | 2007       | 2008       | 2009       |     |
|-------------------------------|------------|------------|------------|------------|------------|-----|
| Energy                        | 57         | 66         | 93         | 112        | 107        | 37% |
| Infrastructure *              | 58         | 66         | 91         | 81         | 81         | 28% |
| of which: PPP/PFI             | 37         | 47         | 69         | 68         | 56         |     |
| Oil & Gas                     |            | 33         | 33         | 76         | 64         | 22% |
| Petrochemicals                |            | 43         | 30         | 32         | 9          | 3%  |
| Mining                        |            | 8          | 11         | 3          | 6          | 2%  |
| Telecom                       |            |            | 5          | 3          | 17         | 6%  |
| Industrial                    |            |            | 1          | 14         | 9          | 3%  |
|                               | <b>172</b> | <b>221</b> | <b>273</b> | <b>315</b> | <b>293</b> |     |
| of which:                     |            |            |            |            |            |     |
| Bank loans                    | 121        | 161        | 209        | 235        | 224        | 76% |
| Bonds                         | 21         | 26         | 18         | 6          | 13         | 4%  |
| Equity                        | 30         | 35         | 46         | 74         | 56         | 19% |
|                               | <b>172</b> | <b>221</b> | <b>273</b> | <b>315</b> | <b>293</b> |     |
| U.K.                          | 16         | 23         | 20         | 15         | 12         |     |
| Refinancings                  | 41         | 54         | 58         | 40         | n/a        |     |
| Source: Dealogic              |            |            |            |            |            |     |
| Project Finance International | <b>166</b> | <b>209</b> | <b>247</b> | <b>262</b> | <b>147</b> |     |
| Dealogic minus equity         | 142        | 186        | 227        | 241        | 237        |     |

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**Track Record: International Project Finance  
–Record of Underwriting (2007)**

| <b>2007</b>            |         | <b>Total</b>  | <b>No.</b>   | <b>Average</b>   |
|------------------------|---------|---------------|--------------|------------------|
|                        |         | <b>(\$bn)</b> | <b>deals</b> | <b>U/W (\$m)</b> |
| Korea Development Bank | Korea   | 3.2           | 19           | 168              |
| ICICI Bank             | India   | 2.7           | 3            | 900              |
| Dexia                  | Belgium | 2.7           | 19           | 142              |
| Santander              | Spain   | 2.1           | 11           | 191              |
| Royal Bank of Scotland | U.K.    | 1.6           | 12           | 133              |
| UniCredito             | Italy   | 1.6           | 10           | 160              |
| HBOS                   | U.K.    | 1.6           | 9            | 178              |
| HSBC                   | U.K.    | 1.5           | 5            | 300              |
| Barclays               | U.K.    | 1.3           | 10           | 130              |
| Société Générale       | France  | 1.3           | 9            | 144              |

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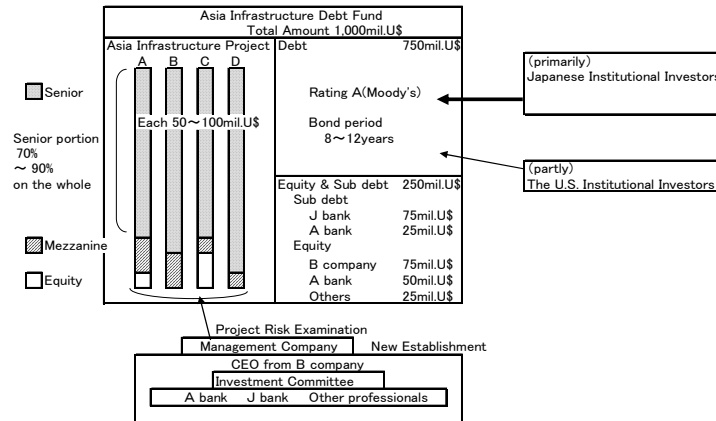
**Track record : International Project Finance  
–Record of Underwriting (2009)**

| <b>2009</b>              |           | <b>Total</b>  | <b>No.</b>   | <b>Average</b>   |
|--------------------------|-----------|---------------|--------------|------------------|
|                          |           | <b>(\$bn)</b> | <b>deals</b> | <b>U/W (\$m)</b> |
| State Bank of India      | India     | 5.1           | 10           | 510              |
| Korea Development Bank   | Korea     | 2.9           | 10           | 290              |
| National Australia Bank  | Australia | 1.9           | 14           | 136              |
| IDBI Bank                | India     | 1.8           | 5            | 360              |
| Santander                | Spain     | 1.4           | 23           | 61               |
| BBVA                     | Spain     | 1.4           | 20           | 70               |
| Calyon                   | France    | 1.4           | 15           | 93               |
| Westpac                  | Australia | 1.3           | 4            | 325              |
| Caixa Geral de Depositos | Spain     | 1.1           | 10           | 110              |
| Sumitomo Mitsui          | Japan     | 0.9           | 13           | 69               |

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## Case: Asia Infrastructure Debt Fund Scheme -1997~2000



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## Case: Political Risk Guaranty from International Financial Institution (or Japanese Government – Managed Financial Institution) – 1

- 1. Insurance: Principal and Interest Payment from the project company (95% Coverage only for the Following Political Risk)
- 2. Political Risk:
  - Due to the following reasons, if not paid during the Cure Period(30days ~180days), the Guaranty will be effective.
    - Foreign Exchange Restriction and transfer risk
 In addition, the Guaranty may be effective on a case by case basis, if the guarantor can conclude Indemnity Agreement with the government.
    - Nationalization, Expropriation
    - Civil War
    - Change of Laws, Breach of Duty by the government

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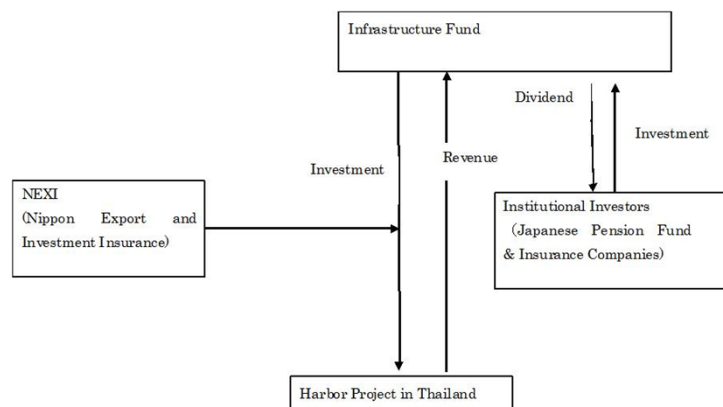
### Case: Political Risk Guaranty from International Financial Institution (or Japanese Government – Managed Financial Institution)–2

- 3. Beneficiary:  
Lenders of the Project (SPC may be eligible on a case by case basis)
- 4. Denomination: US Dollars and Japanese Yen
- 5. Period: from the Date of Disbursement until the Date of Final Repayment.
- 6. Jurisdiction: Law of Japan, New York State Law, Law of England

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### Case: Asia Infrastructure Debt Fund Project Harbor Project in Thailand(2009~)



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## Public Revenue Bond

- Project Classification by Economic Efficiency and Public Fairness
  - High Priority is given to Economic Efficiency than Public fairness in 3 when compared with 2, and in 2 when compared with 1.
1. Official Development Assistance (ODA)
  2. Public Revenue Bond
  3. Private Sector-oriented International Project Finance

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## Case : Recent Issue of U.S.Domestic Revenue Bond

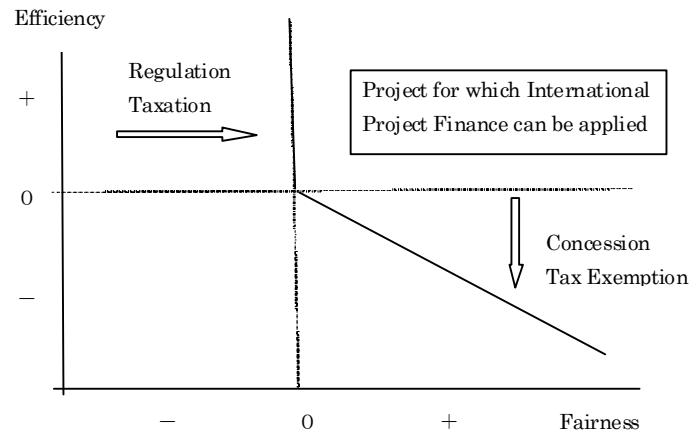
- Issuer: City and County of Denver, Colorado
- Issuing Style: Series 2010A Airport System Revenue Bonds
- Amount: Approximately \$115million
- Purpose: Denver International Airport (Refinance)
- Rating: A+ Outlook Stable (Fitch Feb.2010)

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### Conclusion—Economic efficiency and public fairness in economic development



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