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PROJECT FINANCE BRIEF HISTORY AND CURRENT USES (15 Minute Overview)

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My name is John Burget & I'm currently based in Houston. The purpose of this short overview is to provide you with a brief history of how project finance started in medieval times, followed by its many current uses in projects of all types and sizes worldwide.

DEFINITION: "NON-RECOURSE" (OR "LIMITED RECOURSE"):

- CREDIT STRENGTH BASED EXCLUSIVELY ON PROJECT REVENUES AND
- CONTRACTUAL COMMITMENTS OF PROJECT PARTICIPANTS.

First we'll start with a basic definition of "Non-Recourse" financing:

- Credit strength is based exclusively on project revenues.
- The project must have strong contractual commitments by key participants, including stiff penalties for delays or failure to meet stringent performance standards.
- Its geographic location must have effective laws and regulations to support a viable financial structure.
- Finally all projects must have sufficient early stage "seed money" to fund top-notch engineering, legal, and financial work to create a project that can obtain long-term funding at reasonable cost.

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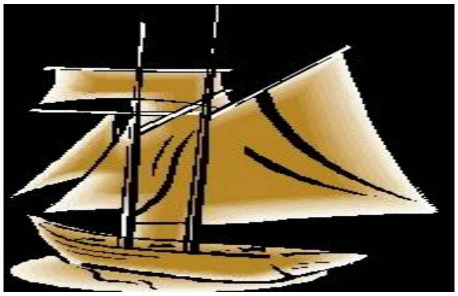
BRIEF HISTORY



- **17th and 18th Centuries: Dutch and British East India Cos. -- Funds for cargoes from distant places.**
- **Large financings of US railroads in the 1800’s.**
- **<u>First modern use in US:</u> Independent power projects (IPP’s) in 1980’s.**

- The earliest use of project finance was to acquire highly valuable products from distant places. This began at ancient Mediterranean centers of trade, and later was used by the British and Dutch East India Trading Companies to create large financial empires.
- In the USA project finance was used to build its first major railroads in the 1800’s.
- Its first modern use was for independent power projects (IPP’s) in the 1980’s.

Basic Elements:

- Generally for long-lived capital assets, both industrial and infrastructure projects, with proven technologies.
- Organizational structure a "Special Purpose Entity" with limited equity contributions by project sponsors.

Project finance is often applied to long-lived capital assets with proven technologies for power, energy and other infrastructure projects like ports and airports.

Each project is usually structured as a "Special Purpose Entity" with limited equity contributions by project sponsors.

•Sponsors and other key participants create a viable technical and creditworthy structure through multiple, highly explicit contractual obligations.

•Major participants must be "credit worthy".

- Key participants must be credit worthy so that investors will have a high level of confidence that the terms of all contracts will be fulfilled in all circumstances. There must be stiff financial penalties in these contracts for delay or failure of any part of the project to function in exact accordance with its performance guarantees.

US Independent Power Projects

- Public Utilities Regulatory Policy Act (PURPA) Upheld by US Supreme Ct 1983.
- Required traditional utilities to buy power from "Qualified Facilities" including all forms of renewable energy

- The first modern use of project finance was the development of independent power projects in the early 1980's. This began after the US Supreme Court upheld a Federal law requiring regulated electric utilities to buy power from what were then called "qualified facilities".
- These included all forms of renewable energy, and fossil fuel like natural gas if used in "cogeneration" or combined heat and power production. "CHP" doubled the energy recovery from the input fuel – totaling 80% in most such projects.
- For the next decade IPP's represented more than two thirds of all project financings in the USA.

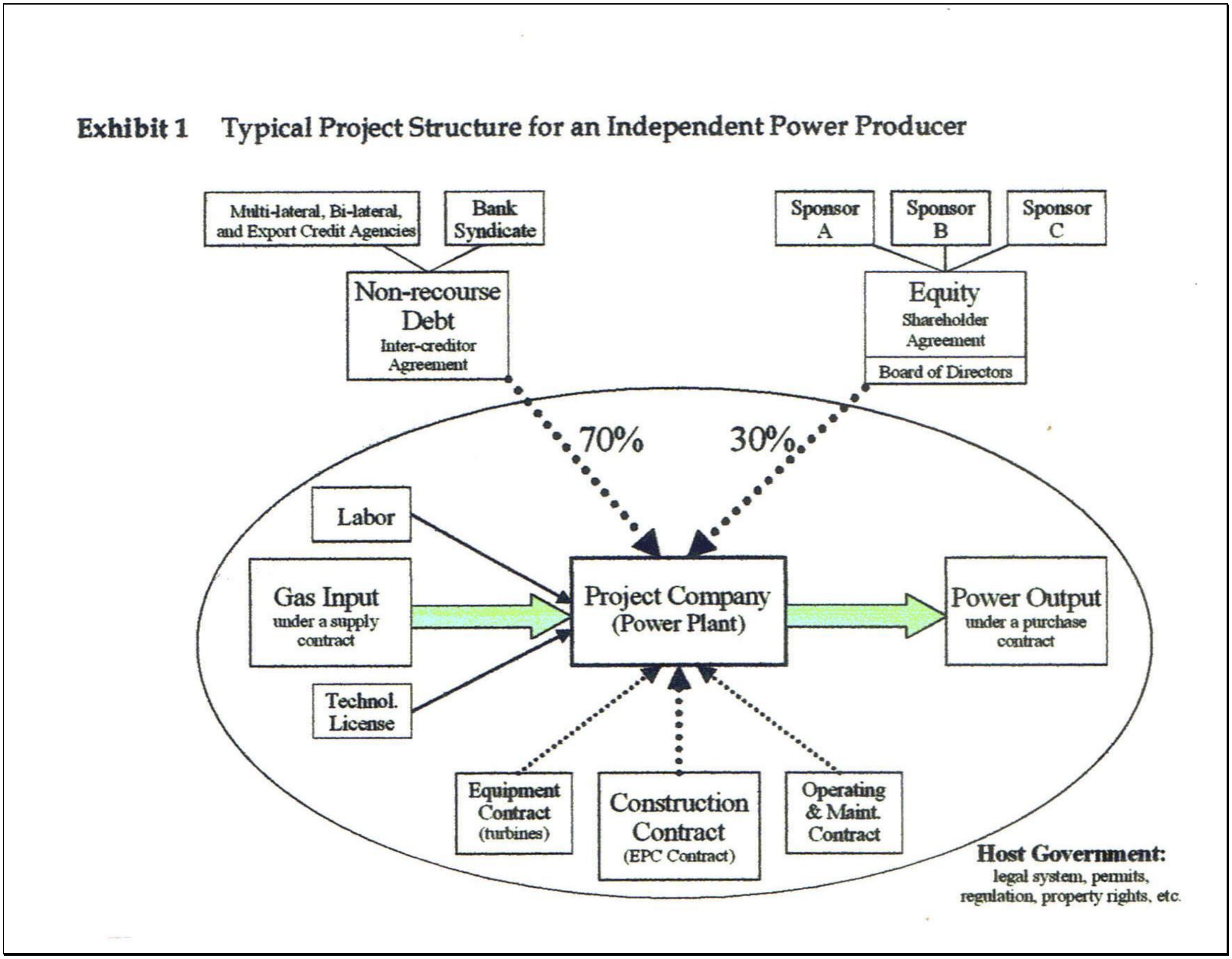


Exhibit 1 shows the complexity of a typical Special Purpose Entity. Note the importance of the non-recourse debt, fuel input and power output contracts, and a legally complete project company with sufficient seed money to cover engineering, legal and financial work. There must also be tough construction, equipment, and operation and maintenance contracts with strong performance guarantees.

- **<u>California</u> initially required utilities to sign <u>ten-year</u> Power Purchase Agreements (PPA's) with Qualified Facilities – but some large QF's failed when a new law later ended these PPA's**

- **<u>Without a long-term PPA</u> financing for any QF was extremely difficult,**

- **(Except for projects with <u>large tax benefits</u>, which often attracted investors with little concern for real economic returns.)**

- California initially required all conventional electric utilities to sign ten year power purchase agreements (PPA's) with qualified facilities known as "standard offer contracts". These had highly favorable pricing and made long-term financing of early technologies possible even for small projects.
- However some large QF's there failed when California ended these special contracts in the late 1980's.

US Tax-Exempt Revenue Bonds

IRS defines public power and other US projects eligible for financing with these bonds (including ports, airports, toll roads and other infrastructure)

These are all "project financings", since the bonds can only be repaid from project revenues.

- The IRS defines public power and several types of private company bonds as eligible for such financing if used for pollution control, ports, airports, waste-to-energy and certain other infrastructure projects.
- These are all "project financings" since the bonds can only be repaid from project revenues, even if they are issued by a specialized state government entity.

- **Most such bonds require an <u>independent engineering and economic feasibility study</u> to confirm their long-term financial viability.**

In the US, beginning in the late 1970's many <u>tax-exempt revenue bonds with complex structures earned AAA and AA ratings</u>,

Through guarantees from specialized insurance groups like Municipal Bond Insurance Agency (MBIA), AMBAC & FGIC.

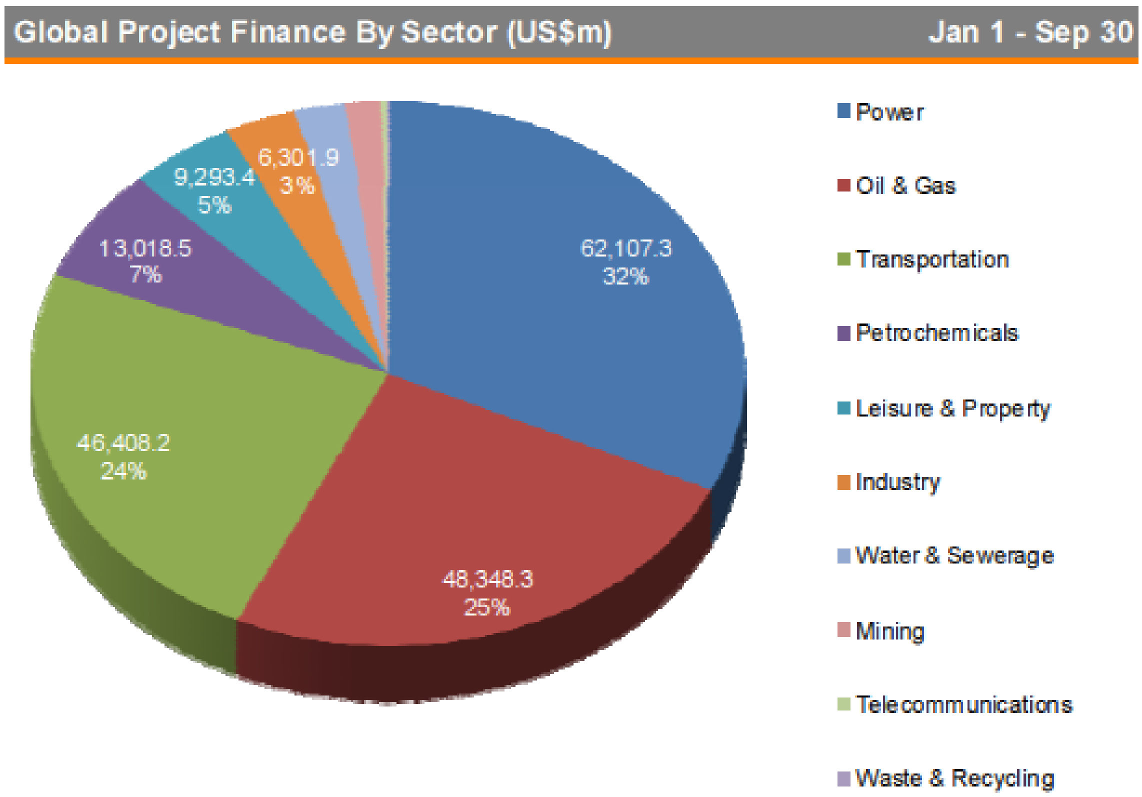
The total of all project bonds and similar bank loans reached $251 Billion USD for 461 projects worldwide in 2008, before the financial collapse that pervaded nearly all developed countries.

Overall project funding by 2020 is expected to reach $1-$3 Trillion each for India, Russia & Brazil, and possibly $9 Trillion in China -- Collectively called BRIC.

Recent Developments

- **Beginning in the 1990's, and throughout the global financial turmoil of the early 2000's, worldwide project financings evolved into a myriad of distinctly different structures like:**

- **Public-private partnerships (PPP's) and billions of dollars in specialized loans or guarantees from International Development Financial Institutions.**



GLOBAL PROJECT FINANCE BY SECTOR (US $ MILLION) - THOMSON REUTERS 2015

This pie chart shows Global Project Finance by Sector for the first three quarters of 2015 according to Thomson Reuters (Totaling more than $800 Billion USD). The ten sectors in the pie chart show the percentages in clockwise order of total loans and bonds for Power (32%), Oil & Gas (25%), Transportation (24%), Petrochemicals (7%), Leisure & Property (5%), and Industry (3%). The remaining 4% combines the sectors of Water & Sewerage, Mining, Telecommunications, and Waste and Recycling.

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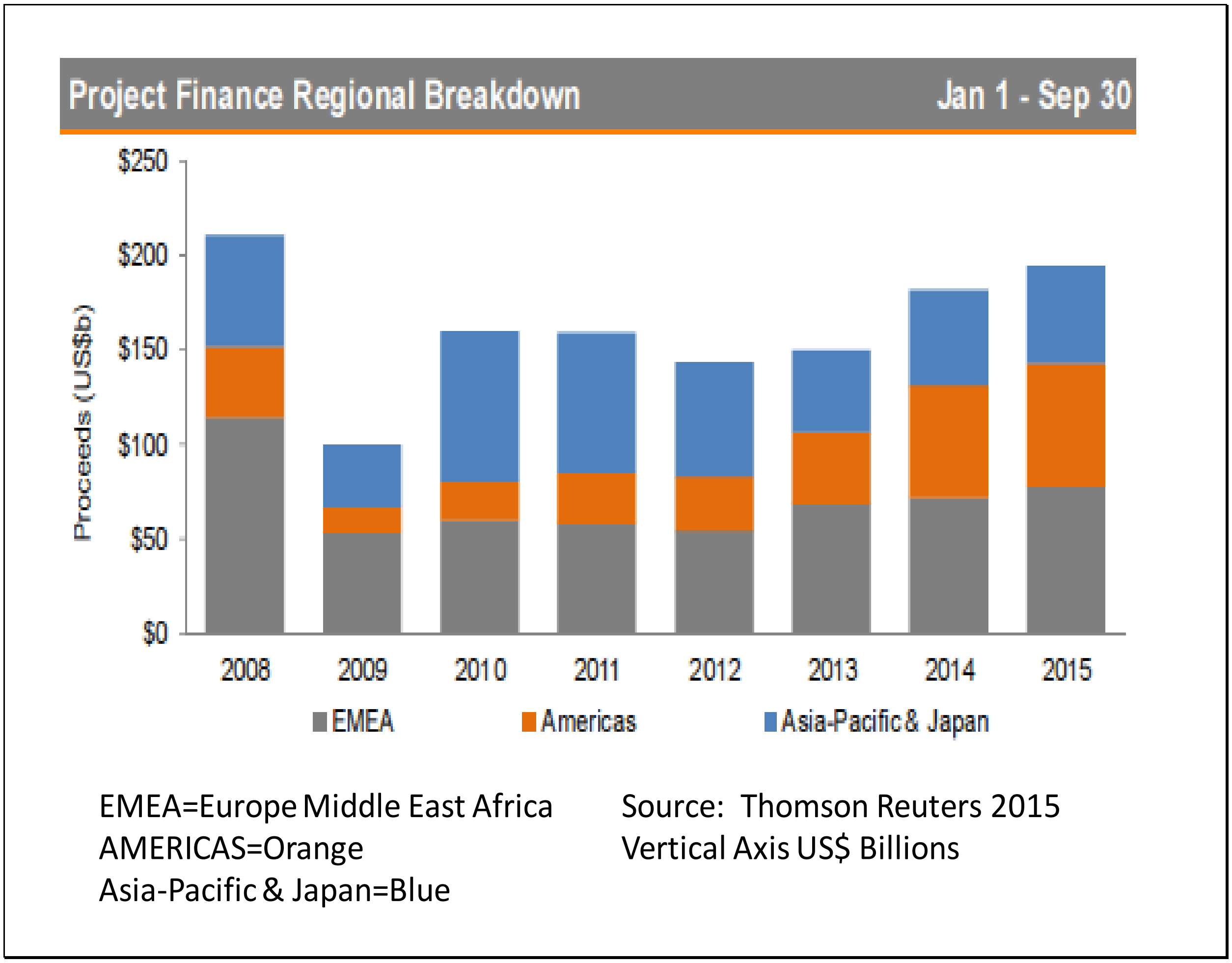

This final Exhibit shows total dollars for projects in different global regions for the first three quarters of 2008-2015, also from Thomson Reuters. The vertical axis is in billions of US$. The vertical bars are color coded gray for Europe, the Middle East & Africa (EMEA); orange for the Americas; and blue for Asia-Pacific & Japan.

Thank you for your time and interest.

I would greatly appreciate it if you would briefly Email me to let me know what you think of this presentation. I will treat in strict confidence any candid thoughts or personal questions you have. My professional experience as a project finance expert is best summarized in my LinkedIn profile, accessible from the last line on this page.

I hope you will also consider my separate 10 minute presentation entitled **"Project Finance Stories from Personal Experience"**, which I will send at your request as soon as I've received your reply to this presentation.

I greatly look forward to our soon getting better acquainted so that we might share in confidence any present issues or past experiences you wish to discuss. **I feel certain that we will mutually benefit from direct personal contact in strict confidence, with no obligation on your part.**

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