

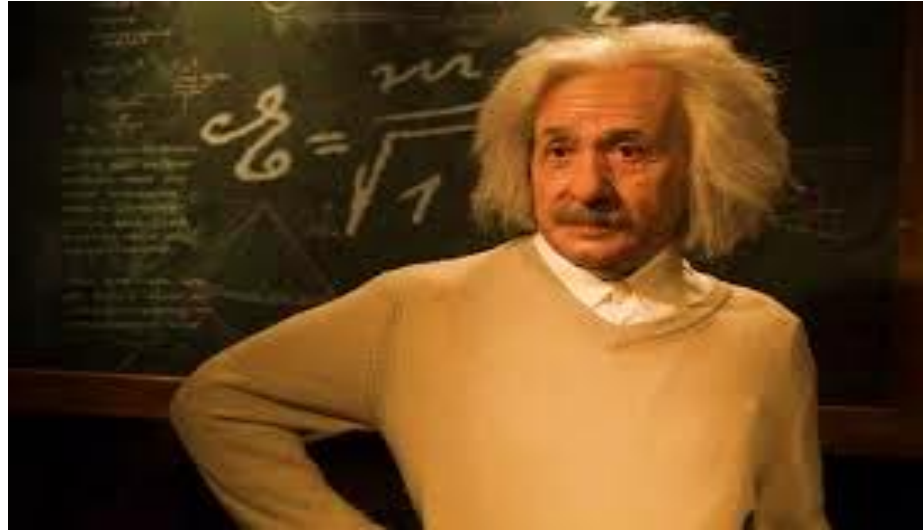
ABFC2016

ADVANCED BIOECONOMY FEEDSTOCK CONFERENCE
FOUR SEASONS HOTEL, MIAMI, FL – JUNE 6-8, 2016

Leveraging Supply Chain Investments

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YOU THINK YOU HAVE BUILT A PRETTY GOOD SUPPLY CHAIN

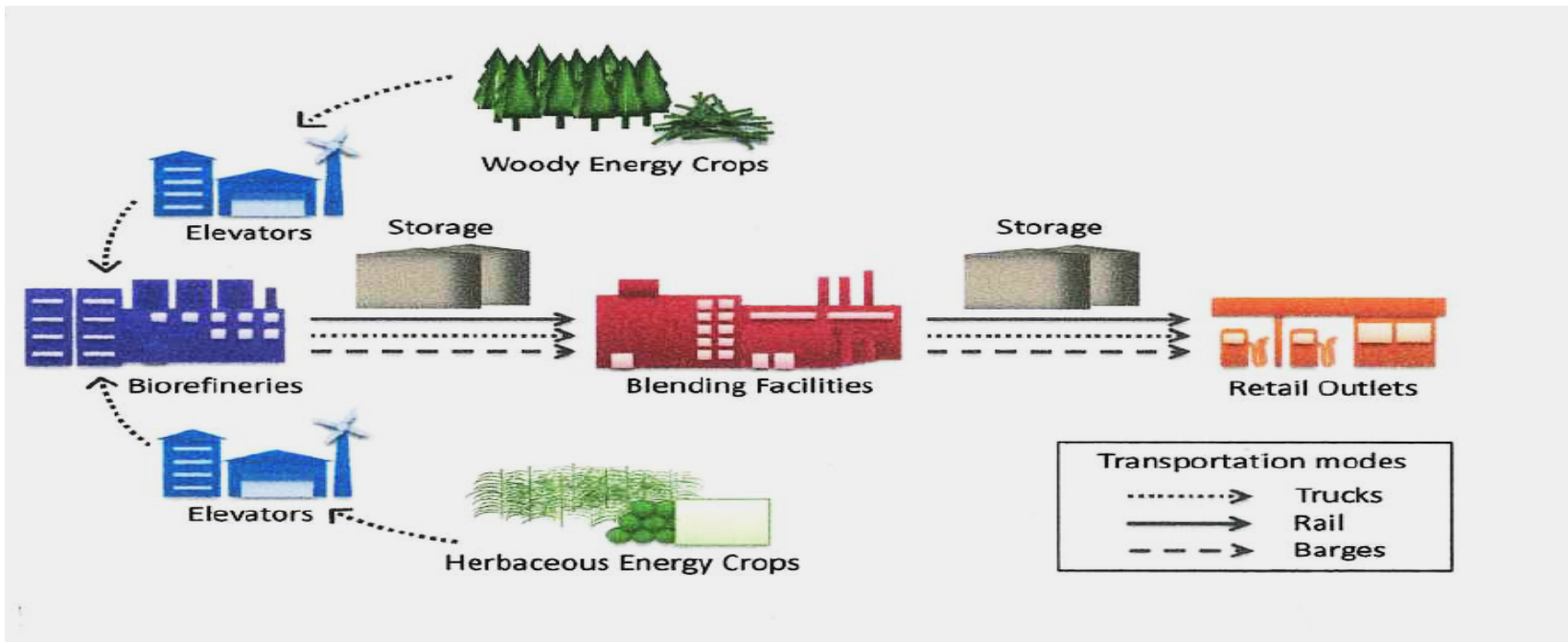


You have followed x's and o's of supply chain development that professionals have been preaching for years. Now it's time to leverage your supply chain investment to see if debt and equity think you did a good job.

This presentation focuses on the institutional debt and equity markets' review and analysis of biomass supply chains.

BIOFUEL SUPPLY CHAIN

- ▶ A biofuel supply chain encompasses all activities from feedstock production, biomass logistics of storage and transportation, biofuel production, and distribution to end consumers.
- ▶ Similar to most other supply chains, a biofuel supply chain involves various distinct stages with different ownership entities such as farmers, biorefineries, distributors, and transportation/logistics companies, and its performance highly depends on the network design, planning, and operations.



BIOMASS PROJECT FINANCE

- ▶ In the early stages of developing any new technology the lab – pilot – demo progression of the technology is the key focus.
- ▶ Only when the private equity partners or bond underwriters say we can't finance your project without a guarantee of a reliable, consistent, industrial quality feedstock does the appropriate amount of attention go into the development of feedstock supply.
- ▶ In many conversion processes, feedstock costs can be over half of the operating cost of a commercial scale facility – a fact that validates the capital market's insistence on proving the reliability of the biomass supply.

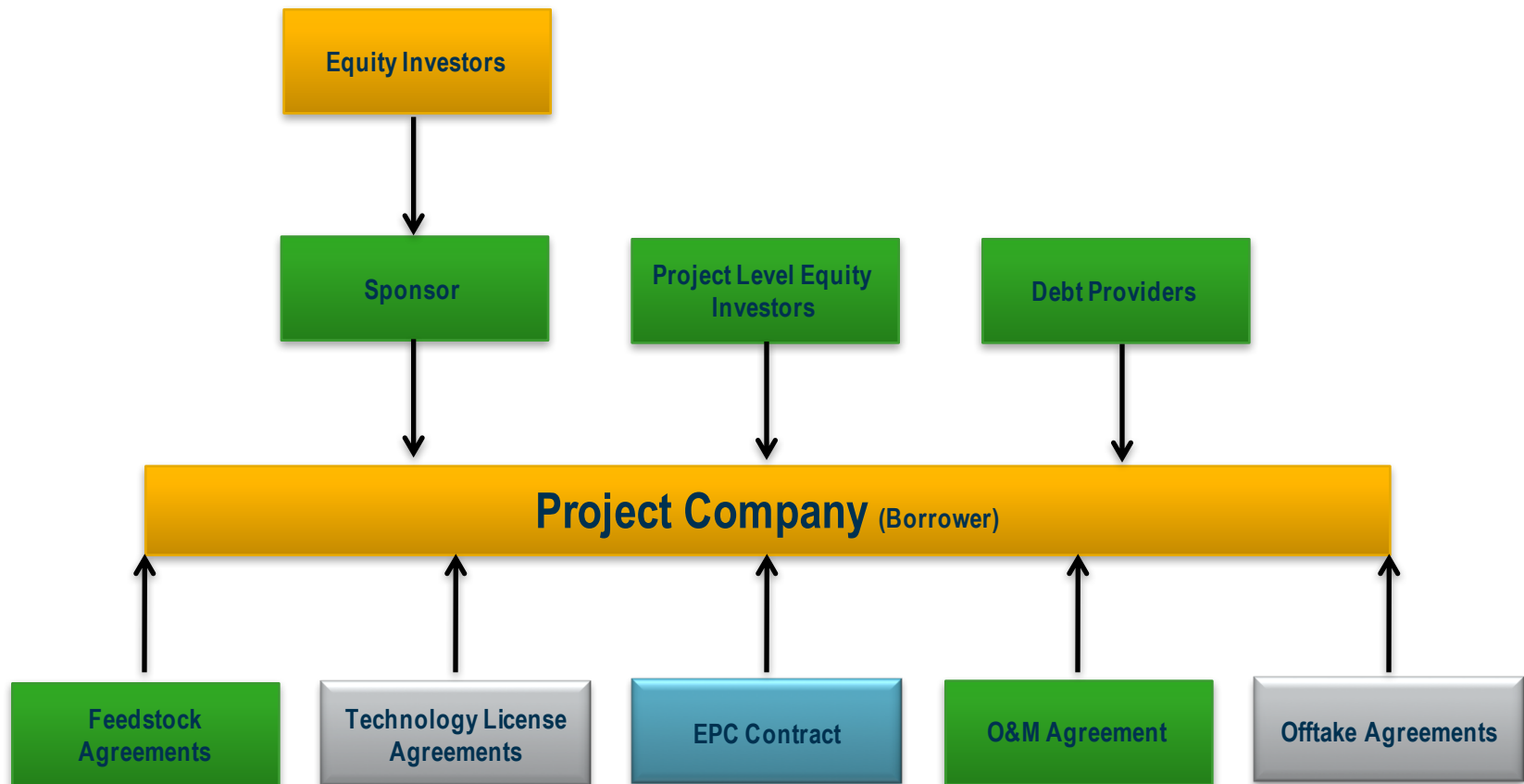
BANKABLE SUPPLY CHAINS

- ▶ Long-term quantity supply agreement
- ▶ Long-term fixed price supply agreement (or at least a priced ceiling)
- ▶ Credit quality (or lack thereof) of feedstock suppliers
- ▶ Supply Chain risk mitigation – Stockpiles, input flexibility, multiple suppliers, insurance
- ▶ Robust Feedstock Consultant's Report
- ▶ Sustainability
- ▶ Logistics considerations
- ▶ Area specific issues

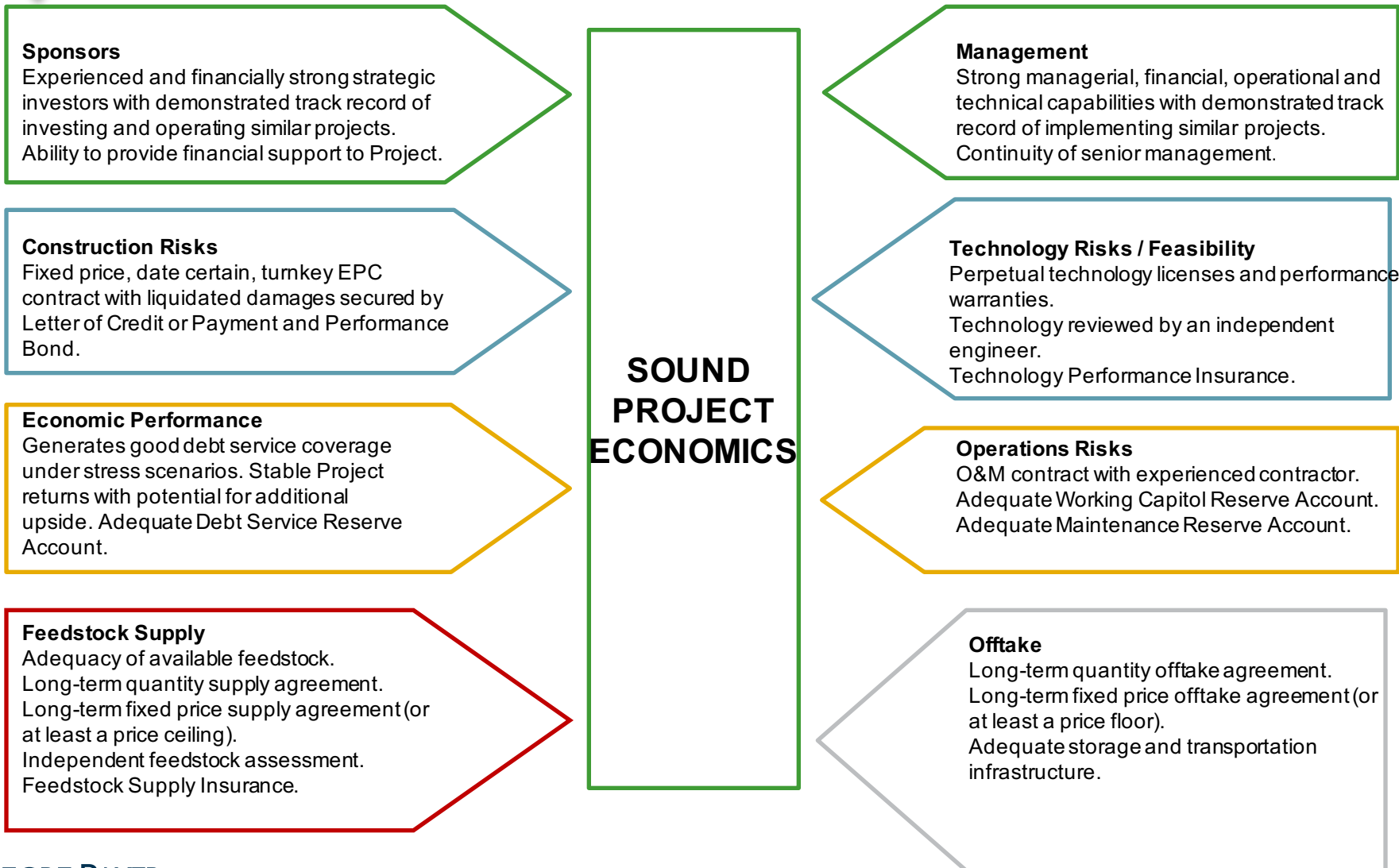
RATING AGENCY REQUIREMENTS (FitchRatings)

- ▶ If a resource or product is supplied to run the project, the Agency considers the availability of the resource product.
- ▶ If liquid markets exists for required commodities, Fitch considers the potential for temporary supply constraints rather than long term availability deficits. Where relevant, this includes an analysis of the price at which a substitute resource or product is availability.
- ▶ In projects were supply risk is high, and markets are characterized by illiquidity, Fitch may stress the costs of a volatile commodity.
- ▶ Supply risk may be mitigated by long term supply contracts with suppliers having a credit quality commencing with the rating of a debt.

PROJECT FINANCE SCHEMATIC

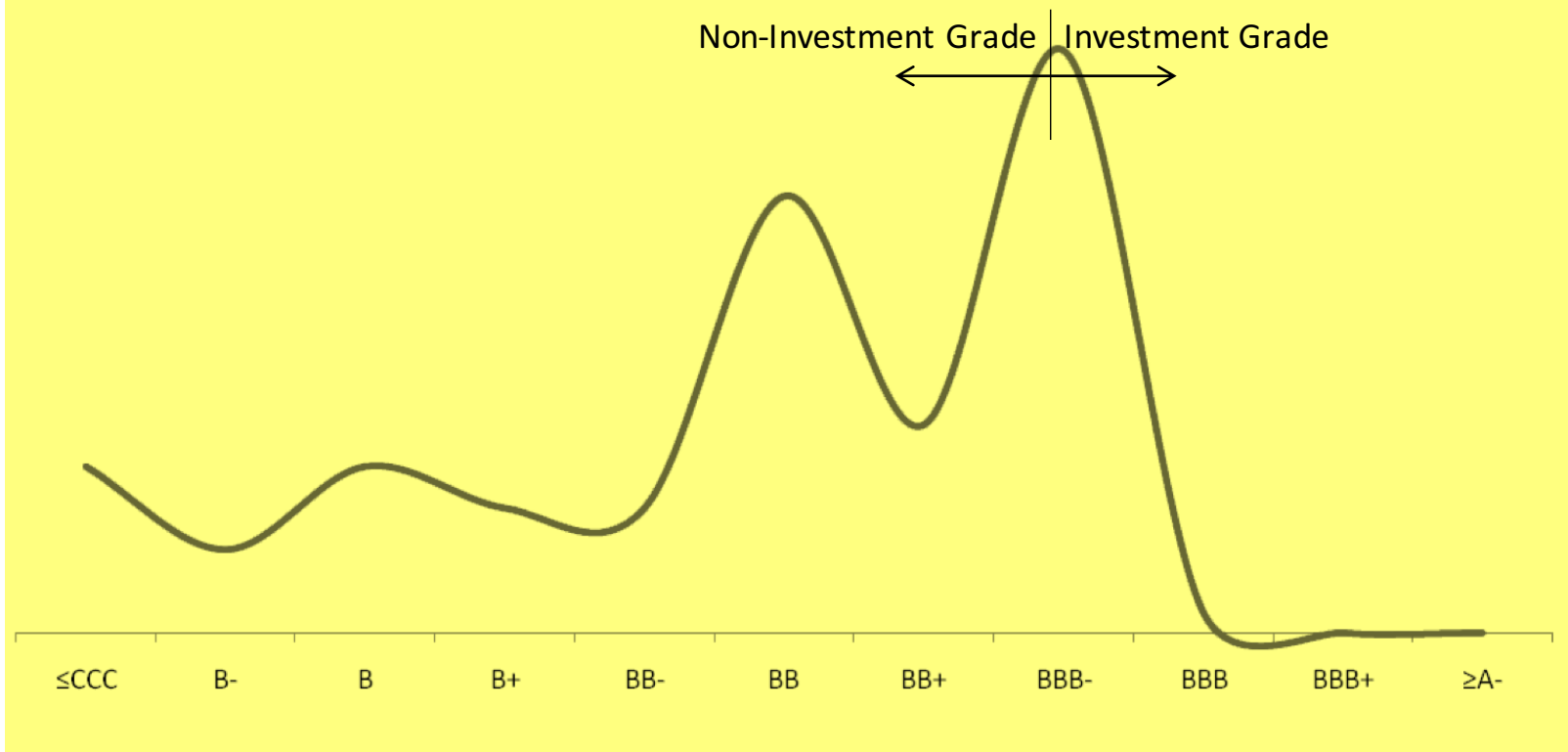


STRATEGIES IN READYING RENEWABLE PROJECTS FOR FINANCING



RENEWABLE ENERGY PROJECT RATINGS

Project Finance Renewable Portfolio Rating Distribution



Source: Fitch Renewable Energy Forum 6/23/11

Note: Includes Public, Private Ratings and Credit Assessments

RATING AGENCY CRITERIA FOR PROJECT FINANCE

Standard & Poor's – www.standardandpoors.com

Moodys Investors Service – www.moodys.com

Fitch Ratings – www.fitchratings.com