

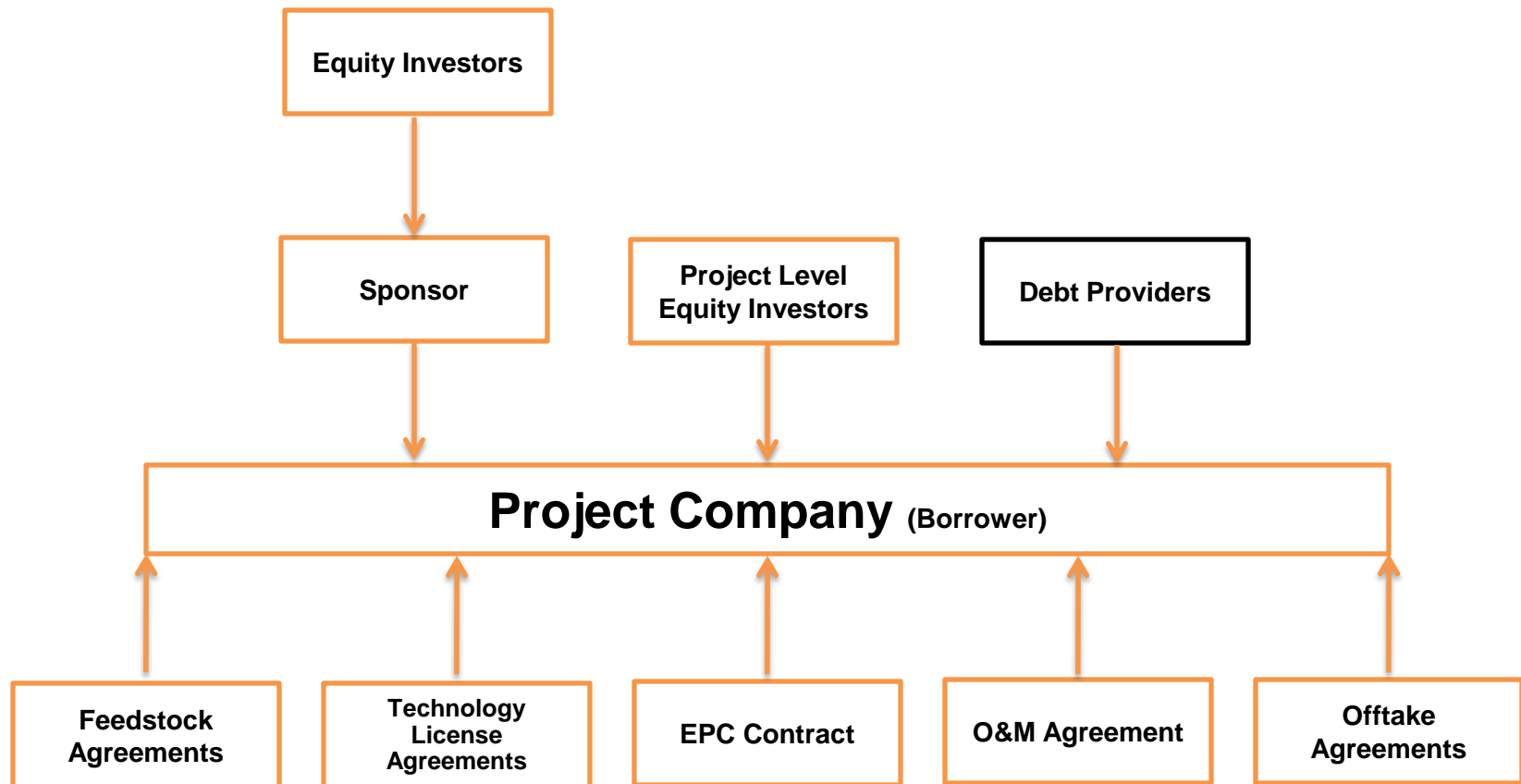


Financing Biorefinery & Bioenergy Projects

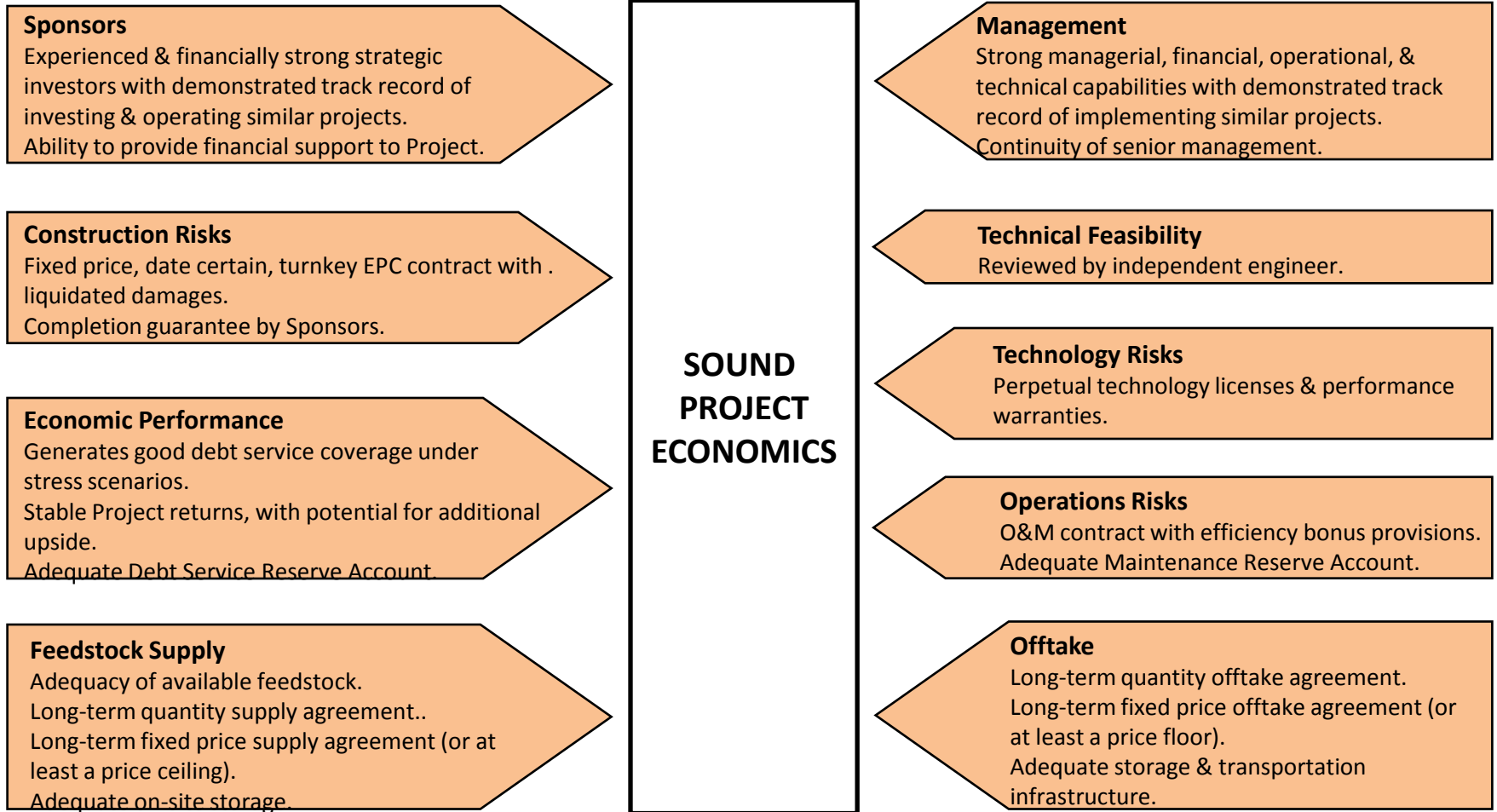
SternBrothers&Co.
INVESTMENT BANKING SINCE 1917

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Typical Project Finance Schematic



Project Structure Must Address Project Risks

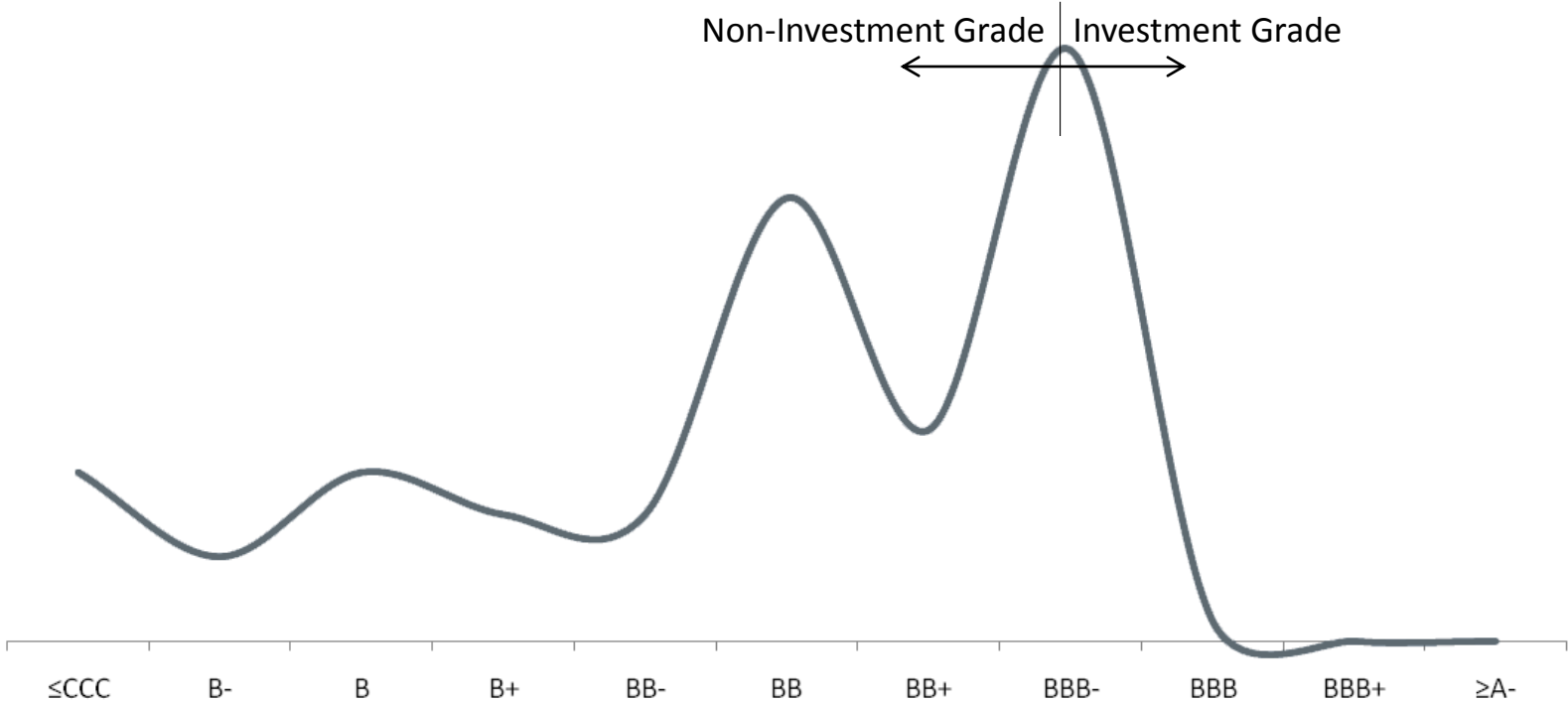


Current State of Bank Market

- New global capital rules & lower risk tolerances discourage banks from funding biomass conversion projects.
- New Basel rules will make it harder for banks to hold loans for large projects.
- Renewable energy projects on a bank's balance sheet = illiquidity + long tenor + (potential) technology risk.
- Emerging market institutions are expected to replace traditional European & U.S. project finance banks.
- The capital market (the bond market) is also a source of capital to replace bank debt as long-lived project assets can be matched with long-lived liabilities.
 - MidAmerican Energy (Berkshire Hathaway) recently sold \$850 million of senior unsecured debt (Baa3/BBB-) due 2039 to fund its \$2.4 billion Topaz Solar project in California

Renewable Energy Project Credit Quality

Project Finance Renewable Portfolio Rating Distribution



Source: Fitch Renewable Energy Forum 6/23/11
Note: Includes Public, Private Ratings and Credit Assessments

Successful Financing Requires Pragmatic Approach

Ultimate objective of Sponsors is to maximize non-recourse debt while providing adequate equity to protect project debt investors

- Trade-off between time, cost and optimization of other Sponsor objectives
- Decisions reflected in economic terms of deal (interest rate, term, reserves, leverage, etc.)

Feedstock Supply

- Long-term *quantity* supply agreement
- Long-term *fixed price* supply agreement (or at least a price *ceiling*)
- Adequate on-site storage

Offtake

- Long-term *quantity* offtake agreement
- Long-term *fixed price* offtake agreement (or at least a price *floor*)
- Adequate storage & transportation infrastructure

Technology Risks

- Commercialized technology reduces investor risk
- Independent engineer's report validating process

Successful Financing Requires Pragmatic Approach

Construction Risks

- Fixed price, date certain, turnkey EPC contract with liquidated damages
- Completion guarantee by Sponsors
- Insurance/warranties on parts, availability, & general failure relating to proprietary technology

Operations Risks

- O&M contract with efficiency bonus provisions
- Adequate Maintenance Reserve Account

Economic Performance

- Generates good debt service coverage under stress scenarios
- Stable project returns, with potential for additional upside
- Adequate Debt Service Reserve Account

Sponsors & Management

- Ability of Sponsors to provide completion guarantees
- Adequate working capital
- Continuity of senior management

Risk Mitigation – Biomass Conversion Project

Issue	Risks Mitigated By:
Biomass Conversion Technology	Identical technology in use at other sites using similar feedstock
EPC Contractor	Well-known, experienced EPC contractor to provide a GMP contract with a payment and performance bond with liquidated damages
3 rd Party Technology and Feedstock Assessments	Technology risk mitigated by independent engineer report Feedstock availability addressed by wood market consultant
Operations Costs	Cost of operations and maintenance are known from operation of similar facilities, O&M reserve in place upon COD of the project, O&M services provided by the EPC contractor
Feedstock Agreement	Multi-year feedstock agreements in place with provider(s) with sufficient volumes and price definition
Product Off-take Agreement	Long-term off-take agreement in place with investment grade buyer(s) for 100% of production with reasonable price definition
Protection of project debt investors	Debt service reserve in place at financial close, required debt service coverage ratio and cash traps, project finance waterfall