SULLIVAN & CROMWELL LLP

Project Finance Workshop

An Introduction to Project Finance for Oil, Gas and Pipelines

April 25, 2007

Introduction

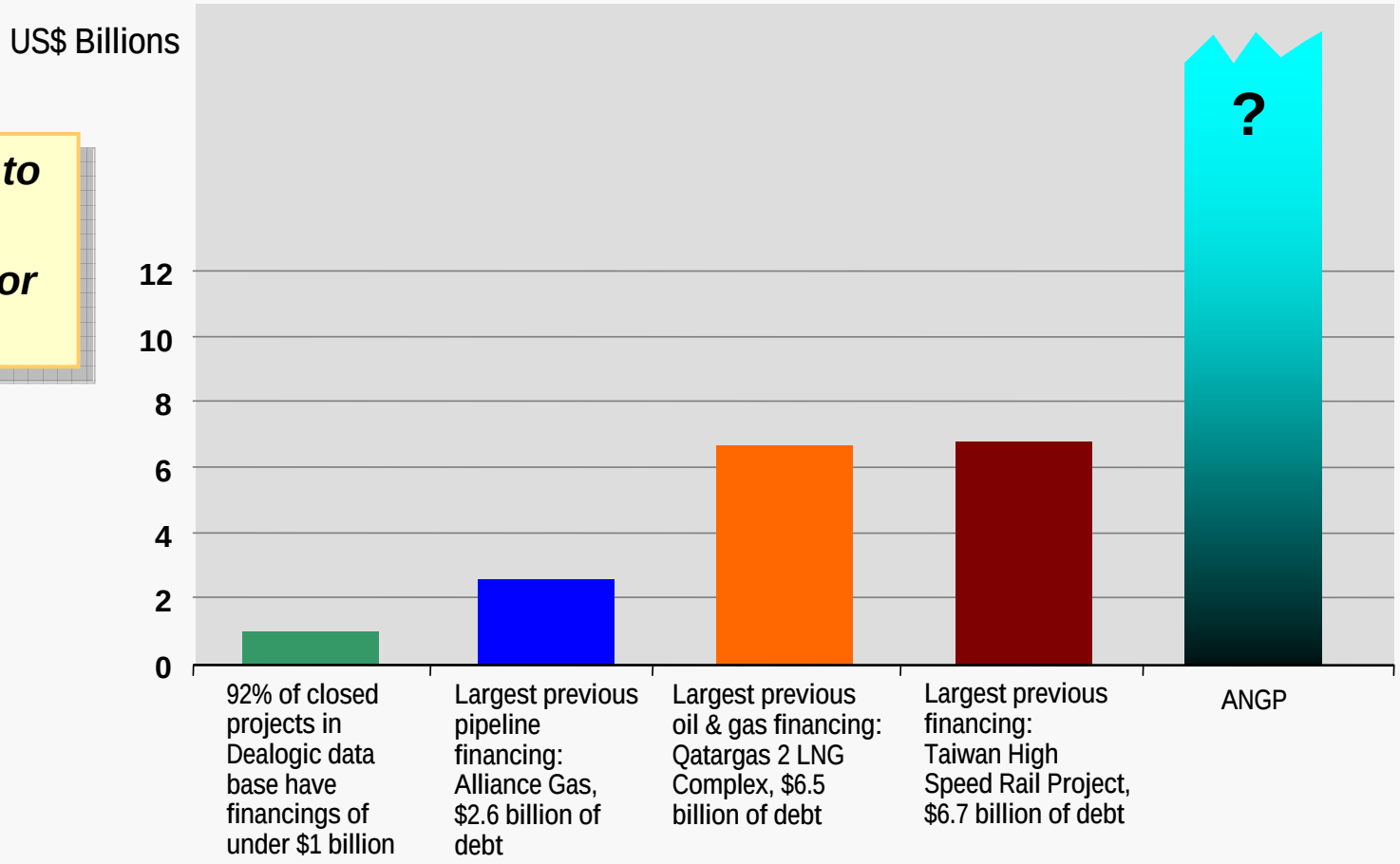
Outline

- What is Project Finance?
- Risk Allocation and Mitigation
- The Current Project Finance Market
- Building Blocks of a Typical Project Financing
- Project Finance for Oil, Gas and Pipelines

Introduction

- Introductory level
- The problem of precedent

Premature to talk about specific financing for ANGP



Introduction

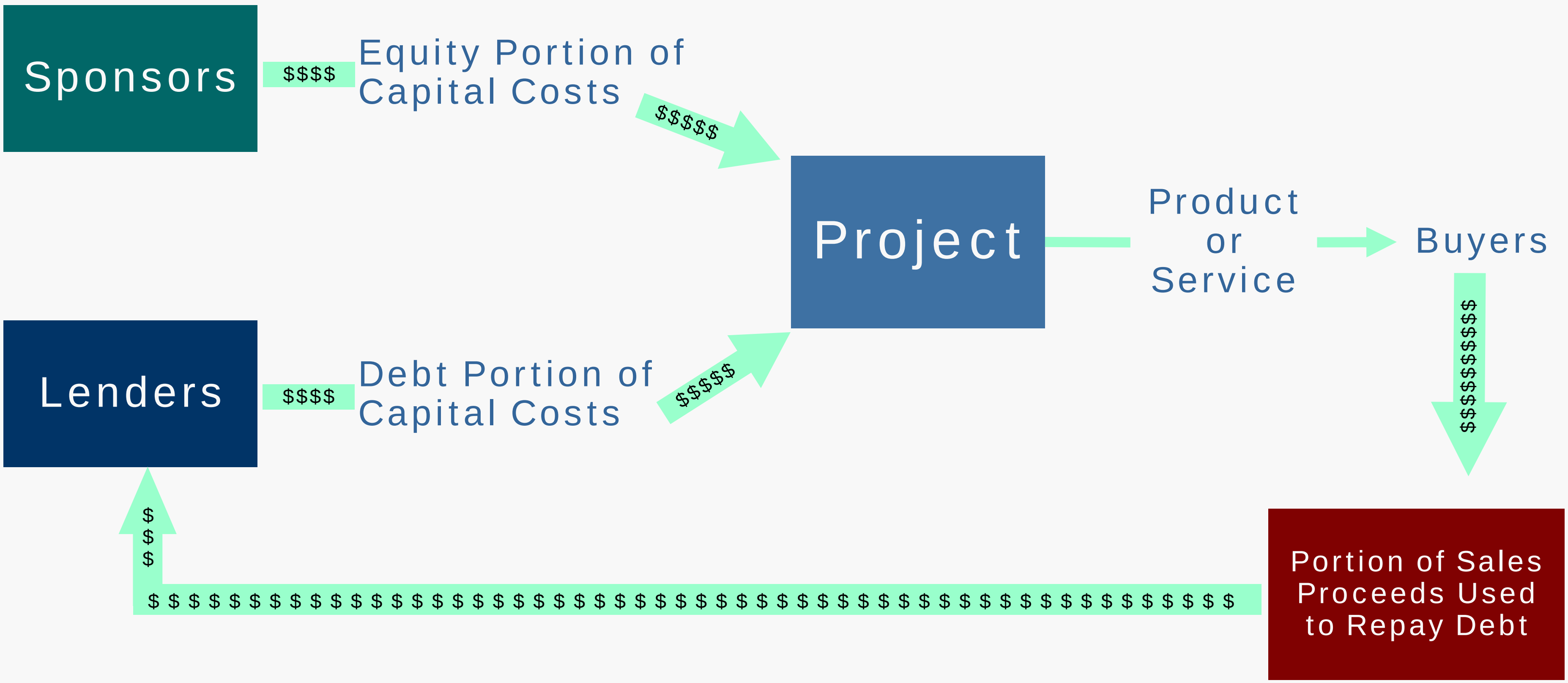
Key Points

- Premature to discuss any specific ANGP financing because project design and scope, identity of sponsors, nature of commercial contracts, sponsor financing objectives, rules for use of Federal guarantees, market conditions at time of financing and other factors are all unknown
- Can talk about main drivers of oil, gas and pipeline financing generally, to assist understanding of how development of ANGP might influence financing

Section 1

What is Project Finance?

1. What is Project Finance?



1. What is Project Finance?

- At one point virtually synonymous with power plant financing
- Today, project finance is not a single financial product, but different products for different markets:
  - e.g., airplanes, toll-roads, upstream oil, power plants – all very different products, markets and practices

Beware of generalizations

1. What is Project Finance?

- What do these different "project finance" products and markets have in common?

  NOT corporate finance

- In corporate finance:
  - The borrower is usually a diversified enterprise whose future net cash flows can be difficult to predict
  - The lender has full recourse to all present and future assets and revenues of the borrowing group
  - The structure and covenants of the major corporate finance debt products are highly standardized

Instead, Project Finance is ...

- A tailored product
- A highly structured product
- A non-diversified credit
- Often “greenfield”
- A cash-flow-based credit
- Usually based on contractual commitments
- Limited recourse
- A tool whose purpose is sometimes risk-sharing and risk-mitigation, as well as fund-raising

Project Finance is …

- *A tailored product*
  - Debt structure and terms crafted to reflect the risk and economic profile of the specific project
  - In contrast, most other financial products (e.g., high yield debt, investment grade bonds, private placement debt) have highly standardized features and covenants

Even in the most active parts of market, e.g. U.S. private power, all attempts to standardize terms and conditions have failed.

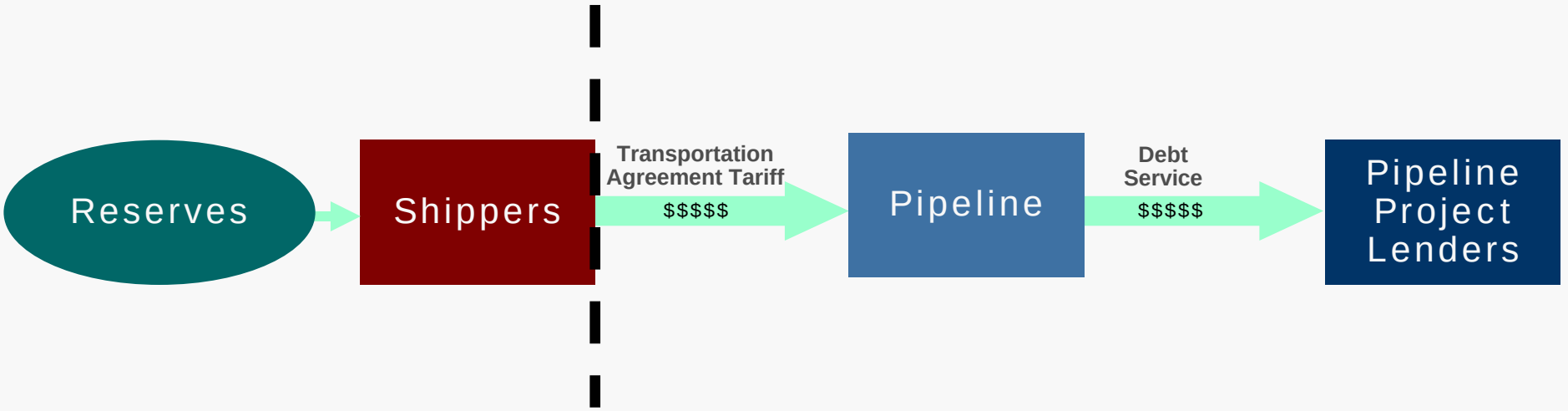
Project Finance is …

- *A highly structured product*
  - Project loans typically involve structural elements such as
    - completion support
    - account structures
    - off-take commitments
    - security interests
    - project covenants and
    - structured remedies

    that differ from those commonly found in corporate credits.
  - These structural elements are crafted to satisfy sponsor objectives and credit concerns and to match the risk profile of the specific project

Project Finance is …

- *A non-diversified credit*
  - One business, one product, one committed source of cash flows
  - But, also indirectly a function of the value chain that lies "behind" the project:
    - contractual commitments by customers
    - and all the real-world factors that determine if those commitments will be met

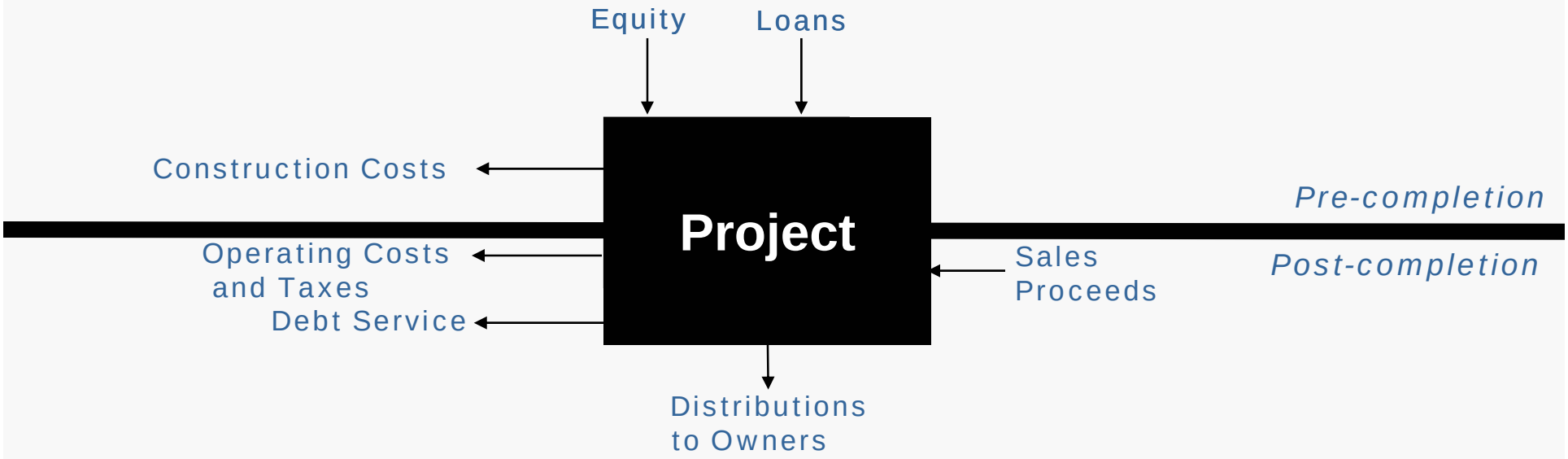


Project Finance is …

- *Often "greenfield"*
  - When loan is disbursed, business does not exist
  - In "greenfield" project — threshold risk is whether the project can get
    - built on time,
    - within budget, and
    - will work as promised, minimizing likelihood of force majeure events
  - Lenders generally unwilling to take entire unmitigated completion risk — sponsors always bear primary, or "first layer" of risk through equity and/or completion support
  - Many projects fail because adequate completion support is not available

Project Finance is …

- *A cash-flow-based credit*



- Primary credit metrics are cash-based:
  ratio of "cashflow available for debt service" to debt service

Project Finance is …

- *Usually based on contractual commitments*
  - Contractual commitments are generally in an amount sufficient to cover debt service and an agreed "cushion," and for a term no shorter than term of debt
    - Examples
      - Power plant: power purchase agreement
      - Pipeline: transportation agreements
    - Exceptions
      - Projects that produce "terminal market" commodities (copper, market crude oil)
      - There is a limited appetite for "merchant risk" (market risk) in deep and well understood markets (principally electric power)
  - *Contractual commitments are only as good as the parties behind them.*

Project Finance is …

- *Limited recourse*
  - "General Recourse" – means all of the present and future assets and revenues of the borrowing group are available to satisfy the debt.
  - "Limited Recourse" – means that only specified assets or revenue streams are available to satisfy the debt – neither borrower nor its affiliates "owes" the debt if it cannot be satisfied from the agreed assets or revenue stream.

Project Finance is …

- *A tool whose purpose is sometimes risk-mitigation and risk-allocation, as well as fund-raising*
- As such, it sometimes enables the project by
  - providing some partners with necessary funds,
  - lowering financing costs,
  - mitigating or sharing risks,
  - strengthening the project through involvement of financing "partners"

Summary of Main Points

- Hard to generalize – different for different types of projects
- Tailored and structured for the particular project
- Following completion, loans for repayment look only to project cash flows, typically based on contractual commitments
- Often serves important purposes in addition to simply raising funds

Section 2

Risk Allocation and Mitigation

Key point

- Sponsors always bear all risks on equity investment
- Sponsors bear primary risk of loss – 100% loss of equity investment before first dollar of loss on debt

The sponsors' economic stake is the foundation of the credit — not just a cushion against loss, but the basis for the lenders' expectation that the sponsors will be well-motivated to make the project a success

Key point (cont'd)

- Traditional maxim: "Project finance is a bet on the sponsors."
  - Lenders expect "voluntary" fix of post-completion problems because of financial (equity) stake, strategic factors and/or reputational risk.
  - This leads to lender focus on
    - Size of equity stake and leverage
    - Operating experience
    - Financial strength
    - Strategic story

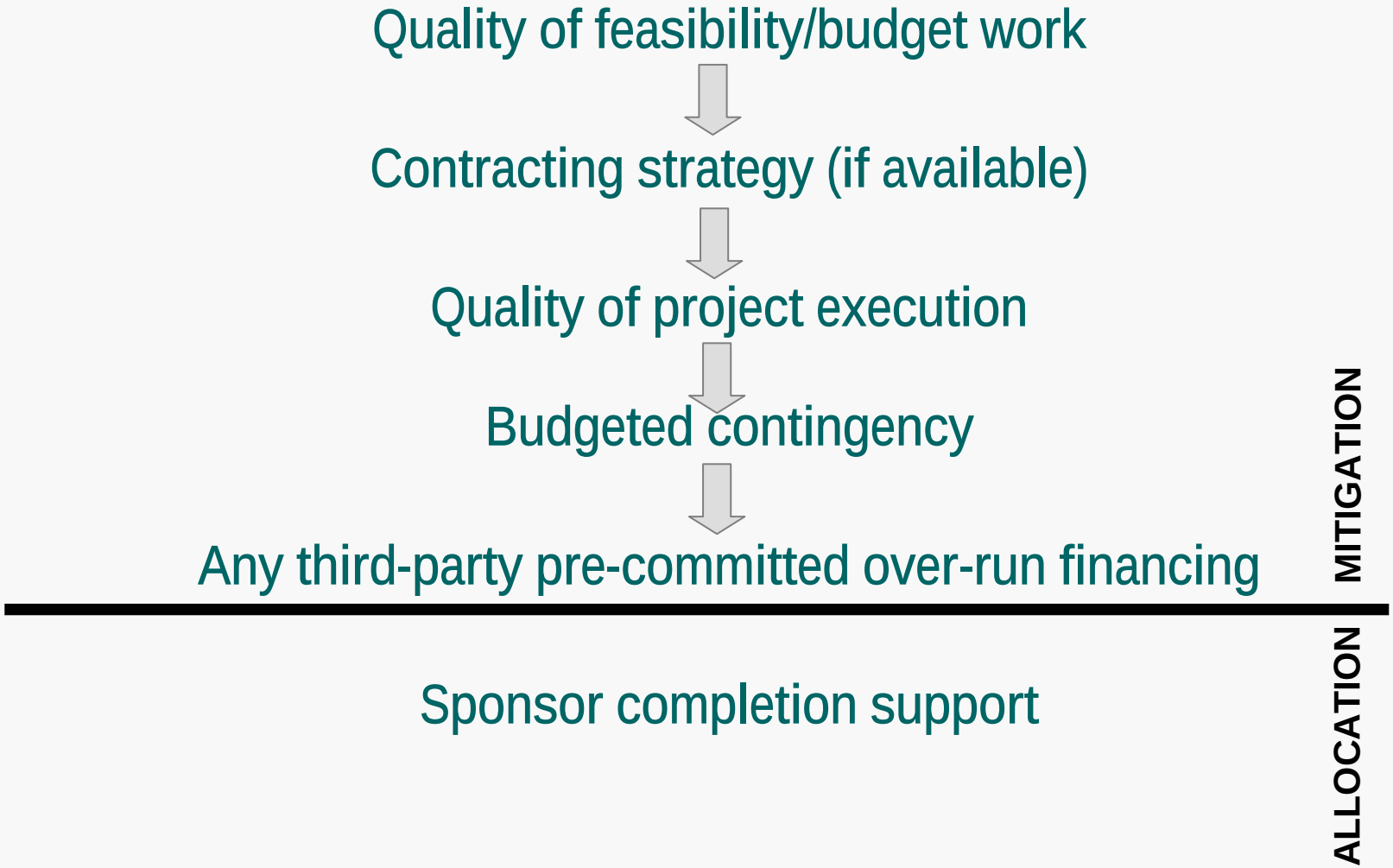
2. Risk Allocation and Mitigation

- Within the debt portion of the investment, project finance sometimes allocates risk of loss to those best able to bear it
- Examples:
  - Price/market risk — often borne by buyers under committed off-take contracts, then borne by lenders
  - Political — sometimes borne by political risk insurers
  - Tax/regulatory — often mitigated by host government through stability assurances
  - Construction/completion — primarily borne by project sponsors
  - Operational — primarily borne by project company

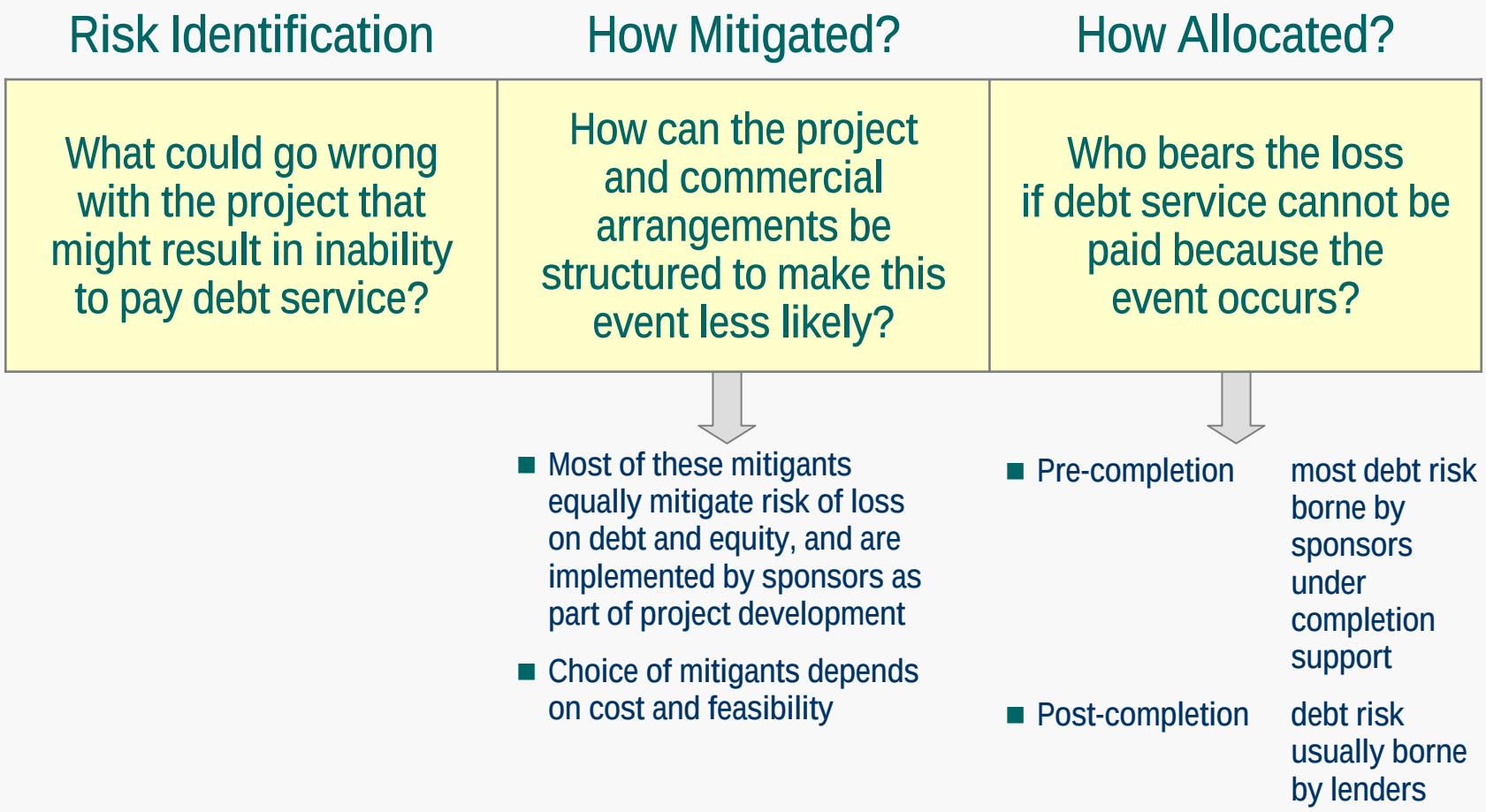
Consistent with general market practice, the legislation authorizing federal guarantees for the Alaska Natural Gas Pipeline specifically contemplates some form of completion support from project sponsors

2. Risk Allocation and Mitigation

- Examples: Mitigation and Allocation of Completion Risk



The Project Finance Risk Matrix



Risk Allocation Takes Place in a Three Step Process

In A Properly Structured Project:

Reserves and Market Are Necessary, BUT

Decisions regarding

Project Structure and Commercial Arrangements (especially contractual commitments)

define → Project Credit

which in turn allows development of → Finance Terms and Conditions

The Federal guarantee legislation recognizes primacy of commercial decisions by providing that no credit supports shall be required other than those resulting from commercial requirements of project owners.

Summary of Main Points

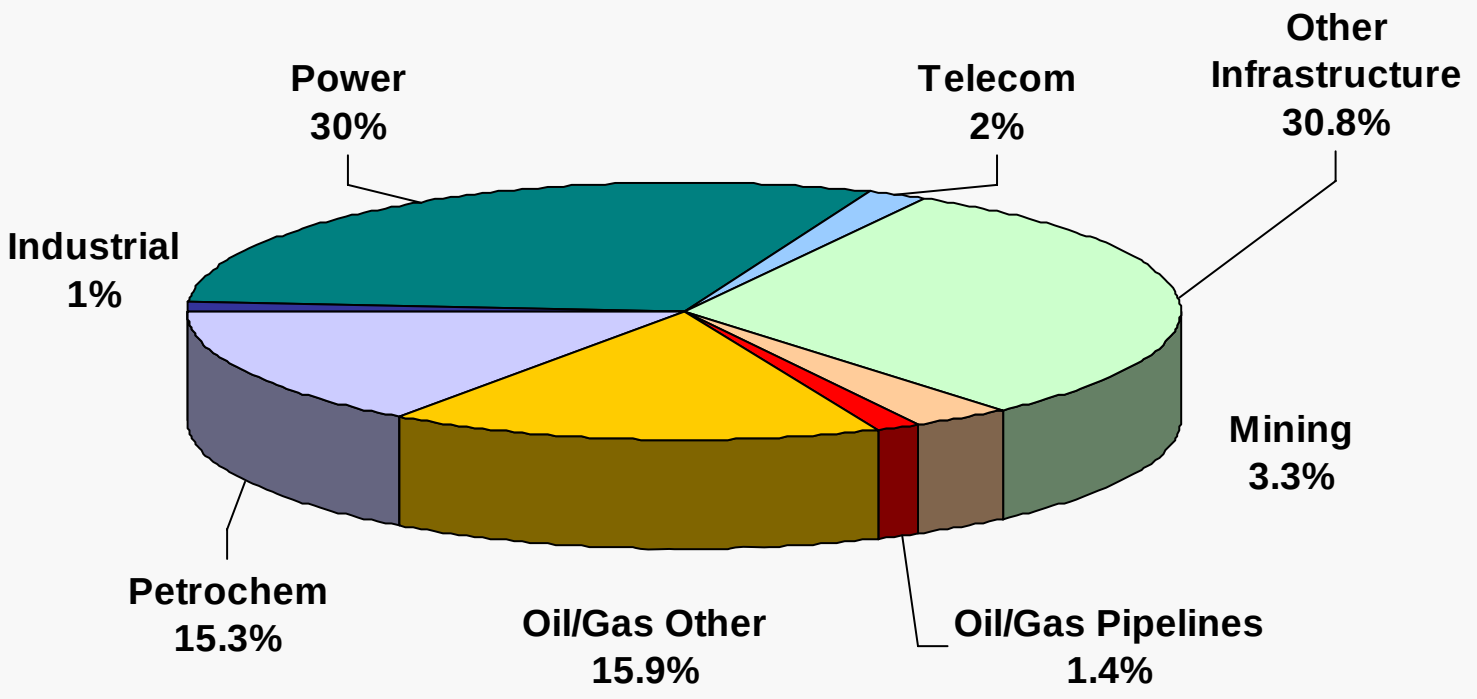
- Project finance involves sharing risk of project failure, but equity sponsors always bear first risk of loss
- Project development and operating experience of sponsors, strength of their balance sheets, strategic importance of the project, size of the sponsor equity investment, and strength of contractual commitments are most important factors considered by lenders
- Some risks are mitigated or allocated to others through project agreements
- Finance terms and conditions must follow, and not precede, project structure and commercial arrangements

Section 3

The Current Project Finance Market

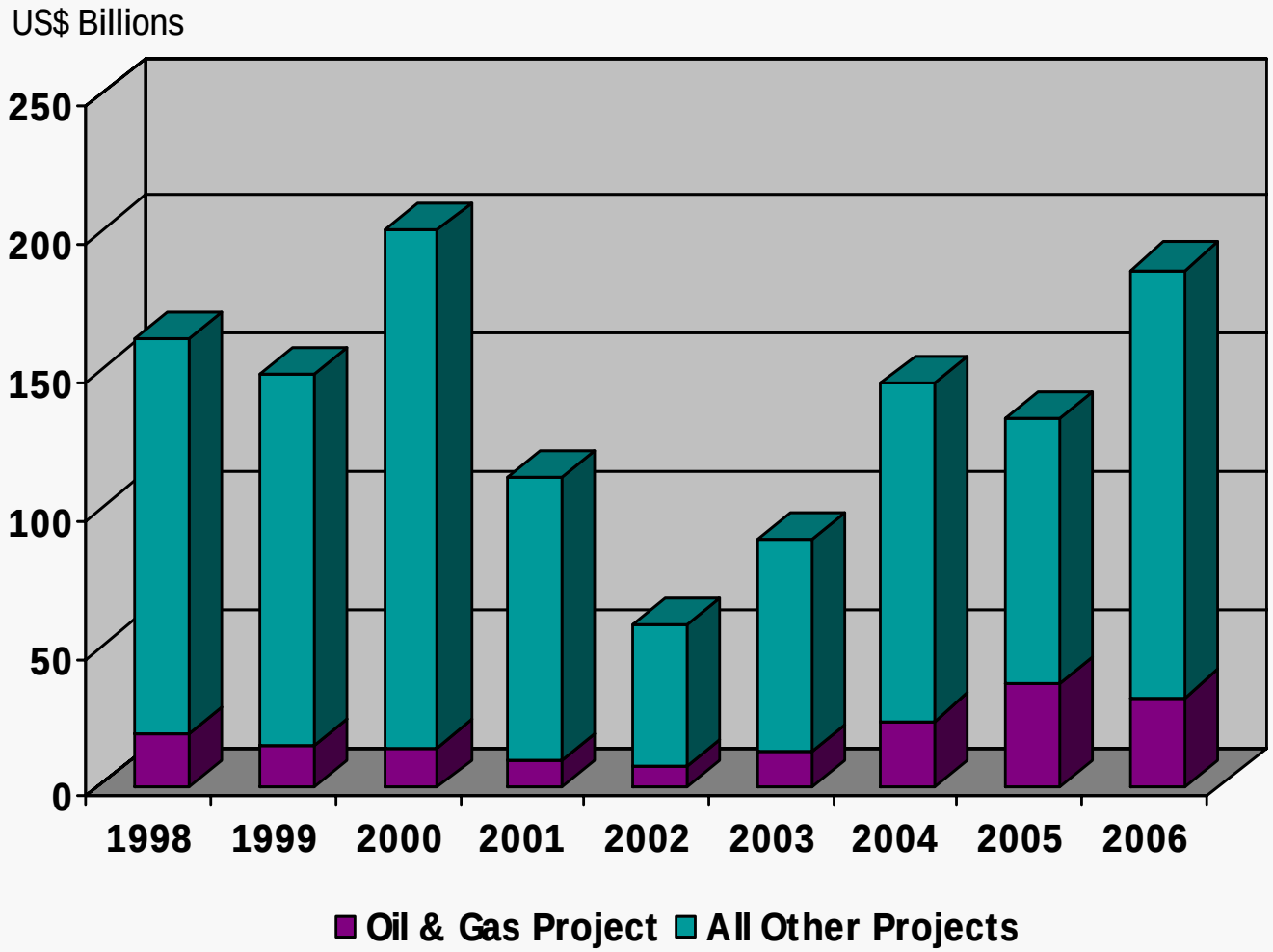
Who uses PF?
Project Debt by Industry: 2006

2006 Global Volume of Project Debt: US$ 186.8 billion



Source: Dealogic

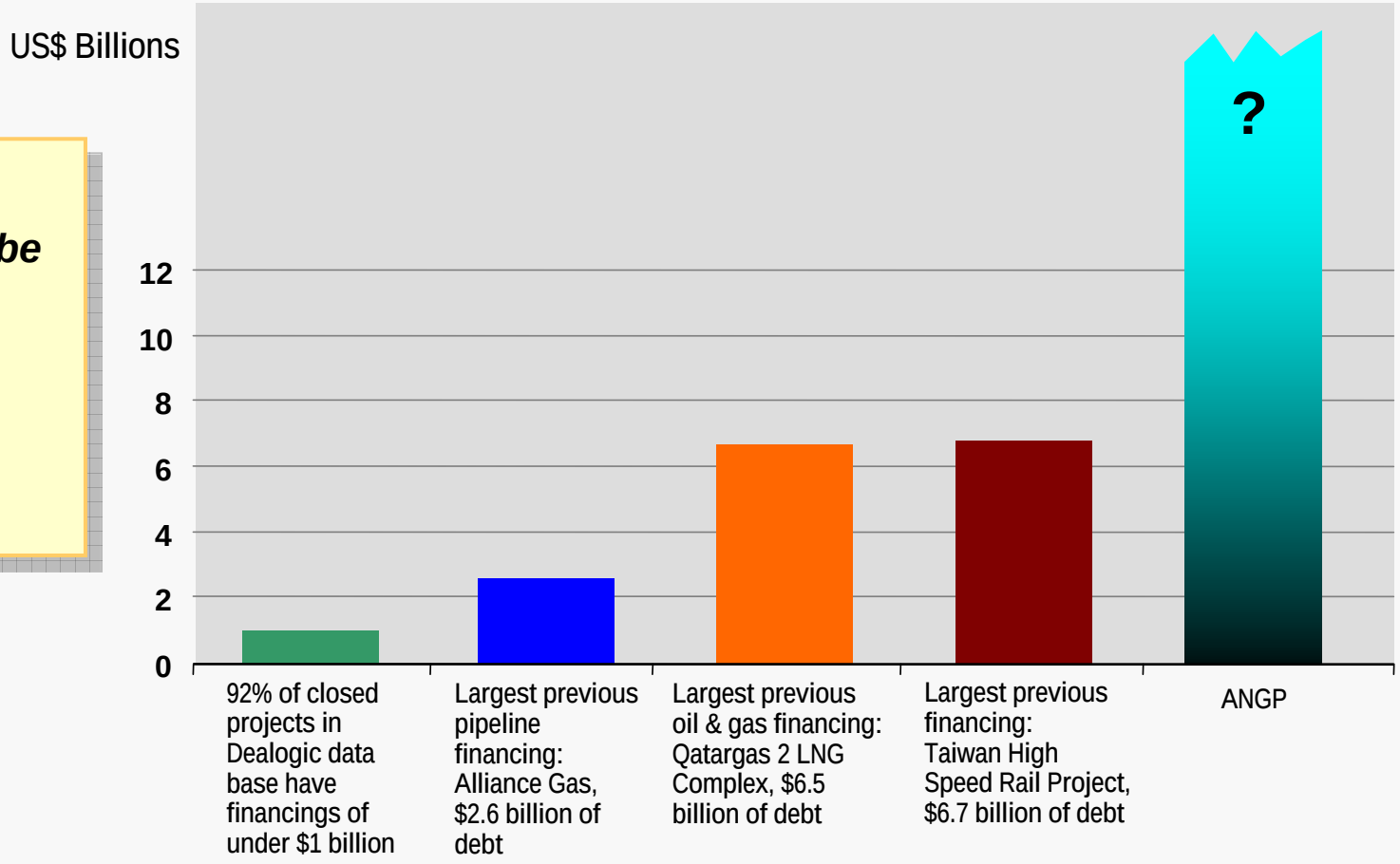
Total Project Finance Debt Market



Source: Dealogic

3. The Current Project Finance Market

If project financed, ANGP could be substantially larger than the largest project financing completed to date.



3. The Current Project Finance Market

- Bond market well-suited source for large borrowing program, currently favorable for oil & gas project bonds
  - Capital markets deep, large liquid bonds attractive
  - Better pricing transparency
  - Longer tenor (term) than banks
  - Particularly well suited for pipelines given the regularity and predictability of cash flows, and the long life and large size of required investment
- Voracious appetite by banks
  - High degree of liquidity
  - Bullish view of risks

But market conditions can change rapidly → Therefore, multi-track finance plans are common

3. The Current Project Finance Market

- S&P credit study – across all industry sectors and including many emerging market projects:
  - Probability of Default (PD) — BBB+ (investment grade)
  - Loss Given Default (LGD) — Best of all the asset classes in S&P database

"The majority of the defaulted project finance loans in this study resulted in a restructuring with 100% of loan value maintained"

These results include all industry sectors and emerging markets — U.S. energy projects would doubtless have more favorable PD and LGD

Summary of Main Points

- Project finance market has evolved, heavily influenced by capital markets and rating agencies
- Result is emphasis on underlying commercial drivers of credit
- Oil and gas pipelines a small part of the market
- Market very liquid now, but volatile, so sponsors must plan for both banks and bonds

Section 4

Building Blocks of a Typical Project Financing

4. Building Blocks of a Typical Project Financing

Project → Finance Plan → Financing Process

- Project Structure
- Project Agreements
- Commercial Contracts

4. Building Blocks of a Typical Project Financing

Project → **Finance Plan** → Financing Process

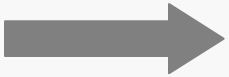
- Borrowing Structure
- Security and Accounts
- Completion Support

4. Building Blocks of a Typical Project Financing

Project → Finance Plan → Financing Process

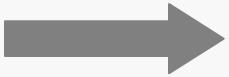
- Execution

Project Structure

Project 

- Entity choice
  - Tax efficiency and regulatory considerations are key
  - "Pass-through" structures are common
    - Limited partnerships
    - Limited liability companies (LLCs)
    - Unincorporated joint ventures

Project Agreements and Commercial Contracts

Project 

- Agreements with Governments
  - For resource projects, lease, concession, etc.
  - Investment incentive, fiscal stability and other agreements
  - Key licenses and permits
- Agreements among Participants
  - JV agreements
  - Management or operating arrangements
- Commercial Agreements
  - Key construction contracts
  - Key supply agreements
  - Offtake agreements (transportation commitments for pipeline)
  - Insurance

Borrowing Structure

Project → Finance Plan

- Leverage – How much debt?
  - Concept of project "debt capacity" – driven by debt model and Debt Service Cover Ratios, viewed
    - periodically,
    - over the life of loan
  - Variations in leverage

Security and Accounts

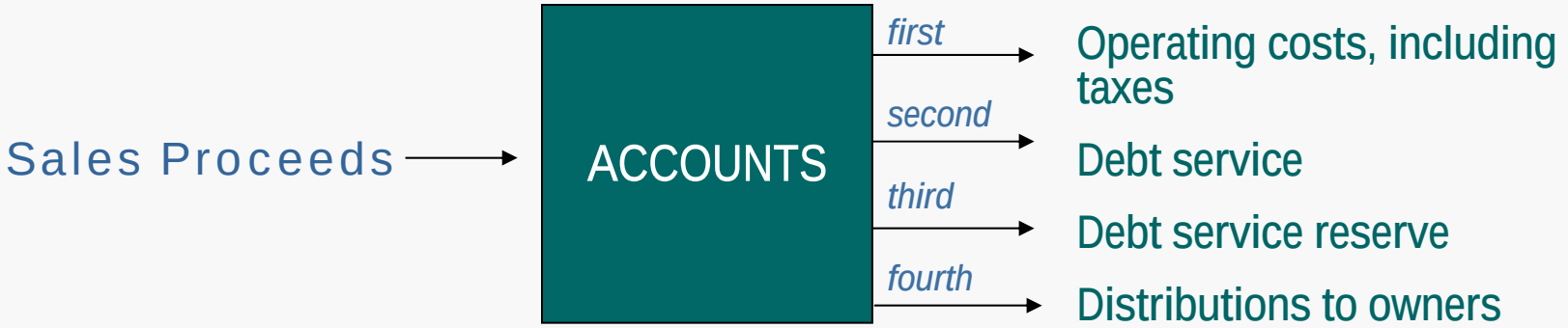
Project → Finance Plan

- Traditional security package: assets, project agreements (including offtake contracts), ownership interest, accounts, insurance
- Modern trend towards omission of asset security on a cost/benefit analysis, especially for strategic projects with strong sponsors
- Key for lenders is to capture cash flows in secured accounts

Security and Accounts: The Waterfall

Project → Finance Plan

- Priority for continuing operations as only way to continue to service and repay debt



- Accounts create transparency, protection from other creditors (and, in emerging markets, some protection from exchange controls)

Covenants

Project → Finance Plan

- Operational and legal covenants
  - Additional debt: norm is lender consent, sometimes objective tests based on *pro forma* debt-cover and leverage tests
  - Expansions, discretionary capital expenditure and certain other changes: norm is lender consent, sometimes more objective tests (more latitude if funded with equity)

Completion Support

Project → Finance Plan

- Need to define completion: physical and financial
- Sponsor support usually in form of additional equity commitments or debt guarantees
  - Equity commitments are common in pipelines and are limited in amount
  - Debt guarantees are in place through completion, requiring sponsors to repay the debt if the project is not completed
- All support falls away after completion tests are met

Lender Environmental Considerations

Project → Finance Plan

- In emerging markets, finance requirements can be greater than local law requirements
- In U.S. and Canada, not an issue, as local law requirements are robust
  - Lenders will only require compliance with law

4. Building Blocks of a Typical Project Financing

Project → Finance Plan → Financing Process

Key objective is to complete financing in timely fashion so that start of construction is not delayed

- Financing process requires extensive management and strong leadership
- Can be time-consuming and expensive
- Experienced sponsors and advisors are key
- Close collaboration among all parties is critical for success

Summary of Main Points

- Project structure and commercial arrangements precede development of borrowing structure and finance plan
- Many large and strategic oil, gas and pipeline projects do not have full asset security package – instead focus is on accounts and waterfall
- Once finance execution starts, requires strong leadership and management, and experienced advisors, to complete financing in time and avoid any delay in start of project construction

Section 5

Project Finance for Oil, Gas and Pipelines

Why do lenders like oil, gas & pipeline projects?

- Past experience has been good
- Resource based lending for upstream projects; contractual based lending for pipeline projects
- Technologies are usually well-proven
- Particularly suited to cash-based credit analysis – cash flows clear
- Either commodity products without market risk (oil), or highly credit-worthy off-take/transportation commitments
- One of the main post-completion risks is usually price risk – which, traditionally, banks understand and can price
- Sponsors can be
  - highly creditworthy
  - experienced with large projects, conservative culture
  - judged by lenders unlikely to abandon strategically significant projects

Upstream vs. midstream (pipelines)

- Upstream
  - Oil projects involve commodity products with little to no market risk; transportation may not be an issue
  - Gas projects depend on available transportation and market, and strength of off-take commitments

Upstream vs. midstream

- Midstream
  - Pipeline credits vary widely – depending on
    - Degree of project integration with upstream/downstream
      - Upstream and midstream as integrated project
      - Separate but with upstream producers as owners of midstream
      - Separate with upstream producers' role limited to customer
    - Contractual and credit links into upstream
      - Producer transportation commitment vs. buyer as shipper
      - Nature of transportation commitment
    - Tariff structure
      - Unregulated — negotiated tariff
      - Common carrier
      - FERC/NEB
    - Emerging market vs. developed

Main Pipeline Financing Approaches

- Degree of Integration with Upstream/Downstream
  - Especially for large strategic projects which rely on single transportation system, producers want (i) timely development of transportation, (ii) control over construction and operating costs, and (iii) reliability – usually leads to integration with upstream or producer participation if midstream is separate
  - Even if pipeline is organized as a separate project, development of upstream resources, transportation commitments and downstream markets are foundations of the pipeline credit

Main Pipeline Financing Approaches

- "Dual Project Risk"
  - Dual completion risk if separate upstream project is also green-field
  - Crux of issue: midstream lenders exposed to upstream risks without normal covenants with and remedies against upstream project
  - Creates tremendous pressure (i) for common ownership or (ii) on terms and conditions of transportation agreements as only "link" into upstream
  - Financing complexity, time and costs also can increase

Transportation Agreements

- Transportation Agreement defines cash flows for pipeline borrower
  - producer or buyer as shipper
  - nature of shipping commitment
    - ship-or-pay (most common)
    - ship-and-pay
- For ANGP, as FERC/NEB regulated project, open season bids would be on the basis of firm transportation commitments

Transportation Agreements

- Firm Transportation Commitment (ship or pay)
  - Key midstream financing issues are tenor, volume, tariff, shipper credit and force majeure
    - If Federal guarantees are available and used, these are issues for Federal government as guarantor, and for lenders as to any uncovered portion of debt . . . but force majeure exceptions to "ship or pay" obligations are key
  - Starting point for midstream post-completion credit is blended credit behind shipping commitments
  - Shipper credit analyzed based on (i) financial strength, (ii) upstream development and operating costs and break-even net-back, (iii) end-user markets, and (iv) sufficient volumes to fulfill firm commitment
  - In FERC regulated transaction, tariff adjusts — generally protects lenders because costs passed on to shippers
  - Producers may be reluctant to enter into firm "ship-or-pay" commitments if they do not own the pipeline

Transportation Agreements

- Force Majeure
  - In “ship-or-pay”, force majeure provisions define circumstances where shippers do not have to pay
  - Of key importance to lenders, since force majeure events result in interruption in cash flow available to service debt
  - Main force majeure provisions cover operational/availability risk in midstream — if midstream cannot accept gas, shippers not obligated to pay
  - Result is keen lender interest in (i) quality of original design and construction, (ii) operational expertise and track record of midstream operator, and (iii) technical and financial capacity of midstream project company and its owners to address operational issues
  - Project size and complexity, together with long tenor and large size of midstream financing, likely to increase these concerns in ANGP

Structural issues for cross-border pipelines

- Separate entities in each country most common
- Can be separately tranched loans to each entity, but
  - cross-completion risk
  - sometimes structured to create unified credit
- Two loans can equal more complexity and cost and longer time to develop

10 Largest Oil and Gas Pipeline Project Financings

(greenfield and expansion only – excludes acquisition financing and refinancings)[1]

	Project Name, Location	Total Capital Cost (Senior Debt Portion)	Sponsors	Financial Advisers to the Consortium
1.	Alliance Pipeline Project (Gas), Canada/US (3,000 km)	US$3.73 billion ($2.59 billion debt)	Coastal, IPL,Williams, Fort Chicago Energy, Westcoast Energy	Goldman Sachs, Scotia, Paribas.
2.	BTC Pipeline (Oil), Azerbaijan/Georgia/ Turkey (1,730 km)	US$3.6 billion ($2.59 billion debt)	Amerada Hess, ConocoPhillips, INPEX, SOCAR, Unocal, BP, Eni, Itochu, Statoil, TPAO	Lazard
3.	Bolivia-Brazil Pipeline Project (Gas), Bolivia/Brazil (3,075 km)	US$2.23 billion ($1.4 billion debt)	PETROBRAS, BG, El Paso, YPFB, BHP, Enron Corp., Shell	Credit Suisse First Boston, Kleinwort Benson
4.	Cupiagua-Cusiana Pipeline (Oil), Colombia (800 km)	US$2.2 billion ($1.54 billion debt)	Ecopetrol, BP, Total, Triton, TransCanada, IPL	Goldman Sachs, Credit Lyonnais
5.	Chad-Cameroon Pipeline (Oil), Chad (1,070 km)	US$2.0 billion (pipeline only) ($700 million debt)	Exxon Mobil, Petronas, Chevron	Citibank

[1] Also excludes primarily upstream projects with an integrated pipeline component. Based on Dealogic database.

10 Largest Oil and Gas Pipeline Project Financings

(greenfield and expansion only – excludes acquisition financing and refinancings)[1]

	Project Name, Location	Total Capital Cost (Senior Debt Portion)	Sponsors	Financial Advisers to the Consortium
6.	OCP Heavy Crude Pipeline (Oil), Ecuador (503 km)	US$1.2 billion ($900 million debt)	Alberta Energy, Repsol YPF, Occidental, Agip, Pecom Energia, Techint, Kerr-McGee	Chase Manhattan Bank
7.	Mozambique-South Africa Pipeline Project (Gas), Mozambique (865 km)	US$1.2 billion ($543 million debt)	Republic of South Africa, Republic of Mozambique, Sasol Polymers	Dresdner Kleinwort Wasserstein
8.	Malhas Project (Gas), Brazil (expansion)	US$1.0 billion ($900 million debt)	PETROBRAS, Mitsui, Itochu, Mitsubishi	
9.	Kern River Expansion II (Gas), United States (part refinancing)	US$875.0 million loan	Williams, Tenneco	
10.	Camisea (Gas), Peru	US$865.0 million ($480 debt)	Techint, Sonatrach, PlusPetrol, SK, Hunt Oil, Tractebel	Citi

[1] Also excludes primarily upstream projects with an integrated pipeline component. Based on Dealogic database.

Summary of Main Points

- Even in oil and gas sector, project financings vary considerably
- Major distinction is between developer- and producer-driven projects
- Many structural variations for upstream, midstream and integrated projects
- For pipelines, credit defined by Transportation Agreement (parties, nature of commitments and pricing), completion support and operating track record
- Universe of greenfield large developer-driven pipeline financings is very limited

CONCLUSION: KEY POINTS

- Every project is different and this one will likely set its own financing precedents
- Parties use project financing for different reasons
- Commercial fundamentals, together with contractual commitments, completion support and sponsor strength, are the foundation of a project credit
- With the right underlying economics and if properly structured, oil and gas projects can be strong credits
- Project finance execution is a complex enterprise requiring collaboration among many parties; flexibility is required to respond to moving markets

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