Defense Acquisition University

USD (AT&L) Better Buying Power Initiative

Incentivize Productivity & Innovation in Industry: Capitalize on Progress Payments Structures

Outline

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- Understanding Cash Flow
- Performance Based Payments (PBP) Basics
- PBPs vs Progress Payments
- Negotiating PBPs
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Capitalize on Progress Payments Structures

What OSD Found:

Progress, Performance and Advance payments offset the weighted average cost of capital and should allow for a commensurate reduction in overall price (not profit).

"The government is an exceptionally reliable customer in terms of financing. The Department pays up front and regularly, sometimes before products are delivered. … The Department can therefore offer its contractors a high cash flow return on invested capital."

14 Sep 2010 USD(AT&L) memo

Guidance & Implementing Policy

The Result: 14 Sep 2010 USD(AT&L), Memorandum for Acquisition Professionals

- "The Department should take advantage of this circumstance through the use of innovative contract financing methods to incentive vendors with the time value of money in exchange for lower prices/costs."
- "As a matter of practice, on all fixed price type contracts, I expect that the basis of negotiations shall be the use of customary progress payments. After agreement on price…, the contractor shall have the flexibility to propose an alternative payment arrangement for the Government's consideration."

Guidance & Implementing Policy

The Result: 14 Sep 2010 USD(AT&L), Memorandum for Acquisition Professionals (Continued)

- *"By having determined the projected contract cost, the contracting officer should be able to determine the consideration being offered by the contractor for a more favorable payment structure.."*
- *"I will direct the Director of DPAP to develop for my review a cash flow model to be used by all contracting officers…*

Implementing Policy

3 Nov 2010 USD(AT&L), Memorandum for Secretaries of the Military Departments and Directors of the Defense Agencies

- *"Effective immediately you will identify pilot programs to use innovative financing methods as a negotiating tool."*
- *"….I have directed the Director, Defense Procurement & Acquisition Policy (DPAP) to immediately develop a cash flow model and to provide guidance for the use of a preferred hierarchy of innovative financing methods described in the model that takes into consideration the lifecycle phase of weapon system programs. Emphasis should be placed on flow-down to subcontractors as well."*

Implementing Policy

27 Apr 2011 DPAP memo: Cash Flow Tool for Evaluating Alternative Financing Arrangements

- **Determined by performing a discounted cash flow analysis which takes into account the amount and timing of cash flows of the contract period.**
- **Excel-based analysis tool allows the contracting officer and industry to easily compare the financial cost and benefits of using Performance Based Payments (PBP) versus customary progress payments.**

"The timing and amount of cash flows provided to the contractor through Government financing has a measurable cost to the Government and a measurable benefit to the contractor."

Implementing Policy

27 Apr 2011 DPAP memo: Cash Flow Tool for Evaluating Alternative Financing Arrangements

- The model will determine a win-win price that equitably accounts for the cost benefits and potential risk associated with PBPs.
- PBP Tool can be found at the following: HTTP://www.acq.osd.mil/dpap/cpf/Performance_based_payments.html

Why Are We Here?

- The defense Industry understands the importance of cash flow
- The basic concept of cash flow and time value of money
  - A dollar today is worth more than a dollar a year from now
- The financial value of cash flow can be measured
  - Discounted Cash Flow
  - Internal Rate of Return (IRR)
  - Net Present Value (NPV)
- Financial returns represented by government contract cash flow
  - Return is usually much higher than the profit / fee rate

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What Does *Discounted Cash Flow - DCF* Mean?
A valuation method used to estimate the attractiveness of an investment opportunity. Discounted cash flow (DCF) analysis uses future free cash flow projections and discounts them (most often using the weighted average cost of capital) to arrive at a present value, which is used to evaluate the potential for investment. If the value arrived at through DCF analysis is higher than the current cost of the investment, the opportunity may be a good one. There are many variations when it comes to what you can use for your cash flows and discount rate in a DCF analysis. Despite the complexity of the calculations involved, the purpose of DCF analysis is just to estimate the money you'd receive from an investment and to adjust for the time value of money.

What Does *Internal Rate Of Return - IRR* Mean?
The discount rate often used in capital budgeting that makes the net present value of all cash flows from a particular project equal to zero. Generally speaking, the higher a project's internal rate of return, the more desirable it is to undertake the project. As such, IRR can be used to rank several prospective projects a firm is considering. Assuming all other factors are equal among the various projects, the project with the highest IRR would probably be considered the best and undertaken first.

What Does *Net Present Value - NPV* Mean?
The difference between the present value of cash inflows and the present value of cash outflows. NPV is used in capital budgeting to analyze the profitability of an investment or project. NPV analysis is sensitive to the reliability of future cash inflows that an investment or project will yield. NPV compares the value of a dollar today to the value of that same dollar in the future, taking inflation and returns into account. If the NPV of a prospective project is positive, it should be accepted. However, if NPV is negative, the project should probably be rejected because cash flows will also be negative.

For example, if a retail clothing business wants to purchase an existing store, it would first estimate the future cash flows that store would generate, and then discount those cash flows into one lump-sum present value amount, say $565,000. If the owner of the store was willing to sell his business for less than $565,000, the purchasing company would likely accept the offer as it presents a positive NPV investment. Conversely, if the owner would not sell for less than $565,000, the purchaser would not buy the store, as the investment would present a negative NPV at that time and would, therefore, reduce the overall value of the clothing company.

Understanding Cash Flow

Example: Certificate of Deposit Offers

- Bank #1: Deposit $12,000 today, get $13,200 in 12 months
  Internal Rate of Return = 10%

- Bank #2: Deposit $1,000 per month for the next 12 months and get $13,200 at the end of month 12
  Internal Rate of Return = ?

- Bank #3: Deposit $1,000 per month for the next 12 months, withdraw $800 each month starting the 2nd month, at the end of month 12 withdraw all remaining cash plus $1,200 interest.
  Internal Rate of Return = ?

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This example was taken from a presentation given by Mr. Phil McManus representing Director, Defense Procurement and Acquisition Policy (DPAP) at the 2011 DoD Procurement Conference held in Orlando, FL 10-14 May 2011.

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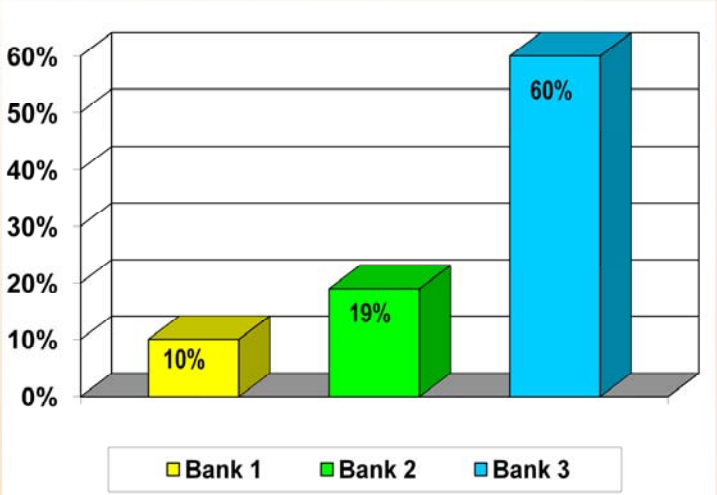
CD Example - Returns
Internal Rate of Return (IRR)



The Bank 3 scenario is very similar to a one-year, fixed-price contract with 80% customary progress payments.

Performance Based Payments (PBPs) Basics

- Performance Based Payments (PBPs)
  - Are the preferred method, but only when:
    - CO determines them to be practical and contractor agrees to their use
  - *Cannot exceed* 90% of price
    - versus 80% of cost with progress payments
  - Are established upfront, with defined events and dollar values
  - Create very real potential for advance payment scenario unless cost limitation language is included:
    - e.g. "At no time will cumulative performance based payments exceed cumulative cost incurred on this contract"

Differences between PBPs and Progress Payments

	PBPs	Progress Payments
Order of Preference	Preferred over other forms of customary financing	Considered customary contract financing
Payment Basis	Predetermined amounts versus actual costs	Actual, incurred costs (Allowable & Allocable)
Entitlement to Payment	Successful/verifiable completion of performance event	Submission of allowable costs equal to progress made
Profit	Some profit may be included	Excluded

Differences between PBPs and Progress Payments

	PBPs	Progress Payments
Accounting System	Does NOT require approval except on FPIF	Must be approved
Frequency	Not more than monthly (but may have > 1 event/month	Not more than monthly
Apply Alternate Liquidation Rate	No	Yes, under certain circumstances

Implementation Requirements: Negotiating PBPs

- Basis of negotiations for fixed price contracts shall be the use of customary progress payments
- RFPs will state that the proposal and award will be based on use of customary progress payments.
- After agreement on price, or contract award (for competitive acquisitions) the contract shall have the flexibility to proposes PBPs

Implementation Requirements: Negotiating PBPs

- Contractors should be instructed that if PBPs are desired, a proposed PBP scheduled should be submitted, and include:
  - All PBP events
  - Completion criteria
  - Event values
  - Contractor's expected expenditure profile
- If deemed practical, the Government must evaluate and negotiate the details of the PBP schedule

Implementation Requirements: Consideration & PBP Analysis

- Contracting Officers must clearly identify the consideration received in the post negotiation clearance documentation whenever a payment schedule is more favorable to the contractor than customary progress payments is negotiated
- The negotiated consideration must be specifically approved by the clearance official or one level above the contracting officer, whichever is higher
- All contracting officers shall utilize the PBP Analysis Tool on new fixed-price type contract awards resulting from solicitations issued on or after July 1, 2011 whenever PBPs are contemplated for contract financing

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Payment schedule modifications can have significant cash flow benefit to the contractor: thus, it's appropriate for the government to institutionalize the "quid pro quo" of contractor providing consideration to government for the value of this increased contractor cash flow.

Implementation Requirements: Consideration & PBP Analysis

- Modifications to contracts that already use PBP financing, the basis for negotiation must also be PBPs. In those situations, the PBP Tool can be used to help determine the win-win price for the modification
- Alternative financing arrangement other than PBPs require DPAP review and concurrence prior to utilization

Cash Flow Consideration Practical Application

- Government is entitled to consideration when contractor is provided improved cash flow
- Usually involves financing:
  - Performance Based Payments
    - most common situation
  - Unusual Progress Payments
    - e.g. anything greater than 80% for large business is unusual
    - Requires approval by Director, DPAP
  - Advance Payments
    - Requires approval by Deputy Under-Secretary Finance

PBPs - Negotiating Consideration

- PBP – Consideration
  - DOD PBP Tool (cash flow model) is available:
    http://www.acq.osd.mil/dpap/cpf/Performance_based_payments.html
    - Calculates cost and benefits of cash flow
    - Permits objective assessment of financial risks and benefits
    - Identifies recommended Win-Win solution (lower price)

The DOD Cash Flow Model

The Purpose of the Model

- The purpose of the model is to determine the amount of consideration due the Government when it provides financing that is better than customary progress payments.
  - i.e. Performance Based Payments (PBPs)

How the Model Works

- The model compares monthly contract cash flows under both scenarios:
  - Progress Payments & PBPs
- Model uses Excel financial functions to evaluate each set of cash flows.
- Model finds a win-win price solution where PBPs benefit the Government and Contractor.

Basic Elements of the Model

- Obj/Neg Profit Rate with Progress Payments
- Progress Payment Rate (Effective Rate?)
- Expenditure Profile (expected costs by month)
- Delivery Schedule
- Timing and Value of PBPs
- Payment Lag Times
- Time Value of Money (Contractor and Government)

Excel Financial Functions

- The Model uses two built-in financial functions in Excel:
  - Net Present Value (NPV) is the net value, in today's dollars, of a series of future cash flows that will occur over time.
  - Internal Rate of Return (IRR) is the return, expressed as an annual percentage rate, generated by a series of cash flows that will occur over time.
  - The actual Excel functions are XNPV and XIRR which take into account specific cash flow dates.

NPV – Application to Contracts

- NPV can be used to analyze any project (e.g. contract) that requires an initial outlay of cash before generating positive cash flow to determine the financial viability of the project.
  - NPV discounts each cash flow based on when it will occur.
    - The further in the future, the more it is discounted
    - NPV is the sum of the discounted cash flows – It is a dollar value
  - NPV requires user to specify the annual discount rate to use.
    - The discount rate is an annual % rate that reflects the time-value of money to the user. It is often referred to as the "Hurdle Rate" for a project.
  - When NPV is greater than zero, it means the annual return (%) on the project is greater than the hurdle rate – it is a good investment.
    - NPV does not identify the annual return (%) achieved - IRR does that

IRR – Application to Contracts

- IRR, like NPV, uses discounting of cash flows
- Where NPV discounts cash flows by a specified rate to determine NPV ($), IRR determines the annual rate of return (%) generated by the cash flows.
  - IRR does this by using the NPV process.
  - IRR searches for the discount rate that results in the NPV of the project cash flows to be approximately zero
- When IRR exceeds the Hurdle Rate, the project is a good investment.

Time-Value of Money

- The time-value of money is the key to analyzing cash flow.
- For the Government and Industry the time-value of money is the cost of raising money.
  - Government = Cost of Borrowing (Treasury Rate)
  - Industry = Weighted Average Cost of Capital
    Debt (borrowing) and Equity (stock)
- The time-value of money is much greater for industry.
  - Difference is what makes a Win-Win possible

The Win-Lose Position

- At the same price, providing better cash flow to the contractor would be a Win-Lose deal:
  - Contractor wins:
    - Better IRR & NPV
  - Taxpayer loses:
    - Government borrows more money, for longer period of time

The Break-Even Positions

- The break-even position is the PBP price that would make the financial value of PBPs equal to that of progress payments.
  - For Contractor:
    - When NPV of cash flows with PBPs is the same as with progress payments
  - For Government:
    - When final cost to the Government (price + cost of borrowing) with PBPs is the same as with progress payments
- The break-even positions for each will be different based on the time-value of money
  - Contractor break-even price will be lower than Government break-even price

The Win-Win Position

- The model will recommend a win-win solution that is the mid-point of the two calculated break-even positions.
- Both parties benefit:
  - Contractor - better IRR & NPV for Contractor
  - Government - lower final cost (price + cost of borrowing)
- Win-win can be adjusted (up or down) within the two break-even positions to account for risk of the particular PBP schedule.

The Win-Win Position

- Oversight and compliance costs may be reduced
- Enhanced technical and schedule focus
- Reinforced roles of program managers and Integrated Product Teams (IPTs)
- Risk of overpayment may be reduced
- More contractors may participate in Government contracting

What About Risk of PBPs?

- PBPs can present potential cash flow risk to contractor not present in progress payments
  - Contractor gets paid when PBP event is completed = no payment if PBP event is not successfully accomplished
  - Contractor bears risk for loss, theft, destruction or damage to property unless Government expressly assumed risk
  - Delay in event completion = delay in payment

What About Risk of PBPs?

- PBPs are a better deal for contractors that perform well.
- PBPs are not intended to be a better deal for contractors that don't perform well.
  - Any contractor concerned about its ability to perform well should probably opt for using customary progress payments

When PBPs are not appropriate?

- Selecting inadequate completion events
  - Example, events that do NOT require meaningful effort or action
- Selecting insufficient completion criteria

Selecting event values that don't equate with milestone activities

  - Possible front loading of event values

How the Model Handles Risk

- The model allows users to objectively evaluate the risk posed to the contractor at the win-win position.
- Users can slip any event by one month by simply double-clicking on the event and immediately see the impact.
- Users are instructed to run "what-if" analysis on the slipping of PBP events to determine how may event slips would have to occur before the win-win PBP deal would become less advantageous for the contractor than progress payments.
- Generally PBP win-win benefits far outweigh the risk.
- Fixed-price contracts are used when risk is relatively low, risk of slipping PBP events should also be relatively low

Other Model Features

- Model includes error trapping to catch data input errors.
- Model will alert user when:
  - PBPs would create an advance payment situation
  - PBPs may not be practical
    - Win-Win yields minimal price reduction
    - Deliveries begin within six months of contract award

Summary

- Negotiate Fixed Price Contracts using Customary Progress Payments
- Contractor given option to propose PBPs
- If practical, Contracting Officers must evaluate and negotiate PBPS
- Contracting Officers must use Cost Flow Analysis Tool
- Consideration must be documented and approved

Resources:

- PBP Tool can be found at the following: HTTP://www.acq.osd.mil/dpap/cpf/Perfromance_based_payments.html
- DAU: CLC 057 - Understanding Performance Based Payments and the Value of Cash Flow (Includes a demonstration of the model)

The Goal: Win-Win arrangement for the Government and the Contractor