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# ROC vs. ROS: Government Can Lower Price by Raising Fee

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# Agenda

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- Bottom-Line Upfront
- Definitions
- Mathematical Scenarios
- Results and Summary

# Bottom-Line Upfront

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- Under certain conditions the Government can achieve a lower price by offering a higher fee
  - Conditions:
    - Sole Source contract or FAR Part 15 – Contracting by Negotiations
    - Cost type contracts:
      - Cost Plus Fixed Fee (CPFF)
- Reason:
  - Contractors generally measure profitability on Return on Sales (ROS) or “Operating Profit Margin”
  - Government (FAR) negotiate on Fee or Return on Cost (ROC)
    - By definition ROC is larger than ROS
  - Cost estimating provides a range of potential outcomes; allowing for a risk/reward trade space
- Purpose:
  - A better understanding of the trade space rational between Contractor and Government

# Definitions Specific for Briefing

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- Cost – Point estimate for the range of cost outcomes to perform the Statement of Work (SOW)
- Cost Achievement – A cost goal for an estimating Scenario, where the contractor intends to execute the SOW to a specific cost goal to achieve its profit target
- Negotiated Cost – A specific cost value negotiated between the Government and Contract, which the Fixed Fee is based upon
- Target Cost Differential (TCD) – Difference between the Cost Achievement goal and the Negotiated Cost

# General Definitions

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- FCCOM or COM – Facilities Capital Cost of Money (COM)
  - An allowable non-fee bearing cost to offset government unique working capital costs required to execute the program
- ROC - Return on Cost; ROC and Fee are synonymous
  - Equals Fee / Cost
  - Prescribed by the FAR for Part 15
- ROS - Return on Sales
  - Equals (Fee + COM) / Sales
  - Note: Government considers COM as part of Cost
- Sales = Cost + COM + Fee
  - Synonymous with Price
- Risk/Rewards (Contractor Perspective) – Tradeoff between Fee and Cost
  - Higher Costs with Lower Fee vs. Lower Costs with Higher Fee
- Effective ROS – Contractor's calculated ROS, using the Target Cost Differential in the denominator

# Return on Sales

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- ROS is a ratio widely used to evaluate a company's operational efficiency. ROS is also known as a firm's "operating profit margin"
- Widely used by large corporations
- Wall Street Perspectives
  - An increasing ROS indicates the company is becoming more efficient, while a decreasing ratio could signal looming financial troubles
  - The ratio varies widely by industry and is useful for comparing different companies in the same business
  - Range of ROS is narrower in the Defense industry
    - Limited by Government Regulation

**Important Measure for Wall Street**

# Cost Plus Fixed Fee Negotiation Example

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- The Negotiation Teams have come to an impasse at the following positions:

| | Contractor | Government | Delta |
|---|---|---|---|
| Cost | $12,000,000 | $10,000,000 | $2,000,000 |
| COM | $120,000 | $100,000 | $20,000 |
| Fixed Fee | $1,500,000 | $990,000 | $510,000 |
| Price | $13,620,000 | $11,090,000 | $2,530,000 |
| ROC | 12.5% | 9.9% | 2.6% |
| ROS | 11.9% | 9.8% | |

- Factors leading to the Cost and Fee differences include:
  - Assessment of the work required for SOW accomplishment; Rates; and Supplier Costs

**Estimating Uncertainty Drives Negotiations**

# Example – Move 1: Split the Difference

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- Obvious Next Move

| | Contractor | Government | Delta |
|---|---|---|---|
| Cost | $11,000,000 | $11,000,000 | $0 |
| COM | $110,000 | $110,000 | $0 |
| Fixed Fee | $1,375,000 | $1,089,000 | $286,000 |
| Price | $12,485,000 | $12,199,000 | $286,000 |
| ROC | 12.5% | 9.9% | 2.6% |
| ROS | 11.9% | | |

**Agreement on Cost is Often Easier than on Fee**

# Example – Move 2: Floor and Ceiling Positions

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- Contractor and Government offer moves to their Floor and Ceiling positions

| | Contractor | Government | Delta |
|---|---|---|---|
| Cost | $11,000,000 | $11,000,000 | $0 |
| COM | $110,000 | $110,000 | $0 |
| Fixed Fee | $1,320,000 | $1,320,000 | $0 |
| Price | $12,430,000 | $12,430,000 | $0 |
| ROC | 12.0% | 12.0% | 0.0% |
| ROS | 11.5% | | |

Move 2b: Government Ceiling

| | Contractor | Government | Delta |
|---|---|---|---|
| Cost | $11,000,000 | $11,000,000 | $0 |
| COM | $110,000 | $110,000 | $0 |
| Fixed Fee | $1,100,000 | $1,100,000 | $0 |
| Price | $12,210,000 | $12,210,000 | $0 |
| ROC | 10.0% | 10.0% | 0.0% |
| ROS | 9.9% | | |

New Price Delta: $220,000

- Government Business Clearance ceiling at **10.0%** Fee
- Contractor Business Clearance floor at **11.5%** ROS

**Contractor Agreement to a Deal Requires Risk/Reward Trades**

# Options for Negotiations Settlement

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1. Contractor accept Government Offer at Government max 10% Fee
   - Requires new approval for a lower floor
2. Government obtain new Business Clearance to Higher ROC
3. Contractor achieve an Effective ROS at combination of higher cost / lower fee or lower cost / higher fee

**Unless you are willing to compromise, society cannot live together.**
**— Alan Greenspan**

**When the final result is expected to be a compromise, it is often prudent to start from an extreme position.**
**— John Maynard Keynes**

# Effective ROS Calculation for CPFF

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- Target Cost Differential is added to Sales, yielding an Effective ROS

| | Deal Agreement | Cost Achievement | Formula |
|---|---|---|---|
| Cost | $11,000,000 | $10,100,000 | |
| TCD | $0 | ($900,000) | $10.1M - $11.0M |
| COM | $110,000 | $101,000 | Cost *1% |
| Fixed Fee | $1,210,000 | $1,122,000 | Cost * 11.0% |
| Price | $12,320,000 | $11,424,000 | Cost + Com + Fee |
| ROC | 11.0% | 11.0% | |
| Negotiated ROS | 10.7% | 10.7% | (COM+Fee)/(Price) |
| Effective ROS | | 11.6% | (COM+Fee)/(Price+TCD) |

**Effective ROS Calculation is Based on an Assumed Cost Achievement**

# Example – Deals 1 & 2: Extreme Options

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- Extreme Options: Maximum Cost with minimum fee; Minimum cost with Maximum fee

| | Deal 1 | Cost Achievement |
|---|---|---|
| Cost | $12,000,000 | $10,000,000 |
| TCD | $0 | ($2,000,000) |
| COM | $120,000 | $100,000 |
| Fixed Fee | $1,200,000 | $1,200,000 |
| Price | $13,320,000 | $11,300,000 |
| ROC | 10.0% | 10.0% |
| Negotiated ROS | 9.9% | |
| Effective ROS | | 11.5% |

Deal 2: Min Cost; Max Fee

| | Deal 2 | Cost Achievement |
|---|---|---|
| Cost | $10,000,000 | $10,800,000 |
| TCD | $0 | $800,000 |
| COM | $100,000 | $108,000 |
| Fixed Fee | $1,300,000 | $1,300,000 |
| Price | $11,400,000 | $12,208,000 |
| ROC | 13.0% | 13.0% |
| Negotiated ROS | 12.3% | |
| Effective ROS | | 11.5% |

**Either Deal Unlikely**

# Example – Deals 3 & 4: Middle Options

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- Middle Options: Probable Settlement Range

| | Deal 3 | Cost Achievement |
|---|---|---|
| Cost | $11,300,000 | $10,400,000 |
| TCD | $0 | ($900,000) |
| COM | $113,000 | $104,000 |
| Fixed Fee | $1,243,000 | $1,243,000 |
| Price | $12,656,000 | $11,747,000 |
| ROC | 11.0% | 11.0% |
| Negotiated ROS | 10.7% | |
| Effective ROS | | 11.5% |

Deal 4: 10.5% Fee

| | Deal 4 | Cost Achievement |
|---|---|---|
| Cost | $11,700,000 | $10,250,000 |
| TCD | $0 | ($1,450,000) |
| COM | $117,000 | $102,500 |
| Fixed Fee | $1,228,500 | $1,228,500 |
| Price | $13,045,500 | $11,581,000 |
| ROC | 10.5% | 10.5% |
| Negotiated ROS | 10.3% | |
| Effective ROS | | 11.5% |

**Probable Settlement Range**

# Cost & Price Trade Space

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| Scenario | Negotiated Cost | Price | ROC |
|---|---|---|---|
| Impasse | $12,000,000 | $13,620,000 | 12.5% |
| Move 1 | $11,000,000 | $12,485,000 | 12.5% |
| Move 2a | $11,000,000 | $12,430,000 | 12.0% |
| | | | |
| Deal 1 | $12,000,000 | $13,320,000 | 10.0% |
| Deal 2 | $10,000,000 | $11,400,000 | 13.0% |
| Deal 3 | $11,300,000 | $12,656,000 | 11.0% |
| Deal 4 | $11,700,000 | $13,045,500 | 10.5% |

Highest Price; Lowest Fee

Lowest Price; Highest Fee

**Higher Fee Can Lead to Lower Negotiated Price**

# Negotiation Results

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| | ROC | Negotiated Price |
|---|---|---|
| Deal 1 | 10.0% | $13,320,000 |
| Deal 4 | 10.5% | $13,045,500 |
| Deal 3 | 11.0% | $12,656,000 |
| Deal 2 | 13.0% | $11,400,000 |

| | ROC Rank | Rank of Negotiated Price |
|---|---|---|
| Deal 1 | | |
| Deal 4 | | |
| Deal 3 | | |
| Deal 2 | | |

- Example shows an inverse relationship between Fee and Price for a negotiated price

**A Negotiated Settlement is the Beginning of the Story**

# Range of Execution Results

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| | ROC | Negotiated Price | Final Price with 25% Cost Achievement | Final Price with 50% Cost Achievement | Final Price with 75% Cost Achievement | Final Price with 100% Cost Achievement |
|---|---|---|---|---|---|---|
| Deal 1 | 10.0% | $13,320,000 | $12,815,000 | $12,310,000 | $11,805,000 | $11,300,000 |
| Deal 4 | 10.5% | $13,045,500 | $12,679,375 | $12,313,250 | $11,947,125 | $11,581,000 |
| Deal 3 | 11.0% | $12,656,000 | $12,428,750 | $12,201,500 | $11,974,250 | $11,747,000 |
| Deal 2 | 13.0% | $11,400,000 | $12,410,000 | $12,612,000 | $12,814,000 | $12,208,000 |

| | ROC Rank | Rank of Negotiated Price | Rank of 25% Cost Achievement | Rank of 50% Cost Achievement | Rank of 75% Cost Achievement | Rank of 100% Cost Achievement |
|---|---|---|---|---|---|---|
| Deal 1 | | | | | | |
| Deal 4 | | | | | | |
| Deal 3 | | | | | | |
| Deal 2 | | | | | | |

**Execution Cost Drives Fee/Final Price Relationship**

# Takeaways

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- Contractors negotiate to obtain a “business deal” that aligns with company goals
- Government negotiates to obtain a “fair and reasonable” price
- Closing the deal requires flexibility with the two key drivers: Cost and Fee
- The concepts behind this mathematically simple CPFF example can be extended to other cost contract types
- It is all about execution!

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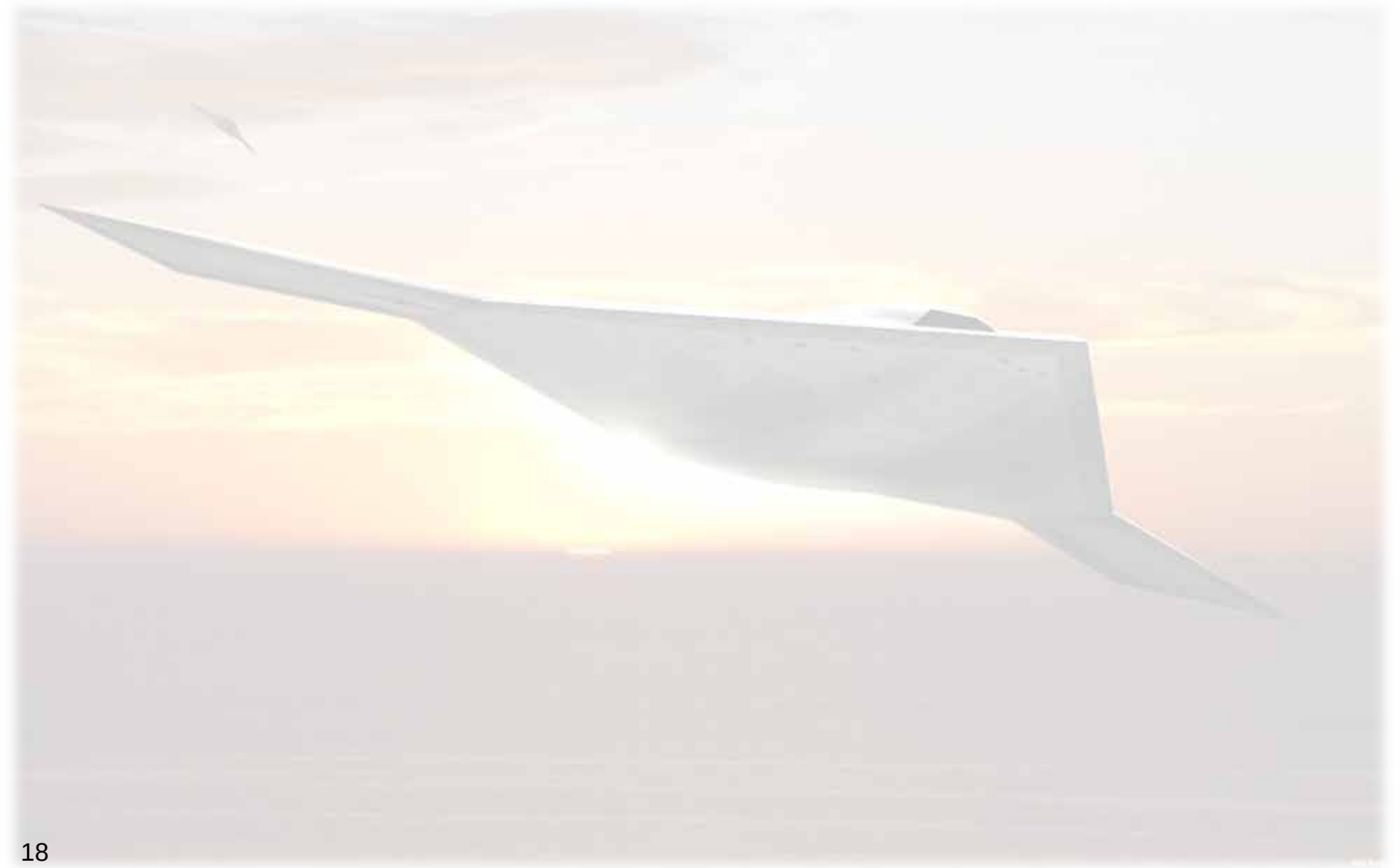

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