DEPARTMENT OF DEFENSE

Contract Finance Study

APPENDIX G
FINANCING IN THE COMMERCIAL MARKETPLACE: PRE-DELIVERY PAYMENTS
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Financing in the Commercial Marketplace: Pre-delivery Payments

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Financing in the Commercial Marketplace: Pre-delivery Payments

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Abstract

As part of its efforts to assess contract financing policies, the Department of Defense (DoD) asked the Institute for Defense Analyses to analyze pre-delivery payments (PDPs) in the commercial sector and, in particular, to determine the drivers of PDPs. PDPs are payments from buyers to sellers before receiving an item. Our analysis focuses on large capital goods such as aircraft, ships, and machinery, with the goal of helping inform DoD policy on contract financing for DoD contractors. Contract financing is DoD terminology for PDP.

Key terms: Contract financing; pre-delivery payments; PDPs; cost of capital; relational contracts
Executive Summary

The Department of Defense (DoD) asked the Institute for Defense Analyses (IDA) to provide analyses and insights on buyer motivations and practices pertaining to buyer-provided contract financing in various commercial sectors. That is, when acquiring a major item such as an aircraft, a ship, or another item of significant cost, under what circumstances does a buyer provide payments to the seller prior to delivery of the item? In particular, we determine the key drivers of buyer contract financing and the economic, legal, and financial context in which those payments occur.

History of DoD Contract Financing Policies

DoD has not comprehensively examined its contract financing policies since the Defense Financial and Investment Review (DFAIR) of June 1985. Now, DoD is taking steps to assess its policies in the context of current economic and financial conditions. DoD was encouraged to review its current contract financing policies by a 2019 report from the General Accountability Office (GAO), which in turn was called for by a provision in the National Defense Authorization Act for Fiscal Year 2019. Our analysis is part of a wider DoD effort to assess whether its contract financing policies for fixed-price contracts achieve their intended objectives, given the current economic and financial environment. Since this study is one part of a larger DoD analytical effort, IDA was asked to focus on commercial sector practices and not expend time comparing DoD contract financing to that in the commercial sector.

Overview of Pre-delivery Payments

In regard to terminology, the DoD calls its payments to DoD contractors made prior to delivery of a product or service “contract financing.” In the commercial sector, such buyer financing is referred to as pre-delivery payments (PDPs). Whether called contract financing or PDP, the net effect is the same—the buyer provides financing pursuant to milestones, progress towards completion, or a set of dates prior to delivery. Unless discussing specific DoD matters, we used PDP in this study because we focused on the commercial sector. PDPs to the seller may include research and development (R&D) contributions, initial deposits, progress or milestone payments, and post-delivery incentive payments. For the most part, PDPs are used as working capital for the seller; that is, funds to pay for labor, material, components, and other inputs to create the final product.
Findings

Our research and interviews with industry executives and representatives uncovered the following information:

- PDPs are not a given and are rare in the commercial sector.
- Drivers that increase the likelihood of PDPs include:
  - Seller market power vis-à-vis buyer
  - Production cycle length
  - Custom builds with no or minimal resale market
  - Market demand volatility
- The most prominent driver varies by industry.
- Industry standards and historical customs are important:
  - They reduce friction between the buyer and seller (“grease the wheels of commerce”) by minimizing contract negotiation time.
  - De facto rules allow a focus on price, product, and timely delivery.
- The difference in the cost of capital between the buyer and seller does not drive PDPs.

The following table summarizes key findings on PDPs in the commercial sector. Industries with high seller market concentration (e.g., large commercial aircraft and luxury business jets) often have PDPs in excess of 50 percent of the price. Moreover, money is due on contract signing, and payments are made on fixed dates prior to delivery. In all of the industries described in the table, markets are dominated by a few firms that can demand PDPs not tied to milestones or specific manufacturing progress. We also find PDPs in excess of 50 percent in industries with medium or low seller concentration. Typically, these PDPs involve capital-intensive products that often have long lead times, such as geosynchronous satellites or ships. These industries require PDPs driven by defined milestones. Custom products are another area where PDPs set by milestones or progress are common. Examples include when railroad transport firms acquire specialized intermodal gantry cranes, and a company hires a construction firm to build a new facility.
The following table presents the number of PDPs as a percentage of price. The percentage paid as PDPs varies widely at every level of seller concentration. However, the data show the power of market concentration and high demand in that sellers in all three high concentration industries—large commercial aircraft, satellite launch services, and luxury business jets—receive PDPs that are over 50 percent of the price of the item and based upon dates, and not based on defined milestones or progress metrics. High payments (in excess of 50 percent of price) before final delivery also occur in less concentrated industries. However, these payments are driven by industry standards that account for factors such as high capital inputs (ships), long lead times (public utility and construction), and custom product or other limiting factors (geosynchronous satellites).
### PDPs by Industries

<table>
<thead>
<tr>
<th>Industry</th>
<th>Concentration</th>
<th>PDPs as % of Price</th>
<th>PDP Driver</th>
<th>Type of PDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Jets - Luxury</td>
<td>High</td>
<td>Up to 90%</td>
<td>Custom luxury product</td>
<td>Fixed date from delivery</td>
</tr>
<tr>
<td>Large Commercial Aircraft</td>
<td>High</td>
<td>30-67%*</td>
<td>Seller duopoly</td>
<td>Fixed date from delivery</td>
</tr>
<tr>
<td>Satellite Launch Services</td>
<td>High</td>
<td>90-100%</td>
<td>Time-sensitive launch window</td>
<td>Milestone</td>
</tr>
<tr>
<td>Satellite Geosynchronous</td>
<td>Medium</td>
<td>85-90%</td>
<td>Custom product</td>
<td>Milestone</td>
</tr>
<tr>
<td>Shipbuilding</td>
<td>Medium</td>
<td>20–60%</td>
<td>Industry standard</td>
<td>Milestone</td>
</tr>
<tr>
<td>Railroad Transportation</td>
<td>Medium</td>
<td>40–70%</td>
<td>PDPs for custom equipment only</td>
<td>Milestone</td>
</tr>
<tr>
<td>Aviation First-Tier Supplier</td>
<td>Medium</td>
<td>0%</td>
<td>No industry standard for PDPs</td>
<td>Delivery</td>
</tr>
<tr>
<td>Helicopters</td>
<td>Medium</td>
<td>15–25%</td>
<td>Deposit on contract signing</td>
<td>Fixed date from delivery</td>
</tr>
<tr>
<td>Business Jets - Standard</td>
<td>Medium</td>
<td>20%</td>
<td>Deposit on contract signing</td>
<td>Fixed date from delivery</td>
</tr>
<tr>
<td>Cloud Computing</td>
<td>Medium</td>
<td>0</td>
<td>Usage drives revenue</td>
<td>N/A</td>
</tr>
<tr>
<td>Public Utility</td>
<td>Low</td>
<td>90%</td>
<td>Industry standard/custom product</td>
<td>Progress</td>
</tr>
<tr>
<td>Construction</td>
<td>Low</td>
<td>90%</td>
<td>Industry standard/custom product</td>
<td>Progress</td>
</tr>
<tr>
<td>Packaged Machinery Mfg.</td>
<td>Low</td>
<td>25–30%</td>
<td>Competitive market; limited PDP</td>
<td>Milestone</td>
</tr>
<tr>
<td>Automotive First-Tier</td>
<td>Low</td>
<td>0</td>
<td>Competitive market; relational</td>
<td></td>
</tr>
</tbody>
</table>

* The PDP is the percentage of price paid for the aircraft at discounted prices; see Table 3.

In terms of DoD contract financing, it is important to note that the prime rates directly cited in the 1985 DFAIR study were exceptionally high in the early to mid-1980s. The DFAIR report noted that an economic environment of high inflation and interest rates is detrimental to the defense industrial base, and high interest rates were deemed a reason to increase DoD progress payments. The increase in contract financing payments allowed defense contractors to avoid paying considerable interest to financial institutions for borrowed working capital, especially since interest payments are not an allowable overhead expense on DoD contracts.
It is not altogether surprising that our research found the difference in cost of capital between commercial buyers and sellers is not a driver of PDPs in today’s market. The following figure shows the average prime rate from 1955 to the present. Today’s cost of capital is markedly different from the years of high inflation that persisted when the DFAIR was prepared.

![U.S. Prime Rate 1955–Current](image)

The incentives, risks, and market forces that drive PDPs in the commercial sector are most likely different from the objectives and motivations in the public space for major defense items. Nonetheless, it would be prudent to consider current commercial practices and macroeconomic conditions, in particular cost of capital, in any review of DoD contract financing policies.

In addition to considering current interest rates and in view of our findings, DoD may want to take the following actions as part of its larger examination of contract financing practices to provide insight for possible policy revisions:

- DoD could examine the market concentration of industries from which it buys products or services.
- DoD could compare its practices to those in the commercial sector for purchases of the same or similar goods or services to determine whether DoD contract financing practices mirror or parallel buyer financing arrangements by commercial firms.
- DoD could analyze whether the types of items it buys involving contract financing have unusually long production cycles, custom builds, product
requirements, and regulatory and administrative production oversight that exceeds those typically observed in the commercial sector.
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1. Purpose of the Study

The Department of Defense (DoD) asked the Institute for Defense Analyses (IDA) to provide insights on buyer motivations and practices pertaining to buyer contract financing in the commercial sector. That is, when acquiring a major item such as an aircraft, ship, or other item of significant cost, under what circumstances does a buyer provide payments to the seller prior to delivery? DoD specifically limited the scope of this analysis to understanding the circumstances and context in which commercial pre-delivery payments (PDPs) are made. As a result, this study will not compare DoD contract financing to that in the commercial sector.

A. History of DoD Contract Financing Policies

DoD has not comprehensively examined its contract financing policies since the early 1980s and is now undertaking steps to assess matters in the context of contemporary business practices and financial conditions. In 2019, DoD was encouraged by the General Accountability Office (GAO) to examine its practices that cited both the passage of time and GAO’s own Standards for Internal Control in the Federal Government that call for organizations to monitor the effectiveness of their policies on a recurring basis. DoD’s goal as expressed to the IDA is for DoD to gather information from a number of external and internal organizations.¹ Then, DoD will synthesize the information to determine whether its current practices are still appropriate and effective.

B. Overview of Pre-delivery Payments

The DoD calls its payments to DoD contractors made prior to delivery of a product “contracting financing.” In the commercial sector, industry personnel call such buyer financing arrangements “pre-delivery payments (PDPs).” PDPs to the seller may include

research and development (R&D) contributions, initial and subsequent deposits, progress or milestone payments, and post-delivery incentive payments.²,³

Our analysis explores buyer PDP practices in select commercial sectors to determine whether such financing is customary or an exception to standard business practices. In instances where we identified buyer financing, we attempted to collect and analyze a variety of information:

- **Economic** – This area includes buyer and seller motivations and actions, including seller selection.
- **Financial** – This area covers the influence of interest rates (cost of capital) on contract financing and the potential tradeoffs regarding buyer financing and price.
- **Legal** – This area includes key contract terms or conditions, such as the timing of payments, guarantees, remedies and damages, and intellectual property rights.

² Seller financing is the opposite side. Financing may be necessary for the development or customization of items for a particular customer, costs of production for items under contract, and other upfront costs for ordered items. Generally referred to as working capital. Financing of seller costs can be through buyer pre-delivery payments, delayed payments to suppliers, revolving lines of credit, short- and long-term debt instruments, seller cash reserves or equity, and venture capital.

³ This study briefly examines buyer options for financing PDPs such as retained earnings or equity, lines of credit, asset backed debt and other securitization, and governmental export support mechanisms. However, except in a handful of industries, PDP financing was not a significant issue of corporate executive concern and is typically handled through working capital or other short-term financing.
2. Background

The DoD acts a “banker” or financier to DoD contractors for purchases of technologically complex major weapon systems that are capital intensive and require long lead times to produce and deliver. That is, the DoD effectively provides working capital in the form of contract financing to DoD contractors in lieu of the contractors using their own funds or borrowing from private entities.

There is reasonable justification for such payments. The DoD should be able to obtain more favorable pricing because the cost of borrowing to the U.S. Government is or should be less than the cost of borrowing to a commercial firm. Through negotiations, the DoD can achieve a lower contract price when providing working capital.4

It is also important to note that the military items DoD buys are very different from commercial items. Modern weapon systems are expensive due to their complexity and are produced in relatively low volume due to cost, the evolving threat environment, and a rapidly evolving technological environment that tends to accelerate obsolescence. Moreover, the production of major weapon systems for practical purposes occurs in a regulated market; that is, acquisitions are subject to drastic swings in planned purchases due to political considerations and the vagaries of annual appropriations.5

In recent years, DoD has provided approximately $45 billion per year in contract financing to DoD contractors for fixed-price contracts to provide working capital to cover labor, material, and other costs associated with production.6 The Federal Acquisition Regulations (FAR), and DoD interpretation of it, is that DoD contract financing applies only to fixed-price contracts.7

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DoD provides two types of contract financing payments: progress payments and performance-based payments. Progress payments are based upon the percent of incurred costs tied to estimates on the state of product completion. Immediately prior to Covid-19, DoD paid 80 percent of total contracts costs incurred by large firms and 85 percent for small businesses of total contract value.\(^8,9\) In response to the Coronavirus Disease 2019 (COVID-19) national emergency, the DoD issued a regulatory class deviation to increase the rate to 90 percent for large businesses and 95 percent for small businesses.\(^10\)

For performance-based payments, the DoD can pay up to 90 percent of the contract’s price or the price of a deliverable.\(^11\) Performance-based payments occur according to the satisfaction of specific contractual milestones.

The origins of DoD contract financing go back to at least World War II when the U.S. Comptroller General, in an opinion dated June 19, 1941, allowed payments in advance of actual delivery.\(^12\) Wartime needs resulted in the military departments establishing a tradition of granting progress payments for the goods and services acquired. The results were uneven in that some contractors received overpayments. Subsequent regulations during the 1950s and later resulted in a standardized system as codified in FAR Part 32 and Defense Federal Acquisition Regulation Supplement (DFARS) 232.

DoD’s last comprehensive assessment of contract financing policies occurred in the 1985 Defense Financial and Investment Review (DFAIR). The DFAIR mandate was to examine three key variables: contract pricing, contract financing, and profit policies in effect at that time. The main policy objective was to maintain the military industrial base through adjustments to the above three variables and to do so in a manner that uses public funds effectively and efficiently.\(^13\) Although legal and financial regulatory considerations impacted the contract financing policy-making, the main focus was on maintaining the health of the defense industry.

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11. FAR 32.1004(b)(2)(ii).
13. DFAIR, E-1.
In the late 1970s and early 1980s, due to macro-economic issues of high inflation and interest rates, policy-makers felt that the level of contract financing was insufficient. Adjustments were made to the level of contract financing to ensure that DoD contractors were adequately covered and to protect the DoD against a failure of a contractor to perform under a contract. In 1985, reflecting improved (lowered) inflation and interest rates, a downward adjustment of progress payments occurred: progress payments were reduced to 80 percent for large businesses and 90 percent for small businesses. The changes were made on the condition that they would be reconsidered if the conclusions of the DFAIR warranted it. In August 2018, the DoD proposed a rule to lower progress payments to large firms from 80 percent to 50 percent; however, the proposal was withdrawn in October 2018.

In June 2019, the GAO published a report on DoD contract financing pursuant to a provision in the Conference Report accompanying the FY 2019 National Defense Authorization Act. The GAO report acknowledged that the defense industry, economic and market conditions, legislative and regulatory requirements, and business practices have all changed since 1985. The recommendation was for DoD to assess comprehensively the effect of its contract financing and profit policies on the defense industry and continuously update that assessment.

To help inform DoD, IDA was asked by Defense Pricing and Contracting (DPC), Price, Cost, and Finance (PCF) Directorate, to examine contract financing in the commercial marketplace. This study is one part of DoD’s much larger effort to assess the impact of its contract financing and profit policies on the defense industrial base.

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14 DFAIR; progress payments were at 90 percent in 1981.
15 83 FR 50052 (October 4, 2018).
3. Economic Theory of PDPs

A. Principal-Agent

Economic theory provides insight into why some industries use PDPs. In the principal-agent model, the principal (or buyer) contracts with an agent (or seller) to produce a good the buyer lacks the skill or knowledge to produce. Examples include building satellites that will work for the buyer’s software application and building a cargo ship. In these cases, the seller may be tempted to cut corners to save money. For example, a shipbuilder could use smaller engines or a less durable paint. The buyer can monitor the seller to make sure the specifications are followed, but this is costly and may require specialized information. The main issue within the model is how the buyer can motivate the seller to act in the interests of the buyer.17

1. Monitoring

Offering PDPs helps provide the funding that allows the seller to complete the work on time and provides a mechanism for monitoring the seller’s work. Instead of giving a single payment upon completion of the contract, industries using PDPs remit payments when specific work is completed, such as laying a ship’s keel, while holding back enough to motivate the seller to complete the work. That approach allows the buyer to verify that the work is done to the buyer’s satisfaction as it progresses.

2. Transaction Costs

Easily verified milestones help reduce the cost of monitoring and remove ambiguity; for example, a satellite has been launched or it has not. This clarity helps reduce conflict between the buyer and seller. This is an important feature as many industries that use PDPs are international, making resorting to the courts more difficult.

The buyer and seller also reduce their costs by using standardized contracts. This approach provides an agreed framework for most of the work, and costly negotiations can focus on areas that are unique to the buyer and seller.

B. Concentration and Market Power

In all of the industries studied, price and other terms are set in negotiation (buyers are not price-takers in a competitive market). In most cases, the seller is an Original Equipment Manufacturer (OEM) and the buyer is the end user. We do have important examples where the seller is a first-tier supplier, and the buyer is an OEM. In the traditional economics literature, the relative economic power of the counter-parties manifests itself in price determination:

In negotiated-price markets, transaction prices are determined by the relative bargaining leverage of buyers and sellers. On the seller side, leverage depends on the spread between the posted price and costs. For buyers, leverage is created by the threat of obtaining competitive offers. Importantly, the credibility of this threat depends on the level of competition and product differentiation between sellers, and on the cost of searching for multiple offers.¹⁸

Law and economics literature hypothesize that relative leverage is also important in influencing which side of the negotiation can dictate contract terms. The stronger party is expected to prescribe boilerplate terms that are to its benefit, while also extracting profits through price negotiation.¹⁹

In the context of PDPs, the stronger party is expected to set payment terms to its benefit. In the broader discussion, we do not take “to its benefit” as simply the net present value (NPV) advantage of receiving payments earlier.²⁰ Instead, we are interested in the incentives or “drivers” that would move the stronger party to propose the particular PDP terms evident in a typical transaction for a given industry.

To pursue this line of investigation, we seek objective quantitative proxies for market structure. The simplest and most straightforward measure is the concentration ratio, which is calculated based on the largest Nth number of firms in a market or industry (CR_N). An alternative measure that is more sensitive to the distribution of firm shares across the market is the Herfindahl–Hirschman Index (HHI).

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²⁰ The parties should be indifferent to changes in NPV that are based on prices vs. payment terms.
Given data availability, we can directly calculate the two measures of market concentration using either revenues and/or delivery quantities. For CRN we chose to present the four firm concentration ratio (CR4), which reflects the market share in percent ($s_i$) of the four largest firms in a market:

\[ CR_4 = \sum_{i=1}^{4} s_i \]  

The HHI is calculated as:

\[ HHI = \sum_{i=1}^{n} s_i^2 \]  

Although the interpretation of CR4 is intuitive, the HHI requires some context. Where a monopoly exists, the HHI takes the value of 10,000 ($100^2$); in a hypothetical competitive market where 100 firms each have 1 percent market share, HHI = 100. The Department of Justice and the Federal Trade Commission suggest that an HHI value of 2,500 should raise significant competitive concerns, providing a reason for additional scrutiny when evaluating mergers and acquisitions.\footnote{21} Where raw data is not accessible, the measures are often available from the U.S. Census Bureau\footnote{22} or from academic or industry studies. The measures are presented both for the seller, and (when feasible), the buyer side of characteristic transactions.

\footnote{21}{U.S. Department of Justice and the Federal Trade Commission: \textit{Horizontal Merger Guidelines}, August 19, 2010.}

4. Methodology

To conduct this study of PDP practices in the commercial sector, we reviewed academic literature, consultant and governmental studies, publications, and other public source documents (e.g., U.S. Securities and Exchange Commission (SEC) filings). However, our primary means of acquiring contemporary information on PDPs was through direct interviews with commercial industry personnel. We sought to focus on non-DoD contractors or corporation divisions focused on governmental contracting. Interviewees included executives, lawyers, consultants, and trade association representations from an array of industries. We interviewed both buyers and sellers.

To be clear—this study is designed to be an overview of various commercial industries. Due to time and resources, we could not conduct comprehensive investigations of each industry. As a practical matter, even in the best of circumstances, it is often exceedingly difficult to identify and engage industry personnel to participate in non-paid interviews. For the industries reviewed, we do believe that the data and information collected is representative of the industries.

The objective of this study is to focus on commercial industries that buy or sell items comparable to DoD purchases in terms of technology, cost, and general scope. Due to the unique nature of military items, it is impossible to find directly comparable products. To approximate, we conducted interviews with personnel in the following industries that produce large, expensive, and often custom equipment:

- Aerospace (commercial and business aviation, first-tier suppliers, satellites, and space launch)
- Automobile (OEMs and first-tier suppliers)
- Shipbuilding
- Transportation (rail and air cargo)
- Cloud computing
- Machinery used to produce food and beverage consumables
- Public utilities
- Construction

In order to obtain candid insights, all interviews were conducted on a non-attribution basis through telephonic and videoconference means. In view of our need to move
expeditiously, none of the interviews involved non-disclosure agreements (NDAs). Our institutional experience is that NDAs require substantial time to execute. Furthermore, in many instances we find that interviewees are reluctant to discuss specifics even with an NDA; thus, the time spent acquiring an NDA is often poorly applied.

Finally, we acknowledge the impact of COVID-19 on this study. We found that certain industries that engaged with IDA on studies pre-COVID-19 were preoccupied with corporate survival (e.g., commercial passenger airlines and aircraft manufacturers). Additionally, other firms that were willing to speak with us subsequently found themselves immersed in corporate upheaval (e.g., first-tier aircraft component suppliers). Nonetheless, we were able to interview over 35 people in the industries described earlier.
5. Findings and Analysis by Industry

A. Data Gathered to Characterize Industries

As discussed in Section 1, the purpose of this study is to provide the DoD with insights on buyer motivations and practices pertaining to buyer contract financing (PDPs) in the commercial sector. When we identified instances of buyer PDPs, we collected information in three broad categories:

- Economic – Buyer and seller motivations and actions, including seller selection
- Financial – Influence of interest rates (cost of capital) on PDPs and potential tradeoffs regarding buyer financing and price
- Legal – Key contract terms or conditions, such as the timing of payments, guarantees, remedies and damages, and intellectual property (IP) rights

1. Economic

Industry interviewees emphasize the tension between buyers and sellers regarding PDPs. Buyers seek to minimize the size and number of PDPs, while sellers seek to maximize both size and frequency. Industry standards provide the starting point for negotiations and place bounds on the variation of PDPs. The emphasis is on determining what those standards are and why they were chosen.

Industry standards help minimize friction regarding what milestones or other metrics (measure of progress in completing the item) are acceptable in determining the timing of PDPs. The emphasis is on objective, easily verified events. Standards reduce conflict between the buyer and seller regarding whether a milestone or other metric has been completed, avert delays or litigation, and reduce transaction costs. Industry standards are especially important because many industries that use PDPs trade across international borders. Additionally, accepted norms reduce the monitoring costs incurred by buyers by standardizing a set of clearly defined events that must occur before payments are made.

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23 Although not part of this paper, the commercial sector and DoD utilize earned value analysis (EVA) to assist in measuring the work performed, and then use the progress to forecast project total cost and date of completion.

24 We did not gather data on cash flow to services or products; however, we understand most buyers pay monthly for services consumed. For example, cloud computing services tied to usage are typically paid monthly.
2. **Financial**

When examining contract financing in the DoD environment, we found that emphasis is on how the seller finances its operations. In terms of government policy, seller financing manifests in DoD as the types and amounts of progress and performance-based payments. How the government buyer finances the payments (e.g., through taxes or sovereign bond issuance) is not a focus of this study. However, *seller financing* is an area of interest when we examine industries in the commercial marketplace, especially when the buyer provides no PDPs.

Sellers must finance the development and production of items under contract, including working capital and upfront costs. Buyer PDPs can include R&D contributions, initial deposits, progress, milestone and set-date payments, payment on delivery, and post-delivery incentives. Seller financing includes short-term paper and bank loans; long-term bank loans and securities; and equity, including venture capital. Some sellers also use delayed payments to suppliers. In packaging machinery manufacturing, we were told that suppliers may wait 6 to 12 months for payments from buyers in the brewery industry; however, of the firms we interviewed, this is an outlier. In most industries, the sellers are paid within 30 to 90 days upon submission of an invoice. Overall, based on comments from interviewees, delayed payments by sellers to their suppliers are not major sources of seller funds.

In certain industries, we also examine *buyer financing*. In a handful of commercial sectors, particularly those involving high-value items such as large commercial aircraft, how buyers finance their payments to sellers (both PDPs and delivery payments) affects contract finance practice. Buyers finance contract payments though their own cash flow and retained earnings; asset-backed and non-secured bank loans and securities; equity, including venture capital; and loans and guarantees from export credit authorities. In some instances, leasing companies are the buyers, who in turn lease their acquired assets to end users.

3. **Legal**

Contractual terms and conditions generally follow the business negotiations as driven by economic and financial considerations. In some instances, policy considerations may constrain certain business arrangements—typically dealing with taxation or social policy objectives as set by government.

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25 Interviewees indicated payment terms by buyers to sellers (and payments from sellers to their suppliers) are typically governed by industry-standard contract clauses.

26 Social policies may include prohibition of segregated facilities, equal opportunities for veterans, and combatting human trafficking. All of these policies are included in the Federal Acquisition Regulations.
To provide greater clarity and specificity on PDPs in the commercial marketplace, we obtained agreements or contractual clauses regarding terms, conditions, timing of payments to sellers, and other factors that may influence PDPs. We were also interested in clauses pertaining to guarantees, remedies and damages, and IP rights. We found that interviewees were particularly reluctant to share any written contractual materials; however, we did find some standardized contracts in the public domain, such as shipbuilding contracts.

B. Industry Findings

In this section, we review salient research and interviews with company personnel by industrial sector. Table 1 and Table 2 summarize our findings.

Table 1 sorts the industries by market concentration, which was explained in Section 3.B. Industry concentration is sorted into three categories (high, medium, and low) by seller concentration. We sort by seller because the research focuses on PDPs to sellers, and we found that market concentration tends to drive the necessity of the buyers providing PDPs.

On the right side of Table 1, we categorized key PDP practices into groups. For example, “money due on contract signing”; “fixed date (i.e., x months from planned delivery)” payments required; and so on. The research shows that high PDPs (PDPs greater than 50 percent of price) occur when some or all of the following factors apply:

- The seller has market power.
- The production cycle is lengthy and capital-intensive.
- Items are custom or unique.
- Market demand is robust.

Some examples based upon seller concentration include the following:

- The large aircraft industry, which constitutes a duopoly, includes long production cycles where payments before production are tied to fixed dates and not to milestones or progress.
- The shipbuilding industry is capital-intensive with well-established milestone payments based upon production stages (e.g., first cut of steel, laying the keel, and so forth).
- First-tier automotive suppliers make up a capital-intensive industry segment with no PDPs to the sellers. Sellers recoup production costs with sales to automobile OEMs.
Table 1. Overview of Results by Industry

<table>
<thead>
<tr>
<th>Industry</th>
<th>Market Concentration for Seller</th>
<th>Market Concentration for Buyer</th>
<th>Fixed Date (i.e., X Mos from Contract Signing)</th>
<th>PDPs Covered</th>
<th>R&amp;D Contribution from Buyer</th>
<th>Milestone Driven</th>
<th>Progress Payments (Cost-Based)</th>
<th>Money Due on Fixed Date (i.e., X Mos from Planned Delivery)</th>
<th>PDP Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Commercial Aircraft</td>
<td>![Red]</td>
<td>![Green]</td>
<td>![Gray]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Customary</td>
</tr>
<tr>
<td>Satellite Launch Services</td>
<td>![Red]</td>
<td>![Green]</td>
<td>![Gray]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Customary</td>
</tr>
<tr>
<td>Helicopter</td>
<td>![Red]</td>
<td>![Green]</td>
<td>![Gray]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Customary</td>
</tr>
<tr>
<td>Shipbuilding</td>
<td>![Red]</td>
<td>![Green]</td>
<td>![Gray]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Customary</td>
</tr>
<tr>
<td>Aviation 1st Tier Supplier</td>
<td>![Red]</td>
<td>![Green]</td>
<td>![Gray]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Customary</td>
</tr>
<tr>
<td>Railroad</td>
<td>![Red]</td>
<td>![Green]</td>
<td>![Gray]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Customary</td>
</tr>
<tr>
<td>Automotive 1st Tier Supplier</td>
<td>![Red]</td>
<td>![Green]</td>
<td>![Gray]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Customary</td>
</tr>
<tr>
<td>Packaging Machinery Mfg.</td>
<td>![Red]</td>
<td>![Green]</td>
<td>![Gray]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Customary</td>
</tr>
<tr>
<td>Utility/Power Plants</td>
<td>![Red]</td>
<td>![Green]</td>
<td>![Gray]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Customary</td>
</tr>
<tr>
<td>Construction</td>
<td>![Red]</td>
<td>![Green]</td>
<td>![Gray]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Customary</td>
</tr>
</tbody>
</table>

* As measured by four firm concentration ratio (CR4): <50=low; >50 <85=med; >85=high.

Table 2 presents the data in a more granular format. It includes PDP as a percentage of price by industry and perceived drivers for PDPs or no PDPs. Within the concentration clusters, we listed industries by PDP as a percentage of price from highest to lowest. For example, under “Concentration – High,” we order the rank starting with Business Jets – Luxury with a PDP of 95 percent of price, followed by Large Commercial Aircraft at 50 to 75 percent of price, and so forth.
### Table 2. PDPs by Industry by Percentage of Price

<table>
<thead>
<tr>
<th>Industry</th>
<th>Concentration</th>
<th>PDPs as % of Price</th>
<th>PDP Driver</th>
<th>Type of PDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Jets - Luxury</td>
<td>High</td>
<td>Up to 90%</td>
<td>Custom luxury product</td>
<td>Fixed date from delivery</td>
</tr>
<tr>
<td>Large Commercial Aircraft</td>
<td>High</td>
<td>30–67%*</td>
<td>Seller duopoly</td>
<td>Fixed date from delivery</td>
</tr>
<tr>
<td>Satellite Launch Services</td>
<td>High</td>
<td>90–100%</td>
<td>Time-sensitive launch window</td>
<td>Milestone</td>
</tr>
<tr>
<td>Satellite Geosynchronous</td>
<td>Medium</td>
<td>85–90%</td>
<td>Custom product</td>
<td>Milestone</td>
</tr>
<tr>
<td>Shipbuilding</td>
<td>Medium</td>
<td>20–60%</td>
<td>Industry standard</td>
<td>Milestone</td>
</tr>
<tr>
<td>Railroad Transportation</td>
<td>Medium</td>
<td>40–70%</td>
<td>PDPs for custom equipment only</td>
<td>Milestone</td>
</tr>
<tr>
<td>Aviation First-Tier Supplier</td>
<td>Medium</td>
<td>0%</td>
<td>No industry standard for PDPs</td>
<td>Delivery</td>
</tr>
<tr>
<td>Helicopters</td>
<td>Medium</td>
<td>15–25%</td>
<td>Competitive market; limited PDP</td>
<td>Fixed date from delivery</td>
</tr>
<tr>
<td>Business Jets - Standard</td>
<td>Medium</td>
<td>20%</td>
<td>Competitive market; limited PDP</td>
<td>Fixed date from delivery</td>
</tr>
<tr>
<td>Cloud Computing</td>
<td>Medium</td>
<td>0%</td>
<td>Usage drives revenue</td>
<td>N/A</td>
</tr>
<tr>
<td>Public Utility</td>
<td>Low</td>
<td>90%</td>
<td>Industry standard/custom product</td>
<td>Progress</td>
</tr>
<tr>
<td>Construction</td>
<td>Low</td>
<td>90%</td>
<td>Industry standard/custom product</td>
<td>Progress</td>
</tr>
<tr>
<td>Packaged Machinery Mfg.</td>
<td>Low</td>
<td>25–30%</td>
<td>Competitive market; limited PDP</td>
<td>Milestone</td>
</tr>
<tr>
<td>Automotive First-Tier Supplier</td>
<td>Low</td>
<td>0%</td>
<td>Competitive market; relational</td>
<td></td>
</tr>
</tbody>
</table>

* The PDP is the percentage of price paid for the aircraft at discounted prices; see Table 3.

The remainder of this section describes findings in greater detail. We summarized interviews and research to highlight salient points related to PDPs.

In terms of order of industries, we arranged the data by the industries listed in Table 1 and flow from highest buyer concentration to lowest.

1. **Large Commercial Aircraft**

   As a preface to this industry summary, it should be noted that large commercial aircraft is a stand-out in terms of the body of literature, source materials, and availability
of consultants, lawyers, and trade association personnel. In our research, no other industry had a comparable volume of materials or available cadre of attorneys and consultants.

This industry is one of the very few in which the sellers receive PDPs not tied to defined milestones or work progress. We attribute this trend to the market duopoly, very high-value items with long production cycles, strong demand, and robust asset-backed financing and leasing arrangements. Furthermore, IDA has acquired relatively deep expertise in the aerospace industry through decades of work for the DoD.

a. Market Characteristics

1) Sellers

The market for large commercial aircraft (range greater than 3,000 nautical miles) is effectively a global duopoly with two manufacturers, Boeing and Airbus. In 2018, they had combined revenues of almost $120 billion on the delivery of approximately 1,600 commercial aircraft.\(^\text{27,28}\)

Calculated measures of concentration are 100 for CR\(_4\) with HHIs of 5041. Both are obviously very high.

2) Buyers

The primary buyers are passenger airlines, cargo firms, and leasing companies, who in turn lease aircraft to the passenger airlines and cargo firms. When reviewing measures of market concentration for airlines, we are interested in the airlines as buyers of aircraft and not as sellers of air services. Based on 2015 data from an existing study,\(^\text{29}\) we calculate a CR\(_4\) value of 19 (very low); HHI is reported at 185 (very low). These metrics show that Boeing and Airbus have a large number of potential buyers.

3) Unit Price of Product

The sales price of a given aircraft is highly proprietary and not publicly available. Although list prices are available on Boeing and Airbus websites, aircraft are generally sold at a substantial discount from list. For 2018, we calculate that, across all models, the average aircraft value was $75 million for Boeing and $69 million for Airbus. Aircraft

\(^{27}\) The Boeing Company, “2018 Annual Report.” 2018 was chosen as a reference year as it was prior to the effects of both Boeing’s 737 MAX grounding and the COVID-19 pandemic.

\(^{28}\) Airbus, “2018 Annual Report.” Euro values were converted to dollars using a 1.145 factor identified in the Annual Report.

appraisal estimates for new aircraft suggest discounts from list can be upwards of 45 to 60 percent.\textsuperscript{30} The importance of the relationship between list and transaction prices will become clearer when we describe PDPs.

4) Order and Delivery Period

Aircraft are usually ordered in batches, with the time from a firm order to delivery usually of at least 24 months, and in many cases, substantially longer (5 to 6 years is not unusual). For production cycle time, the span should include supplier inputs, including airline-specific interiors. The ranges provided in our interviews were from 12 to 24 months, with the longer time periods associated with larger aircraft. These values were confirmed in primary source documents.

b. Purchase Agreements and PDPs

The purchase agreements (PAs) flow from over-arching aircraft general terms agreements between the sellers and buyers. Because the sellers have market power, their standardized contractual templates are almost universally used. The PAs have standard terms and conditions, with letter agreements (LA)—essentially contractual addendums—allowing flexibility on a wide range of matters. We were not able to obtain original copies of the LAs as they are highly proprietary; however, interviewees informed us that they are standardized, and there are many types of LAs to cover a range of circumstances.\textsuperscript{31} Primary points of negotiation are price, product, and delivery schedule. PDPs are standard and generally not open to negotiation. A sample PA can be found in Appendix A.

c. PDPs

The standard PDP is 30 percent of the list price of the aircraft paid on a standard schedule. Payment schedules are tied to the number of months prior to delivery; the remainder of the price is then paid at delivery. Table 3 shows a standard payment schedule from a Boeing PA.\textsuperscript{32} This schedule includes both the raw data and payments expressed as percentages of the net price given a range of assumptions for discounts from the base prices published by the seller. As the table is read from left to right, the columns reflect the discount from list price offered by Boeing, consistent with new aircraft values reported by aircraft appraisers. The greater the discount, the higher the PDP is as a percentage of price


\textsuperscript{31} The publicly available LAs are heavily redacted. See e.g., https://www.sec.gov/Archives/edgar/data/100517/000119312512435658/d408868dex104.htm

\textsuperscript{32} Purchase Agreement No. 3256 between The Boeing Company and LAN Airlines, S.A., October 29, 2007, https://www.sec.gov/Archives/edgar/data/1047716/000119312508140337/dex45.htm. Most available Boeing PAs with non-redacted PDP terms had the same payment schedules.
because the PDPs are fixed amounts of the list price. If the time from order to delivery is less than 24 months, the specified PDPs for the earlier time periods must be paid up front. For Airbus, total PDPs of 30 percent of list price are also standard. Payment schedules in redacted Airbus PAs are unavailable.

<table>
<thead>
<tr>
<th>Event</th>
<th>Percentage of Aircraft List Price</th>
<th>Percentage of Aircraft Price, 45% Discount</th>
<th>Percentage of Aircraft Price, 50% Discount</th>
<th>Percentage of Aircraft Price, 55% Discount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contract execution</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>24 months pre-delivery</td>
<td>4%</td>
<td>7%</td>
<td>8%</td>
<td>9%</td>
</tr>
<tr>
<td>21 months pre-delivery</td>
<td>5%</td>
<td>9%</td>
<td>10%</td>
<td>11%</td>
</tr>
<tr>
<td>18 months pre-delivery</td>
<td>5%</td>
<td>9%</td>
<td>10%</td>
<td>11%</td>
</tr>
<tr>
<td>12 months pre-delivery</td>
<td>5%</td>
<td>9%</td>
<td>10%</td>
<td>11%</td>
</tr>
<tr>
<td>9 months pre-delivery</td>
<td>5%</td>
<td>9%</td>
<td>10%</td>
<td>11%</td>
</tr>
<tr>
<td>6 months pre-delivery</td>
<td>5%</td>
<td>9%</td>
<td>10%</td>
<td>11%</td>
</tr>
<tr>
<td>Total</td>
<td>30%</td>
<td>55%</td>
<td>60%</td>
<td>67%</td>
</tr>
</tbody>
</table>

Source: Boeing Purchase Agreements.

Note: The payment percentage at execution signing applies to the entire order.

* In the contractual documents, the list price equivalent is the “Advance Payment Base Price,” which might differ slightly from the published list price because of options included.

Interviewees stated that the standard 30 percent PDP was “sticky” and that Airbus and Boeing rarely make exceptions to the standard 30 percent. However, we did uncover an instance in which Boeing set PDP at 20 percent for a large order of 737 MAX aircraft to be purchased by COPA airlines.33 Other circumstantial evidence suggests Boeing may accept PDPs below 30 percent when it finances a sale. We also encountered an example of modified payment terms in a PA, although the specifics were redacted.34

Most suppliers to Boeing and Airbus do not apparently receive PDPs from the aircraft manufacturers, although there are exceptions. Relevant SEC 10-K filings, as well as press reports, indicate that engine PDPs mirror those of the two large aircraft manufacturers. Evidence from similar sources indicate that manufacturers of large integrated aerostructures (e.g., Spirit and Vought who build fuselages and other sections for the

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aircraft manufacturers) receive PDPs from the large aircraft manufacturers. However, the PDPs are generally less generous than those the large aircraft manufacturers receive from their buyers. These factors and production cycle times suggest that the timing of Boeing’s and Airbus’s working capital expenditures come after they start to receive the PDPs from the buyers.

d. Other Terms and Conditions

As confirmed through interviews, buyers have the right to monitor production processes and preparation for delivery. Other items include making office space available to buyer representatives, allowing inspections, providing demonstration flights, and furnishing test data confirming performance guarantees. Buyers also receive flight and maintenance training, technical and spare parts data, and other engineering data.

Interviewees state that the LAs exhibit most of the negotiating flexibility. LAs can include enhancements for customer support, warranties and other services, options for additional aircraft, and aircraft performance guarantees. They also include the credit memoranda that enumerate discounts from list prices.

One specific contractual clause raised by an aviation lawyer, and elaborated on in SEC filings, is liquidated damages, which arise when a delay can be categorized as “Excusable” or “Non-Excusable.” An excusable delay is broadly defined.35 If the delay is less than 12 months, the buyer is required to take delivery. The schedule of future PDPs is then adjusted to reflect the delay, providing some monetary relief to the buyer. If the delay is more than 12 months, any party can terminate the agreement. The statuses of PDPs after termination for an excusable delay is somewhat ambiguous.

In a non-excusable delay, the seller must pay liquidated damages to the buyer; these are usually enumerated as dollars per day of delay for a given aircraft model. There may be a grace period before payments are required and a ceiling on total payments. The buyer can terminate after a stated period (180 or 360 days), with PDPs then refundable.36


36 Given the advantages to the seller of a delay being deemed excusable and the open-ended definition of an excusable delay, there is an incentive for the seller to claim any delay to be excusable. This has come to the fore in the 737 Max grounding crisis where deliveries were indefinitely delayed. Boeing has claimed, in some cases, these delays are excusable, resulting in buyer litigation to recover PDPs for cancelled aircraft. See e.g., ALAFCO Aviation Lease and Finance Company (K.S.C.P.) v. The Boeing Company, Case: 1:20-cv-02467, filed April 22, 2020.
e. Financing

Due to duopoly power, Boeing and Airbus can receive PDPs that are not tied to defined milestones or work progress. For the buyers, PDPs are usually financed separately from the financing of the delivered aircraft, where the PDP financing is repaid at delivery. Once the aircraft are delivered, longer term financing is accomplished through a variety of methods that have evolved over time (e.g., asset backed loans).

When a buyer seeks financing for PDPs, it typically takes the form of short-term loans from commercial banks secured indirectly\(^ \text{37} \) by the value of the aircraft ordered. PDP financing is available at relatively low cost, with interest rates mentioned in our interviews of 1 month London Interbank Offered Rate (LIBOR) of 1.6 to 2.5 percent. As an example of an aircraft manufacturer requiring short-term loans for working capital, Boeing in 2020 was able to tap their financial institution’s 364-day revolving credit line at 1 month LIBOR + 1 percent.\(^ \text{38} \) However, none of the interviewees indicated that the cost of capital is a topic of negotiations.

f. R&D

Buyers do not contribute to R&D expenses; these are the responsibility of the manufacturers. The manufacturers must then recover R&D and other nonrecurring costs through profits on the subsequent sale of aircraft.

g. PDP Drivers

First, as a duopoly, the large aircraft manufacturers have more market power than their buyers; as such, they are in a position to prescribe terms. We would also note there are long lead times for high-value major components and considerable capital investment, including large up-front R&D expenditures, by the aircraft manufacturers. Thus, forward monetary commitments by buyers help provide more certainty to the sellers as they obligate capital.\(^ \text{39} \)

\(^{37}\) Collateral is not a physical asset under mortgage, but rights regarding the subject aircraft. See Cameron Gee, “Aircraft Pre-Delivery Payment Financing Transactions: Updated for 2018,” The Journal of Structured Finance, Spring 2018.

\(^{38}\) THE BOEING COMPANY 364-DAY CREDIT AGREEMENT among THE BOEING COMPANY for itself and on behalf of its Subsidiaries, as a Borrower THE LENDERS PARTY HERE TO CITIBANK, N.A., as Administrative Agent JPMORGAN CHASE BANK, N.A. as Syndication Agent and CITIBANK, N.A. and JPMORGAN CHASE BANK, N.A., as Joint Lead Arrangers and Joint Book, October 26, 2020, https://www.sec.gov/Archives/edgar/data/12927/000001292720000071/a202010oct268kex101.htm.

\(^{39}\) For example, the Boeing 787 program had a large number of orders during the R&D phase. Although the accompanying PDPs could be only a small offset to R&D expenses, they provided some assurance of program success.
Second, as expressed by interviewees, PDPs give the sellers confidence in the buyer’s ability and commitment to take delivery. The sellers want buyers who are financially committed to taking delivery: even if the buyer has the cash, they might renege due to changing market conditions. The ability to fund PDPs sends a positive signal to sellers regarding the financial health of buyers to obtain monetary resources as the PDPs are a substantial portion of the total price. The ability to take delivery of completed aircraft is important to the sellers as they do not want secondary markets flooded with new but undelivered aircraft because this may depress the prices of new aircraft.

2. Business Jets – Luxury

   a. Market Characteristics

      1) Sellers

      The 2019 global market for business jets is $28 billion. In the luxury niche of this market (often referred to as “super midsizer/long range”), the leaders are firms such as Gulfstream (owned by Northrop Grumman), Dassault, and Bombardier.

      The calculated measure of concentration using 2019 data are 100 for CR4 (high concentration) with HHI of 3,544 (high concentration).

      2) Buyers

      The primary buyers are corporations, fractional jet-leasing firms, and very high net worth individuals.

      3) Unit Price of Product

      In the luxury jet industry, aircraft such as the Gulfstream G650 stand out with prices ranging from $40 to $70 million. These aircraft are in a class of their own and can be compared to a luxury good produced by Rolls Royce or Hermes.

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41 Luxury jets could also include converted Boeing and Airbus commercial aircraft, but those are not encompassed in this section. This section focuses on the larger cabin, ultra-long-range business jets (10–20 passengers) that can land at regional or local airports.

4) Order and Delivery Period

We understand that the time between order and delivery can be lengthy. For the most desired models, this period can be up to 7 years, including the time spent in the queue. Given the synchronization of the build process with PDPs, the production period from start to delivery of a flyable aircraft is interpreted to be around 18 months (excluding completion of the interior).  

b. PAs and PDPs

Our research and discussions with industry representatives suggest that PAs have standard terms and conditions. This is in line with the uniqueness of the aircraft (strict structure in regard to price, payment timing, terms and conditions, and warranties). Side agreements are rare and typically pertain only to support services for fleet sales.

For the industry leaders, price maintenance is critical to business strategy. Senior executives said they will not sacrifice price to maintain production levels. Planning on long-term production rates pursuant to strategic business plans is the policy.

c. PDPs

PDPs are foundational to the business model of luxury business jets. Due to high demand, the manufacturers can hold the deposits long before work begins on the aircraft. In general, 10 percent of the purchase price is due on signing, and PDPs follow 6 quarters prior to the aircraft entering service (flyable status). In sum, 90 percent of the purchase price is paid before entry into service. Upon delivery with completed interiors, the remaining amount owed is approximately $1 to $2 million.

The PDPs follow calendar dates and not specific milestones. However, due to consistency of production, the milestones and calendar dates typically align for the industry leaders.

d. Other Terms and Conditions

As noted above, contractual terms are static. Contracts are changed minimally, and the changes are not related to price or payment terms. From the information obtained from interviews, sellers do not allow penalty clauses for late deliveries. One seller interviewee stated its track record of deliveries is so well honed that it has perfect on-time delivery. The same interviewee stated there is a standard \textit{force majeure} clause (“acts of god”) and a standard buyer time-to-remedy clause of 90 days in the event of untimely delivery. In both instances, the buyer’s PDP is returned. In general, for luxury jets, buyers are apprised of

\footnote{The interpretation of 18 months is derived from interviewee statements that PDPs are paid over 6 quarters, and the production cycle aligns tightly with the PDP payments over the 6 quarters.}
production status every few weeks, and the frequency increases to weekly and daily as the aircraft near completion.

e. Financing

All PDP financing is provided by the buyer. Sellers will sometimes provide bank and financier introductions to potential customers. It is understood that many customers will seek loans for the PDPs or use cash.

f. R&D

Interviews and research indicate sellers fund all their own research. Buyers do not fund any R&D. An examination of materials for one seller suggests cost-sharing on R&D expenses with suppliers. We were unable to determine the exact extent of such cost-sharing activities

g. PDP Drivers

The luxury business jet market is akin to a luxury good in very high demand. Annual production is restricted and the number of eager buyers is high. The characteristics of this market drive the ability of the manufactures to extract very large PDPs.

3. Satellite Launch Services

a. Market Characteristics

1) Sellers

The 2019 global market for launch services was approximately $6.2 billion.\(^4\) Major sellers include Arianespace, Space Exploration Technologies Corporation (more commonly known as SpaceX), China Great Wall Industry Corporation, and International Launch Services, among others.\(^5\)

The most relevant submarket for PDPs is the launch of commercial geosynchronous communication satellites (GS). This sector is notable for a disruptive entrant, SpaceX, which competes against well-established legacy sellers. For measures of market concentration, we used numbers of launches instead of corporate revenue because the


sellers often have other lines of business. Calculated measures of concentration are 97 for CR₄ (high concentration) and HHI of 3,368 (high concentration) based on launch data from 2015 to 2019.⁴⁶

2) Buyers

The primary buyers are the same as buyers of GSs in Section 5.B.6: communications service firms (e.g., DirectTV, Intelsat, AsiaSat) and governments providing similar services.

3) Unit Price of Product

Pricing data on launch services is closely held proprietary information. Press reports indicate prices from $50 million to $90 million per launch, reflecting stiff competition between Arianespace and SpaceX.⁴⁷ Interviewees indicate prices have fallen with the introduction of more competition along with technological advances.

4) Order and Delivery Period

Interviewees indicate that the typical order is at least 24 months prior to launch. This period allows planning for a dedicated launch window for satellites. In some instances, it is possible to have “rideshare” payload in the event that extra space is available; such availability occurs at least 6 to 12 months prior to launch.⁴⁸

b. PAs and PDPs

Our research and discussions with SMEs suggest that PAs are in the form of “Launch Services Agreements” and have standard terms and conditions. A detailed statement of work (SOW) differentiates the technical requirements by customer; the SOWs are redacted in publicly available agreements. Industry interviewees describe the contractual terms and conditions as givens, and the focus is on price and launch schedule. Moreover, we were informed that late bookings (closer to desired launch) result in higher prices.


⁴⁸ See for example https://www.spacex.com/rideshare/. Rideshare is essentially a secondary payload on a scheduled launch. Typically, an entity contracts and pays for a primary launch with a set launch date and orbital parameters. In some instances, there is extra space, and the launch firm will sell that space for smaller secondary loads.
c. PDPs

PDPs are foundational to the business model due to limited launch windows for satellites. Upfront deposits are the rule along with milestone payments. Milestones include both design reviews as well as the delivery of hardware items. Table 4 shows a redacted payment schedule from a Launch Services Agreement.49

Table 4. Pre-delivery Payment Schedules: Example Launch Services Agreement

<table>
<thead>
<tr>
<th>Installment Payment Number</th>
<th>Milestone (as described in the Statement of Work)</th>
<th>Installment Amount and Percentage</th>
<th>Due Date*</th>
</tr>
</thead>
<tbody>
<tr>
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Source: Launch Services Agreement among Satélites Mexicanos S.A. DE C.V. and Space Exploration Technologies.

Specific percentages were not available from open sources, but information from interviews indicate that 90 percent of payments could be made prior to launch.

A typical industry schedule for a “rideshare” payload is as follows: 15 percent down payment upon contract signing, 25 percent payment due 12 months prior to launch (L-12), 30 percent due 6 months prior (L-6), and 30 percent due 3 months prior (L-3). PDPs for “rideshare” payloads differ from those for primary payloads: rideshare arrangements are based on fixed dates instead of milestones.

There are other examples of higher risk customers pre-paying for launch services not yet rendered. For example, OneWeb, an internet service start-up, owed (was to pay according to their launch services agreement) Arianespace $258 million for launches numbered 10 through 18, even though only 3 launches were accomplished prior to OneWeb’s bankruptcy.50

d. Other Terms and Conditions

As noted previously, contractual terms are static and focus on price and schedule. Contracts available through the SEC are redacted of key information, but the terms and conditions are typical of commercial contracts. One point of note is an attorney interviewee


50 This leads to a court document available at https://forum.nasaspaceflight.com/index.php?action=dlattach;topic=37814.0;attach=1943334.
at a launch firm who indicated there are buyer-applicable termination clauses with penalties set at either a dollar amount or as a percentage of price. This statement is verified in a redacted contract. The termination clause highlights the time-sensitive nature of the service and difficulty of the launch service provider to resell a launch slot if a buyer reneges on its commitment.

e. Financing

Operators of GS constellations generally finance the entire project, including the purchase of satellites and launch services. All the PDP financing is on the buyer’s side. One launch service interviewee stated that they sometimes get questions from buyer financiers on payment terms between the buyer and seller. We were unable to interview satellite buyers but understand the financing runs the gamut from buyer cash to debt issuances. A launch service interviewee said that export-import banks will help with foreign sales to boost exports. Further, according to a launch service finance interviewee, certain nations such as China or Russia will arrange subsidies for launch services and offer favorable financing.

f. R&D

Commercial customers do not directly fund R&D. Engineering and design work associated with a specific launch are paid for by the buyer. All intellectual property (IP) remains with the launch service provider because they fund development. Often, governments directly fund R&D for a launch capability, with commercial customers expected to cover the marginal costs to refine capabilities (as built into the service price); at least, this is the model for Arianespace. 51 Although SpaceX primarily used equity finance to fund its R&D, having an initial government customer in the NASA Commercial Orbital Transportation Services program was helpful in establishing them as a viable provider. 52

g. PDP Drivers

PDP drivers include the scarcity of launch windows and limited ability to resell a launch slot if a buyer reneges on their commitment. These limitations increase significantly as the launch date approaches. PDPs provide financial assurance to the seller that the buyer is committed to execute a full launch for a service with a limited launch window.

51 Ibid., Rich Smith. This was also the model for the U.S. Evolved Expendable Launch Vehicle (EELV) program; however, the EELV did not prove competitive for commercial launches.


a. Market Characteristics

1) Sellers
The 2019 global market for business jets is $28 billion.53 The general business jet market, excluding the luxury niche described in Section 5.B.2, is comprised of firms such as Textron, Honda, Embraer, Cirrus, and others.

Calculated measures of seller concentration are 83 for CR4 (medium concentration) and HHI of 2,237 (medium concentration).

2) Buyers
The primary buyers of business jets are corporations, general aviation firms, oil and gas firms, fractional jet lessors, governments, and very high net worth individuals.

3) Unit Price of Product
The prices for standard business jets are substantially below that of luxury business jets, which each cost $40 to $70 million. The prices range from the low millions to approximately $20 million. Of course, customization will determine the final price.

4) Order and Delivery Period
In general, the period from order to delivery is 18 to 24 months. The manufacturers try to manage parts or pieces with long lead times through forecasting. Some parts with long lead times may be purchased prior to buyer commitment to ensure sufficient inventory.

b. PAs and PDPs
Through literature research and interviews, we understand that most agreements are boilerplate or standardized, and that sellers will make only minor modifications. One manufacturer interviewee stated that it has a well-run operation and avoids late deliveries. If supplier problems result in aircraft delivery delays, the seller will work with the buyer to find a compromise (e.g., discounts on spare parts). If the supplier issue persists, the seller will seek new suppliers. Overall, the firm stated that late deliveries are rare because it carefully manages production.

As with the luxury segment, price maintenance is critical to business strategy, and sellers are hesitant to reduce prices even with decreased backlog due to COVID-19. One

seller said that it will offer minor price concessions, but it is typical for customers to add options that recoup such concessions.

c. PDPs

PDPs are typical of high-value, specialized equipment. There is a deposit required upon signing. There are fixed-date payments based upon aircraft model type, and these are generally not subject to negotiation. The total of the deposit and time-based payments is around 20 percent of the price. Final payment is due upon delivery. We could not obtain details of the fixed-date payment framework for this industry.

Interviewees state that the PDPs provide working capital and signal buyer commitment to taking delivery. We understand that there is no flow-down of PDPs to suppliers. One interviewee remarked that international sales are much more challenging because they involve more negotiations and price concessions.

d. Other Terms and Conditions

As noted previously, contractual terms are static. SMEs state that firms do not provide for liquidated damages or late delivery penalties applicable to sellers. The lack of such clauses suggests demand is robust enough to avoid buyer requests for such clauses.

e. Financing

The overwhelming bulk of PDP financing is on the buyer’s side. Sellers sometimes provide financing to buyers, but it is not the primary means of financing sales. For the most part, buyers make their own financial arrangements.

f. R&D

According to research and discussions with interviewees, almost all sellers fund their own R&D. Some sellers may offer launch (initial) customers favorable pricing for new models; however, in such instances the sellers still fund R&D.54

g. PDP Drivers

The demand for standard business jets remains sufficiently strong so that sellers can require upfront signing fees and fixed-date payments. However, such payments are in no

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way comparable in magnitude to those in the luxury business segment or the large commercial aircraft industry.

5. Helicopter

a. Market Characteristics

1) Sellers
The global market for commercial helicopters was estimated at $5.8 billion in 2018 and is led by firms such as Boeing, Airbus, and Bell Helicopter.

Calculated measures of seller concentration are 82 for CR4 (medium concentration) and HHI of 2,048 (medium concentration).

2) Buyers
The primary buyers of helicopters are corporations, general aviation firms, oil and gas firms, air transport companies, governments, and very high net worth individuals.

3) Unit Price of Product
The unit price of a typical helicopter is $1 to $20 million with an average price of $6 million. The price drivers are size and customization. Sellers will consider price discounts based on quantity and strategic sales.

4) Order and Delivery Period
Through literature research and interviews, we understand that most sellers maintain a very small inventory of completed “white tail” helicopters; that is, finished but not yet customized. Final manufacturing commences with an order. We could not obtain specifics on production cycles; one interviewee suggested 18 to 24 months, and another interviewee declined to reveal. Nonetheless, we understand that it is not difficult to obtain key components in order to initiate production. An interview with a manufacturer revealed that although the overall market can be volatile, often customers want a helicopter immediately; therefore, it is prudent to maintain a small inventory.

b. PAs and PDPs

Unlike large commercial aircraft or business jets, sellers do not receive PDPs to cover ongoing working capital needs, although there are deposits. There are no milestone or fixed-date payments, and PDPs in general are not a point of negotiation.

c. PDPs

Sellers typically seek a deposit of 15 to 25 percent (driven by helicopter size), with the remainder payable upon delivery. The down payment is intended to signal confidence to the seller that the buyer will take delivery when customization is completed.

d. Other Terms and Conditions

Standardized contracts are used, and interviews did not indicate many points of negotiation other than price. One seller stated that it does not accept late delivery penalty clauses. This approach seems logical as many buyers want a helicopter immediately, and firms can predict future demand with reasonable certainty.

e. Financing

A seller interviewee said that it does offer some financing and will put potential customers in touch with banks or financiers. Nonetheless, the bulk of customers seek their own financing or pay cash. The same interviewee said that its foreign manufacturing subsidiary can obtain governmental export/import financing due to the fact that the country has a small aerospace industry (compared to the United States and European Union), and the country’s government wants to encourage local production.

f. R&D

Based upon interviews and research, all sellers fund their own R&D. Some medium-duty helicopter models can be civilianized versions of military aircraft developed with government funding (e.g., the Sikorsky S-70 version of the H-60 Blackhawk).

g. PDP Drivers

The helicopter market is relatively mature with a number of sellers. Commercial helicopters are somewhat of a commodity product. These factors explain the minimal use of PDPs.
6. **Geosynchronous Satellites**

**a. Market Characteristics**

1) **Sellers**

The 2019 global market for all satellites is approximately $19.5 billion; a large portion of satellites are GS. A GS is a satellite with an orbital period the same as the Earth’s rotation period; that is, it remains permanently fixed in the same position in the sky as viewed from a fixed location on earth. The primary seller manufactures include firms such as Airbus, Boeing, Space Systems Loral, Lockheed Martin, and Thales Alenia Space. Calculated measures of concentration are 82 for CR\(_4\) (medium/high concentration) with HHI of 2,239 (medium concentration) based on deliveries/launches.

2) **Buyers**

The primary GS buyers are communications service firms (e.g., DirectTV, Intelsat, and AsiaSat) and governments. For communications service providers, the calculated measures of concentration are 33 for CR\(_4\) (low concentration) with HHI of 448 (low concentration) based on the number of operators of GS constellations. As in the case of large aircraft, there are large numbers of buyers of communication satellites.

3) **Unit Price of Product**

A GS typically costs $400 to $700 million to put in orbit. This amount includes the cost of the satellite itself (starting at approximately $200 million), the launch, insurance premiums, and other associated costs (ground stations). GSs are extremely complex and intended to function for up to 15 years. However, constant changes in markets and technologies make it difficult to predict the economically useful life of a GS beyond 5 years.

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59 Ibid.

60 We do not have data on the number of satellites damaged or destroyed in collisions after placed in orbit.
4) Order and Delivery Period

GSs are unique and custom built and near impossible to repurpose for other customers. Active developmental efforts are trying to produce software-defined GSs, allowing customization while in orbit. However, it is unclear whether this technical development will change market dynamics of custom-built GSs. The time to manufacture a GS ranges from 24 to 36 months; a standard “cookie cutter,” smaller satellite could be built in about 24 months and larger, complex GSs in 34 to 36 months. Manufacturers will not commit to production prior to contract signing. If there is potential for a long lead time, the manufacturer will demand additional upfront payments to commence work. GS manufacturers do provide PDPs to their suppliers of high-value components.

b. PAs and PDPs

Our research and discussions with industry lawyers and executives suggest that PAs have industry standard terms and conditions, although there is more flexibility than in the case of large aircraft. This approach aligns with the uniqueness of each GS—strict structure is required with respect to terms, conditions, and warranties. Insurance is important for these contractual arrangements; buyers must obtain third-party financing.

Due to the highly proprietary nature of GS contracts, we were unable to obtain details on PDPs but understand all payments are milestone-driven.

c. PDPs

PDPs are foundational to the business model for GSs due to the uniqueness of each satellite. In addition, PDPs have the advantage of reducing risk to the seller and potentially reducing price to the buyer, providing the seller has confidence in the buyer’s ability to make payments.

The PDPs follow specific milestones tied to work progress and the ordering of key components. The satellite manufacturers are essentially integrators of many components from hundreds of suppliers. It is estimated that the manufacturers contribute only 30 to 40 percent of total input value to a GS. Typically, the seller will want 10 to 15 percent upfront; this amount can increase if there are long lead times for components or aggressive buyer-driven schedules. Milestone payments will be tied to design reviews and the arrival of subsystems and components to the seller’s facility. As noted previously, details on payment amounts or percentages by milestone are not available as they are considered highly proprietary.

One interviewee suggested that greater upfront payments could reduce costs to buyers because the seller has greater certainty of payment. Another comment was that the sellers are cash-flow positive because they often receive payments for key components upon
delivery but pay the suppliers according to standard commercial terms of 30 to 60 days after delivery (submission of invoice).

The final amount due (generally 10 to 15 percent of the total GS price) is held back by the buyer until launch. Ownership of the GS transfers upon “intentional ignition” of the GS launch vehicle, and at that point the remaining amount owed is paid. There have been rare cases where some of the payment (approximately 10 percent) is held back until the satellite has proved itself in orbit for a short period.

d. Other Terms and Conditions

The interviewees did not highlight any specific terms and conditions except to emphasize the importance of insurance as critical to both the PA and the buyer obtaining financing. We understand that there are penalty clauses if the buyer cancels the order prior to acceptance. This approach is reasonable considering the expensive material inputs required and the seller’s lost business opportunity because the abandoned satellite has little or no market value.

e. Financing

In terms of industries surveyed, GSs are unique in that insurance is a necessary part of the purchase. GSs present two major issues: once in orbit they cannot be repaired and the launch process involves great risk. Interviewees indicated that buyers may pay 5 to 16 percent of the total project cost (satellite and launch) for insurance premiums. Post-delivery in-orbit insurance is available to cover the early years of GS (2 to 3 years after in-orbit) and the cost is roughly 2 to 3 percent of the GS price.

Sellers will also purchase insurance to cover standard manufacturing issues plus transportation and integration with the launch vehicle. We understand that transportation and integration insurance amounts to 2 to 4 percent of the GS price. As part of the contractual arrangements for the sale of the GS, underwriters will visit seller factories to assess risk by examining engineering and design processes—including details such as the production of circuit boards and other fine details.

Insurance for the issue mentioned previously ties directly to financing because financiers face great risks if there is no insurance. Financing comes from an array of sources: bank syndicates, export-import banks, bond issuances, and so forth. The financing is often based on commitments of the users/potential users of the constellations to lease services from the operators. The reputation of the operator (buyer of GSs) is also important, especially if it has a track record of successful launches and operations. However, in view of the risks and high satellite costs, insurance plays a major role in the purchase, regardless of the buyer. Another factor that makes GS financing a challenge is that the seller holds
title until it is accepted by the buyer, and if the satellite is not completed for whatever reason, the financiers do not have any claim to the work in process.

f. R&D

Sellers fund all R&D. In some cases, the basic satellite (“bus”) may have benefited from government funding of military or civil space developments. Most of the development is incremental and “baked into” the purchase price. If a buyer wants new or innovative technologies in a GS, then the seller will ask for PDPs for R&D. Industry SMEs remarked that GS IP is not transferred to buyers. Licenses may be given to specific buyers, along with general background data tied to in-orbit operations. However, it was noted that buyers have no practical use of GS IP since they have no relationships with the hundreds of subcontractors.

g. PDP Drivers

The primary drivers of PDPs in the GS market are unique, non-fungible products and risk. GSs are custom built and have no resale value. Sellers bear risk in that the production times are lengthy and require a number of costly components or subsystems. To minimize risk to the sellers and create adequate cash flow, defined milestones are the industry standard.

7. Shipbuilding

a. Market Characteristics

1) Sellers

In 2014, the global market for cargo, freight, and container ships was about $900 billion. In 2017, new ships on order were expected to require $236 billion in financing. Shipyards service a global market, with major concentrations in China and South Korea. Calculated measures of concentration are 73 for CR4 (medium concentration) with HHI of 1,197 (medium concentration).

2) Buyers

The primary buyers are cargo shipping firms. Calculated measures of concentration are 1 for CR4 (extremely low concentration) with HHI of 4 (extremely low concentration).

3) Unit Price of Product

The transaction price of a given ship depends on its size and specific function. Research and interviews did reveal that large batch orders—typically in Asian shipyards—result in significant price reductions; the ships are essentially mass produced.

4) Order and Delivery Period

Ships are often ordered in batches of the same model. From keel laying to delivery is generally 3 months with contract signing 1 year earlier. This timeline assumes large batch orders.

b. PAs and PDPs

Contracts are standardized by region with sample contracts available for Europe, Japan, and Asia. PDPs are required and are tied to specific milestones, except when using the standard contract from the U.S. Maritime Administration. That contract uses progress payments based on the percentage of work completed. Although commercial ship contracts do contain damage clauses for delayed seller delivery, interviewees suggest that they are infrequently invoked in the shipping industry due to the cost and time required for litigation. An example of a ship PA is in Appendix B.

c. PDPs

PDPs are specified in the contracts and tied to specific milestones. The number and size of the payments are subject to negotiation, but the following represents the minimum number of payments. The size of payments typically falls into the following ranges: 62

- Signing of Contract – 5 to 15 percent
- Cutting of first steel plate – 5 to 15 percent
- Laying the keel – 5 to 15 percent
- Launching – 5 to 15 percent
- Delivery – remainder owed

d. Other Terms and Conditions

Unique to the shipping market is the use of classification societies, which act as arbitrators between the buyer and seller. They review plans, verify the engineering, and

62 Kavussanos and Visvikis (2016) report the above and an alternative schedule of payments. Our interviews all reported the above.
certify that the ship was built in accordance with the society’s standards. The certification is necessary for insuring the ship.

e. Financing
Ship buyers use a variety of financing options. They raise funds through capital markets by issuing stock or from commercial financing through banks. Loans are frequently “syndicated,” sometimes through Export Credit Agencies. Syndicated loans reached a high of $92 billion in 2007 and declined to approximately $45 billion in 2017.

Export Credit Agencies offer guarantees for loans from financial institutions to overseas buyers. These agencies also guarantee direct loans and access to fixed-rate loans for overseas buyers. In addition to export credits, governments in France, Korea, and China offer guarantees to banks for providing the working capital needed to establish shipping contracts.

Lease financing (in which the ship is owned by another entity) had declined prior to the 2008 financial crisis, but is now growing, particularly for ships built in China.

f. R&D
Large buyers may pay for some research and development. The development of liquefied natural gas ships was paid for by a consortium of oil companies and shipyards. However, we were unable to determine the ownership of the associated intellectual property.

g. PDP Drivers
One rationale for using PDPs is the volatility of the market. A ship could be valued at $100 million at contract signing and only $60 million at keel laying. Requiring PDPs makes it less likely a buyer will walk away. Another driver is the cost of material inputs.

8. Aviation First-Tier Supplier

a. Market Characteristics

1) Sellers
First-tier suppliers to aircraft manufacturers fall into three broad industry categories:

- Firms that build engines
- Firms that build aerostructures
- Firms that produce other aircraft-related components
Figure 1 shows reported values as a percentage of total commercial aircraft sales.

![Figure 1. Air Transport Sector Value by Category](image)


Note: Air transport sector includes regional jets.

The engine makers are the most concentrated. In 2017, the top four producers—Pratt & Whitney (including International Aero Engines), General Electric (GE), Rolls-Royce, and CFM International (joint venture between GE and Safran)—accounted for 96 percent of the market share (based on deliveries) (CR₄=96, HHI=2697; high concentration). For the other categories, we reference U.S. Census data for concentration metrics. Non-engine aircraft suppliers fall into North American Industry Classification System (NAICS) Code 336413, “Other Aircraft Parts and Auxiliary Equipment Manufacturing,” with a reported CR₄ of 47 and HHI of 762 (low-medium concentration) in 2012.

2) Buyers

The suppliers provide components not only to the large aircraft manufacturers (Boeing and Airbus), but also to regional and business jet manufacturers. Boeing and Airbus dominate the market both in terms of value and aircraft deliveries. Concentration values for large aircraft and business jet manufacturers are reported in their respective

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sections. The market for regional jets is also highly concentrated; for 2018, deliveries were 91 for Embraer and 15 for Bombardier (CR₄=100; very high concentration).⁶⁴

3) Unit Value of Product

Although aerostructures are the largest component of value for a given aircraft, the workshare is typically distributed over multiple suppliers. Figure 2 shows the values of aerostructures from a major supplier, Spirit AeroSystems. Values per large component or system range from $1 million to $15 million.

![Image of aircraft models showing unit values](https://example.com/aerostructures.png)

*Figure 2. Example Unit Values for Aerostructures: Spirit AeroSystems*

Jet engines are the single most expensive component for a typical commercial aircraft. Examples of unit values over a range of twin-engine aircraft applications include $5.7 million for the GE CF34-8E engine used in the Embraer E175 regional jet, $12.4 million for the CFM LEAP-1B used in the Boeing 737 MAX 8, and $23.2 million for the GEnx engine used in the Boeing 787-8.⁶⁵ The cost of other avionics and system components ranges from $1 million to $3 million.⁶⁶

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⁶⁵ Ibid.
4) Order and Delivery Period

Relative to the 12- to 24-month manufacturing cycle for large commercial aircraft, significant aerostructures and engines can be lead items—that is, critical high-value items with long lead times. In some instances, manufacturers’ deliveries have been delayed due to late fuselage or engine deliveries.67

b. PAs and PDPs

Prices and terms for engine purchases are included in the PAs between the engine manufacturers and their buyers, as described in earlier sections of the paper (see Section 5.B.1). Aerostructure and high-value component transactions are guided by long-term agreements and relational contracting.68 Approaches to PDPs differ significantly by industry category.

c. PDPs

For aircraft engines, documentation is sparse and we were not able to interview any manufacturers. However, our research indicates that the large aircraft manufacturer’s PDPs flow down to the engine suppliers in proportion to the engine price. Note that generally the engine maker does not receive final payment until the aircraft itself is delivered.69

For suppliers of large aerostructures, PDPs exist but are more ad hoc. Examining financial reporting for two examples, Spirit AeroSystems and Vought Aircraft Industries, we found PDPs manifest in different ways. For Spirit, we found PDPs applied only to the 787 programs. Boeing made an advanced payment of $700 million in 2007 to cover 500 component assemblies; Spirit was expected to “repay” Boeing as the component assemblies were delivered (first delivery was in 2008). Although this arrangement appears to be a modest PDP in terms of the price percentage (14 percent), the 500 units were not delivered until 2015. Another way to look at this arrangement is that the 2007 PDP fully covered the price of the first 70 component assemblies, delivered through 2011. An additional PDP of $396 million was paid by Boeing in 2008, but covered only 50

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69 Thierry Dubois, “Boeing To Cover Payments to CFM for MAX Engines Delivered,” Aviation Week Network, February 27, 2020. This was an exception where Boeing paid CFM the final delivery payment before the grounded aircraft were delivered to customers.
component assemblies. Although these were the last PDPs evident in the financial reporting, there were subsequent suspensions and delays of Spirit repayments.70

Vought seems to have a more consistent PDP structure. Tracking advanced payments and commercial revenue from 2002 to 2009, as reported in their SEC 10-Ks, we found PDPs of around 40 percent of revenue. Although the 10-K narrative did not specify the timing of the PDPs, we found the correlation between the two time-series data to be highest when the PDPs were lagged by 2 years.71

PDPs are not customary for suppliers of other components. In Boeing and Airbus public postings, they prescribe payment after delivery of 120 days (Boeing)72 or 60 days (Airbus Americas).73 In our interviews, 30 days was also quoted.

d. Other Terms and Conditions

For aircraft engines, other terms and conditions are included in the manufacturers’ PAs as explained in Section 5.B.1. When engines are available from more than one manufacturer for a given aircraft model, there will likely be separate negotiations with the manufacturer’s airline customer. These negotiations could result in changes in standard warranties, support packages and other terms. It should be noted that the engine manufacturers have a “razor blade” model where they sell new engines at concessionary prices in order to generate high-margin, after-sales service revenues.

Aerostructures suppliers need to invest heavily in order to produce customized products for individual aircraft manufacturers. Conversely, the aircraft manufacturers need the suppliers to deliver at a rate consistent with the production rates of aircraft final deliveries. This underlying business relationship must be sustained over decade-plus production runs for a given aircraft model. This means that the suppliers enter into long-term agreements with the aircraft manufacturers. These agreements specify bounds for critical parameters, including delivery schedules and pricing formulas. These agreements will likely evolve over time along with orders that more precisely establish prices and delivery dates. Other terms are analogous to those in the aircraft manufacturer PAs.74

71 “2002 to 2009 Annual Reports,” Vought Aircraft Industries, Inc.
73 “Airbus Americas General Terms of Purchase,” Airbus, https://www.airbus.com/content/dam/corporate-topics/publications/suppliers/boeug-ai-us-law.pdf. “Payments with respect to undisputed amounts shall be made sixty (60) days from the end of the month in which the invoice is issued, paid the tenth (10th) day of the next calendar month.”
74 See for example, “787 GTA between Boeing and Spirit,” BCA-65520-0032, May 12, 2011.
The suppliers of other components have a similar business relationship with the aircraft manufacturers, but there are important differences. Suppliers have standard products that can be used in multiple platforms, and correspondingly, the aircraft manufacturers have a choice of several suppliers for given component types. Also, after-market service revenues are an important revenue source for the component suppliers. Emphasis is on the life cycle of the program, so pricing will reflect this. Also, suppliers want to retain IP to ensure after-market revenues—they do not want revenues from repair and spare parts to go to the aircraft manufacturers or third parties. Because many components will interface with end users, and because the technologies are dynamic, change management provisions enable potential hardware and software evolution.

**e. Financing**

Buyer financing, particularly as it relates to Boeing and Airbus, was discussed in Section 5.B.1. For the most part, sellers finance their working capital through cash generated by operations. The participants in these markets are well established and do not depend on outside equity capital to fund operations.

**f. R&D**

For aircraft engines, the manufacturers do not directly contribute to R&D expenses; those are the responsibility of the aircraft engine manufacturers. The aircraft engine makers must then recover R&D and other nonrecurring costs through profits on the subsequent sale of engines and after-sales support.

For large aerostructures, the aircraft manufactures have moved to a partnering/risk-sharing model where the suppliers are expected to contribute substantially to R&D. This approach contrasts with past practices where the aircraft manufacturers would provide design packages to the aerostructure firms. Typically, the aircraft manufacturers will pay for some tooling, to which they retain title.

For suppliers of other components, the aircraft manufactures will fund development tied to their specific platform/application. This funding happens in one of two ways: (1) through the direct funding of R&D expenses or (2) through the incorporation of the expenses via a surcharge on negotiated prices. In the latter case, the supplier will negotiate guarantees on the units to be shipped. If the aircraft manufacturer does not buy the guaranteed number of units, the manufacturer owes the balance of payment.

**g. PDP Drivers**

Because engines are closely tied to the overall aircraft transaction, drivers are similar to those for large commercial aircraft. Although aerostructures makers face more competition than engine makers, once they are chosen by the aircraft manufacture to supply a given structural component, they may gain leverage if the relationship is exclusive. As a
result, they are in a stronger position to negotiate PDPs. The remaining suppliers do not have such leverage and generally accept the terms presented by the OEMs.

9. **Cloud Computing**

   a. **Market Characteristics**

      1) **Sellers**

         The global market for cloud computing infrastructure\(^{75}\) is dominated by major firms such as Amazon and Microsoft and followed by a variety of other firms such as Alibaba, Google, IBM, and smaller firms. Total end-user spending on cloud services approached $260 billion in 2020.\(^{76}\)

         Calculated measures of concentration are 66 for CR\(_4\) (medium concentration) with HHIs of 1,594 (medium concentration).

      2) **Buyers**

         Buyers include any entity that requires computing resources: commercial, governmental, non-profit, consumer, and so forth. It is not possible to calculate market concentration because the buyer audience is so broad.

      3) **Unit Price of Product**

         There is no standard price per product in this industrial segment because all buyers have unique needs and requirements. The key feature is to provide computing services as required by an organization. A reasonable analog is the cost of support and maintenance for commercial aircraft engines, also known as “power by the hour.” This means the buyer pays for the amount that is consumed; in the case of cloud computing, the cost is based upon resource usage.

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\(^{75}\) Generally defined as: collection of hardware and software elements needed to enable cloud computing. It includes computing power, networking, and storage as well as an interface for users to access their virtualized resources. The virtual resources mirror a physical infrastructure, with components like servers, network switches, memory, and storage clusters. https://www.vmware.com/topics/glossary/content/cloud-computing-infrastructure.

One model described by a major U.S. provider allows the buyer to upload its data into the cloud infrastructure. The buyer then pays fees calculated to capture the amount of processed data taken out of the cloud.

4) Order and Delivery Period

Because the seller (provider) has established the infrastructure, the time to deliver the desired data or information generally depends on the buyer’s effort to load the data and master the learning curve to use analytical and other tools provided in the cloud package. Also, the location of the cloud facility is a consideration (because the location affects security and speed).

b. PAs and PDPs

First, the contractual agreements tend to be standardized in order to serve a large and broad customer base (seller perspective); however, if revenue and profitability are sufficient, the sellers will negotiate on specifics. Most sellers aim for contracts of 3 to 5 years with usage dollar targets written into the contracts. Second, there are no PDPs because the revenue is driven by buyer usage.

c. PDPs

PDPs are not used in this industry as described in the previous section.

d. Other Terms and Conditions

As noted previously, most contractual terms and conditions are standardized. Due to the continually evolving nature of the industry, sellers are willing to negotiate. For example, the seller may cooperate with the buyer on a hybrid of customer-owned services and seller facilities and services. Sellers will offer to handle the establishment of digital business applications, cloud infrastructure, sales, support, and general computer and business know-how in return for an expected level of buyer usage. Buyer usage can be viewed as a meter in that the seller wants 24/7 consumption.

e. Financing

There are really no financing issues because the seller of cloud infrastructure services invests in all capital and service costs. Some sellers will invest in additional analytical applications or tools if a hurdle rate of 20 to 30 times the invested amount is recouped in a limited timeframe. However, such information is considered highly confidential and was not made available to us.
f. R&D

As with financing, the seller performs all R&D and in turn retains all IP rights. IP issues can be controversial as the seller cloud applications or models “learn” to be more accurate or reliable based upon the usage of buyer data. We understand that in some negotiated instances, co-branding and co-ownership of the tools that are trained on seller data may occur, providing usage targets are satisfied.

g. PDP Drivers

In the current stage of evolution, PDPs are not an issue in this market. As this sector matures, there could be changes to its business model.

10. Railroad

a. Market Characteristics

1) Sellers

The sellers of rail cars and diesel locomotives are duopolies and are located in North America, specifically in Canada and Mexico. The producers of diesel locomotives are headquartered in the United States with production located in Pennsylvania and Texas. Intermodal rail gantry cranes are designed in Europe and manufactured in China.

Although concentrated, the sellers appear to have marginal market power. For locomotives, we attribute this to the fact that the technologies are very mature and commodity-like. The same is true for rail cars—their design is basic and constructed with commodity inputs.

2) Buyers

The primary buyers are freight rail firms. In the United States, freight rail firms are an oligopoly. The CR₄ for railroad transport firms is calculated at 94 (high concentration) with an HHI of 3,536 (high concentration).

3) Unit Price of Product

Rail cars range in price depending on the design. Grain hopper cars tend to be the most expensive and can cost from $300,000 to $400,000. We do not have costs for diesel locomotives or intermodal cranes, but interviewees indicated the intermodal cranes can cost millions per item.
4) Order and Delivery Period

Rail cars are typically ordered in batches; it takes approximately 6 months from order date to delivery. Freight rail firms use standard terms and conditions for orders of 5 to 10 units. Locomotive assembly takes 8 to 9 months from contract signing to delivery. Tire-mounted gantry cranes can be moved from place to place and are not custom built. They take approximately 12 months to build.

Very large intermodal cranes are custom built for specific facilities and take about 18 months from contract signing to delivery. These can be rail mounted or reside at a fixed location.

In all three cases, the time to delivery depends on the demand. When demand for locomotives is high, it can take up to 18 months for delivery.

b. PAs and PDPs

PDPs are not customary for the purchase of either rail cars or locomotives; instead, they are cash buys paid on delivery. Our research identified one instance in which a railroad paid in advance for rail cars. This purchase occurred during a period of volatile commodity prices and particularly volatile steel prices. The railroad provided a down payment for the purchase of materials but received a discount on the total bill in exchange.

Rail-mounted intermodal gantry cranes are used for transferring freight at intermodal shipping yards. The intermodal cranes are custom built because they are unique to the specific facility. These specialized crane purchases require PDPs, which are based on either physical milestones or the percentage of construction completed. Freight rail firms greatly prefer to use physical, easily verified milestones, which is the standard. The value of PDPs as well as the schedule of payments is subject to negotiation.

c. PDPs

A typical schedule of PDPs is as follows for a specialized or location-specific crane:

- 10 percent at contract signing
- 10 to 20 percent when a major portion of the crane ships from the factory
- 10 to 20 percent when the crane is received at a U.S. port
- 10 to 20 percent when the crane arrives on site
- Unspecified amount when the crane is fully assembled (based upon amount of earlier payments)
- Remainder of the balance due after the final operational test
d. Other Terms and Conditions

The railroads use liquidated damages in contracts to prevent late deliveries, though they are usually framed as incentives for on-time performance. The liquidated damages apply to both final delivery and milestones for the intermodal cranes. The liquidated damages reduce the final payment to the manufacturers.

e. Financing

The railroads are currently well capitalized and provide financing for capital purchases out of cash reserves. In prior years, railroads have used secured loans or leases for equipment such as rail cars (particularly grain hoppers) and locomotives.

f. R&D

The railroads do not engage in R&D for rolling stock or intermodal cranes. Instead, they look for R&D opportunities that can reduce labor costs, such as developing a new switch or safety device that does not require a driver to walk the length of the train to check for safety issues. In such cases, the railroad invests in the development and retains or negotiates for IP rights.

g. PDP Drivers

The main drivers of PDPs appear to be the custom nature of intermodal cranes. Because the cranes are uniquely designed for specific facilities, there is no secondary market. Therefore, the manufacturers demand PDPs. In addition, the transactions are often international, and manufacturers demand PDPs to ensure that the freight rail firms are committed to taking delivery of the final product.

11. Automotive First-Tier Supplier

a. Market Characteristics

1) Sellers

The global market for automobile manufacturing was almost 80 million new cars in 2019.77 In the United States alone, 17 million cars were sold in 2019 with an estimated

value of $462 billion.\footnote{Michael Wayland, “U.S. Auto Sales Fall in 2019 but Still Top 17 Million for Fifth Consecutive Year,” CNBC.com, January 6, 2020.} The first-tier suppliers are critical to this production because they provide major components to the automobile manufacturers.

Calculated measures of concentration are 38 for CR$_4$ for sellers (low concentration) with an HHI of 522 (low concentration). Due to the vast diversity of first-tier manufacturers, the concentrations are calculated for transmissions and drivelines.

2) **Buyers**

As would be expected, the buyers are the global automobile manufactures with names including Ford, GM, Toyota, Volkswagen, BMW, Daimler, Nissan, Hyundai, and so forth. The CR$_4$ is 60 (medium concentration) with an HHI of 1,506 (medium concentration).

3) **Unit Price of Product**

There is no standard price per product in this industrial segment because the types of components vary enormously. However, with the first-tier suppliers, we can expect the price per component or unit to be relatively high. These costs arise because suppliers provide essential major components required for operation of the vehicle (e.g., transmission or engine), and provide other high-value items to the automobile firms.

4) **Order and Delivery Period**

There is no standardized order and delivery timelines because much depends upon the type of component. In general, it can take months to years to develop and deliver certain items. After a component or part is finalized, it can spend 5 or more years in production if the automobile is successful. The order and delivery cycle has changed dramatically over the decades. Several decades ago, the automobile firms would design and engineer all components and have suppliers produce them. That model is effectively defunct. In recent decades, the automobile firms provide the first-tier suppliers with initial design and performance characteristics, and the suppliers work to design and engineer the components. However, even this business model is evolving to accommodate the expected growth in sales of electric vehicles and the enormous increase in software embedded in vehicles.

b. **PAs and PDPs**

PDPs are not customary in this industrial segment. The contracts tend to be standardized; however, relational contracts are the mainstay of business relations.\footnote{Daniel and Yildiran.} That is, with a growing concentration of first-tier suppliers, the automobile firms have a limited
number of suppliers. This concentration is partially driven by decisions made decades ago by the automobile manufacturers to reduce the number of suppliers and enter into long-term relationships with first-tier suppliers. Over time, the first-tier automobile manufacturers’ relationship with first-tier suppliers has transformed from one managed at arm’s length to one observed in relational contracts.

c. PDPs

PDPs almost never occur in the automobile industry. However, there are some rare exceptions for development work or if a key supplier experiences financial distress or cash flow issues involving a large order.

Nonetheless, the market is rapidly changing with the advent of electric vehicles and new technologies. Many automobile firms find that they need to make upfront investments through partnerships or other legal arrangements with key suppliers. For example, some automobile manufacturers have partnered with battery manufacturers through equity investments or joint venture arrangements.80

d. Other Terms and Conditions

As noted previously, most contractual terms and conditions are standardized. Contracts of automobile firms may still contain clauses that levy heavy penalties on suppliers for late deliveries because major production lines may be closed down if key components are missing.81 However, this situation is counterbalanced by the close involvement of the automobile firms in their supply chains. An automobile firm interviewee stated that the firm has a considerable number of quality assurance personnel who review and examine components. If required, these personnel will physically intercede by transporting production and engineering staff to supplier facilities.

e. Financing

Under the current business framework, all key component development and production is financed by the suppliers. As noted previously, this model may evolve in the near future with the introduction of larger numbers of electric vehicles and new technologies.

81 One interviewee noted that penalties could be hundreds of thousands of dollars per day due to lost revenue and profits.
f. R&D

As with financing, the seller performs the bulk of R&D, and as a result, retains all IP rights. Once again, technological advancements are driving changes in business arrangements. Software is of particular importance to automobile manufacturers because it is critical to the modern car platform and its success with consumers. Control and ownership are vital to the long-term profitability of the automobile industry. As a practical matter, the automobile manufacturers do not want key software developed in silos among various suppliers. The general trend is for the automobile firms to develop and own vital software.82


g. PDP Drivers

At the present time, PDPs are not an issue in this industrial segment. Technological advancements are changing automobile investment strategies, and perhaps will drive upfront payments to sellers for development or production efforts.

12. Packaging Machinery Manufacturing

a. Market Characteristics

1) Sellers

The global market for consumer packaging machinery is approximately $40 billion per year. This industry is fragmented among many U.S., European, and Asian manufacturers.83

The calculated measure of concentration is 27 for CR4 (low concentration).

2) Buyers

Consumers of packaging machinery are global and diverse. Size may vary from global food or beverage manufacturers to small niche sellers. Major industries include food, beverage, pharmaceuticals, personal care and toiletries, household chemicals, and similar firms that all require packaging machinery for their goods.84

82 William Boston, “Volkswagen Delays Key Electric Car Launch Amid Software Troubles,” The Wall Street Journal, June 10, 2020. An example of the importance of software involves Volkswagen’s new electric vehicle. Persistent delays and problems with the software have resulted in postponement of deliveries and have hampered Volkswagen’s attempts to compete with electric vehicle manufacturers.


84 Ibid.
The calculated measure of concentration is 16 for CR4 (low concentration) for food; however, some subindustries have varied concentrations—for example, breweries have a CR4 of 88.

3) Unit Price of Product

There is no standard price per product in this industrial segment. All buyers have unique needs and requirements. This is to be expected in a market that varies from soda and beer to pharmaceuticals.

4) Order and Delivery Period

As with unit price, there is great diversity in the time between order and delivery. A complex packaging assembly system for a regulated industry such as pharmaceuticals will require more design and manufacturing effort than a packaging system for a non-food product (e.g., flooring for home or office). Depending upon the size and complexity of the project lead times, delivery may take 90 days to 2 ½ years; that is, the total purchase cycle from initial sales contact to signing of contract can be lengthy. Purchase cycles involving large consumer package goods manufacturers can average 2 years.

b. PAs and PDPs

Our research and discussion with industry representatives suggest that PAs have standard terms and conditions. Buyers and sellers typically focus on price, product, and delivery dates. This is common for a mature industry.

c. PDPs

PDPs typically follow industry norms, but there are opportunities for variance depending on the size of the order, market power of the buyer, and long-term seller positioning. Buyers and sellers work closely during the production phase with regular updates, reports, and interactions.

A general payment schedule is as follows: 25 to 30 percent is due within 10 days of contract signing; a second payment of 60 to 65 percent is due within 30 to 45 days when the item is ready to ship (active buyer involvement with the seller in production acts as milestone approval); and final residual payment is due within 45 days after successful startup and commissioning of the equipment. For smaller sales of less than $250,000: The seller will pay 50 percent of the price upon contract signing, 40 percent upon completion of acceptance of equipment by buyer (at seller premises), and 10 percent prior to shipment. Larger orders are open to negotiation.

Buyers with unique market power are somewhat similar to large commercial aircraft manufacturers. For example, global brewery firms refuse to provide PDPs and pay only
180 or 360 days after the equipment is installed and operational. Equipment sellers accept such draconian terms due to a very competitive seller market and out of fear of being excluded from the beer packaging business if they do not accept buyer payment terms.

d. Other Terms and Conditions

As noted previously, most contractual terms and conditions are standardized throughout the industry. Most negotiations focus on price, product, payment terms, and delivery times. Liquidated damages are rare to nonexistent; however, sellers will accept penalty clauses for late deliveries. Such clauses are relatively benign in that the cap is 5 percent of the purchase price, and they often involve grace periods of several weeks.

Standard contract clauses include buyer monitoring of performance (cost, schedule, and quality) during the development and production processes. Monitoring typically occurs through status meetings and exchange of documentation. Close seller-buyer communications are the norm, and the focus tends to be on meeting delivery schedules.

It should be noted that many sellers also seek long-term maintenance contracts to enhance revenue streams and solidify relationships with buyers.

e. Financing

The buyer is responsible for almost all PDP financing, and can use its own cash reserves or short-term financing. Some equipment sellers will provide short-term credit to small buyers because most cannot secure bank or other financing without plant assets.

f. R&D

Buyers almost never contribute to seller R&D and do not receive IP rights from sellers. With rare exceptions, all IP is owned by the sellers. Because the market is very competitive, sellers undertake their own R&D, especially to gain traction in new market segments. Exceptions include the seller giving the buyer design drawings for parts that sustain high wear. Sometimes a buyer may fund development on proof-of-concept technologies. However, such buyer-financed R&D is very limited. Although not IP related, exceptional circumstances occur under which the buyer will pay for a period of exclusivity on unique equipment.

g. PDP Drivers

The primary driver of PDPs is on the side of the seller to cover working capital costs. Most costs are labor driven (e.g., engineering and manufacturing costs). Raw materials and subcomponents are generally commodity items.

Consideration is given to seller risk. Sellers do have concerns about buyer stability—especially for non-global firms.
Overall, the industry standard for staged payments as described previously is accepted. This seems rational as packaging machinery and systems are customized to specific buyer needs, and delivery times range from a few months to years. Therefore, sellers want reasonable coverage of working capital costs.

13. Construction: Public Utilities and General Large-Scale Building

Public utilities and construction industries are combined in this section because they share common features in terms of purchasing services for construction of large facilities ($100 million and above), whether for an office building, a casino, a school, or a power plant. The industries differ when evaluating market concentration. The only significant difference in the purchase cycle is that the cash flow from buyer to seller is accelerated in the heavily regulated utility markets as public rate setting is determined in part by capital investments. As a result, the faster a utility spends, the faster it recoups costs in rates to commercial and private customers.

For utilities, it is understood that the power-generating equipment is included in the purchase of the generating facility. This is also true for general construction, as mechanical devices such as HVAC are included in overall construction.

a. Market Characteristics

1) Sellers

The global market for construction services is competitive. It has a CR$_4$ of 20 (low concentration). The CR$_4$ is 44 (low concentration) for sales to public utilities.

2) Buyers

For construction services, buyers are dispersed and heterogeneous, and data are not readily available. Therefore, the IDA team assumed a low level of concentration. In contrast, due to the public nature of utilities, the concentration is very high because most jurisdictions will have only one power provider.

3) Unit Price of Product

Due to the diversity of construction products, there is no standard price per product. General construction can range from a very large casino to a small school. Similarly, in the public utility market, a public utility varies from a supplementary natural gas plant to a water treatment plant to an electric power plant.
4) Order and Delivery Period

As with unit price, there is great diversity in the time between order and delivery. Example timeframes for commercial offices and similar buildings is a few years or more; with the same is true for power generation facilities.

b. PAs and PDPs

Most PAs have standard terms and conditions. Buyers and sellers typically focus on price and delivery dates, a common characteristic of a mature industry. Large construction projects tend to vary between design-build (one entity does both) and design-bid-build (one entity designs and another builds). PDPs are limited in general construction, and the same is generally true for utilities, although there are incentives to accelerate payments because utilities are regulated and can recoup expenses through petitions for rate increases.

c. PDPs

In general, design fees are paid on a milestone basis; that is, payment is rendered once schematic or development designs are partially complete. For the construction component, most payments are tied to progress; the progress payments are calibrated based upon master schedules (e.g., the foundation is completed in a certain number of days, the building superstructure is completed in an agreed upon number of months, and so on). However, in some instances, equipment is purchased by the seller or buyer ahead of project initiation to help ensure the project starts on schedule.

d. Other Terms and Conditions

As with most mature industries, core contractual terms and conditions are standardized throughout the industry with most negotiations focusing on price, payment terms, and delivery times. Liquidated damages are the most noteworthy clause. Public utilities rarely have redundant capacity. As a result, it is important to minimize the time between retiring one facility and replacing it with a new facility. Damages for delayed construction projects are critical as they could result in lost revenue and taxes (e.g., delayed completion of construction will affect state tax revenue) or costs rapidly increase (e.g., delay in school construction may require acquisition of temporary space).

Standard contract clauses will include buyer monitoring of performance (cost, schedule, and quality) during the development and production processes. These metrics are typically monitored through status meetings and the exchange of documentation. Close seller-buyer communication is the norm, and the focus tends to be on meeting delivery schedules.
e. Financing

In the regulated utility sector, buyers may pay for partial completion of a project. This situation is driven by the cost of capital assumptions for regulatory rate setting versus the actual cost of borrowing. For example, public regulators often assume a cost of capital of 10 percent, whereas the actual cost to borrow is 5 percent. In this arrangement, utilities have a strong incentive to start recouping the cost of capital through rates charged to users as soon as possible (the difference manifests itself as profit to the utility). Twenty years ago, utilities commonly increased rates only after the project was completed; more recently, the trend is to allow utilities to increase rates while the project is under construction. In this environment, utility firms can be cash flow negative because they prefer to pay vendors (construction firms) in advance in order to have a basis for increasing utility rates. Thus, the regulatory system creates an incentive for utility providers to give PDPs to construction firms. However, the general industry standard is tied to clearly defined milestones or agreed upon master plans.

For general construction, buyers arrange their own financing through various financial institutions.

f. R&D

We did not uncover instances where buyers financed R&D. Buyers own all architectural and technical materials related to the construction; however, due to the unique nature of major projects, such materials have little value.

g. PDP Drivers

For the most part, payments are tied to well-defined milestones (e.g., final architectural plans delivered) or master construction schedules with agreed upon definitions for progress payments (e.g., foundation laid).
6. **PDP Drivers**

We found that the primary PDP drivers revolve around the economic position of the seller or product attributes. The cost of capital has no determining influence in today’s financial environment due to the low cost of capital. The available legal documentation provided no surprising insights and follows industry standards. Commercial firms typically use standardized contracts that allow negotiations to focus on the most salient issues such as price, product, and time to delivery.

**A. Economic**

We found that when PDPs do exist, the key drivers are:

- Seller market power
- Capital intensive and/or long lead times
- Custom products with a lack of secondary markets

Table 5 summarizes industry findings and rank orders industries by market concentration. Industries with very high seller market concentration (large commercial aircraft, luxury business jets, and satellite launch services) have PDPs in excess of 50 percent of the price. Moreover, payments are due on contract signing, and the aircraft manufacturers (large commercial aircraft and luxury business jets) can demand PDPs not tied to milestones or progress but to fixed dates.
Product attributes also result in PDPs that are a significant percentage of price; even if there is medium to low seller concentration, such as with geosynchronous satellites or ships, milestone-driven PDPs are required. This trend is justified as there are long lead times to build with unique and expensive inputs (geosynchronous satellites), or significant quantities of inputs are required (shipbuilding). Defined milestone payments benefit both parties; the seller receives protection against buyers reneging after expending considerable funds, and the buyer receives assurance that production objectives are met.

PDPs set by milestones are also common in the custom products market. This trend is visible in public utilities and construction, as shown in Table 5, which are markets that require payments based upon construction progress. In these cases, the products cannot be resold because they are designed for fixed locations and require several costly inputs. Although not called out in Table 5, our interviews found that very large intermodal gantry cranes for railroads require clear milestone payments. These cranes are designed for specific locations and have no resale value; thus, the standard arrangement is to have milestone payments tied to defined activities (completion of crane at factory, delivery to export terminal, and so forth). Once again, industry standards protect both parties.

Another consideration for PDPs is the international nature of trade and the possible difficulty of enforcing transnational contracts. An example is the transport and cargo
shipbuilding industry, which is concentrated in Asia. To protect both parties, payments are made by industry-defined milestone payments.

Table 6 provides data on PDPs as a percentage of price. The data is from literature reviews and interviews with industry executives, consultants, and lawyers. This table highlights PDP drivers as a percentage of price. For example, firms producing luxury business jets require PDPs of 95 percent due to high demand. High percentages for geosynchronous satellites and ships are driven by industry milestones. In contrast, some industries, such as cloud computing and first-tier automotive firms, have no PDPs.
<table>
<thead>
<tr>
<th>Industry</th>
<th>Concentration</th>
<th>PDPs as % of Price</th>
<th>PDP Driver</th>
<th>Type of PDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Jets - Luxury</td>
<td>High</td>
<td>Up to 90%</td>
<td>Custom luxury product</td>
<td>Fixed date from delivery</td>
</tr>
<tr>
<td>Large Commercial Aircraft</td>
<td>High</td>
<td>30–67%*</td>
<td>Seller duopoly</td>
<td>Fixed date from delivery</td>
</tr>
<tr>
<td>Satellite Launch Services</td>
<td>High</td>
<td>90–100%</td>
<td>Time-sensitive launch window</td>
<td>Milestone</td>
</tr>
<tr>
<td>Satellite Geosynchronous</td>
<td>Medium</td>
<td>85–90%</td>
<td>Custom product</td>
<td>Milestone</td>
</tr>
<tr>
<td>Shipbuilding</td>
<td>Medium</td>
<td>20–60%</td>
<td>Industry standard</td>
<td>Milestone</td>
</tr>
<tr>
<td>Railroad Transportation</td>
<td>Medium</td>
<td>40–70%</td>
<td>PDPs for custom equipment only</td>
<td>Milestone</td>
</tr>
<tr>
<td>Aviation First-Tier Supplier</td>
<td>Medium</td>
<td>0%</td>
<td>No industry standard for PDPs</td>
<td>Delivery</td>
</tr>
<tr>
<td>Helicopters</td>
<td>Medium</td>
<td>15–25%</td>
<td>Competitive market; limited PDP</td>
<td>Fixed date from delivery</td>
</tr>
<tr>
<td>Business Jets - Standard</td>
<td>Medium</td>
<td>20%</td>
<td>Competitive market; limited PDP</td>
<td>Fixed date from delivery</td>
</tr>
<tr>
<td>Cloud Computing</td>
<td>Medium</td>
<td>0</td>
<td>Usage drives revenue</td>
<td>N/A</td>
</tr>
<tr>
<td>Public Utility</td>
<td>Low</td>
<td>90%</td>
<td>Industry standard/custom product</td>
<td>Progress</td>
</tr>
<tr>
<td>Construction</td>
<td>Low</td>
<td>90%</td>
<td>Industry standard/custom product</td>
<td>Progress</td>
</tr>
<tr>
<td>Packaged Machinery Mfg.</td>
<td>Low</td>
<td>25–30%</td>
<td>Competitive market; limited PDP</td>
<td>Milestone</td>
</tr>
<tr>
<td>Automotive First-Tier</td>
<td>Low</td>
<td>0</td>
<td>Competitive market; relational</td>
<td></td>
</tr>
</tbody>
</table>

* The PDP is the percentage of price paid for the aircraft at discounted prices; see Table 3.
B. Finance

We found that the cost of capital is not a factor when buyers and sellers face a low interest rate environment. None of our interviews with industry indicated that interest rates (cost of capital) affect or drive whether PDPs are required. In contrast, when PDPs exist, the industry practitioners cited the economic factors noted in Section 6.A.

The fact that the financial cost of capital is not a PDP driver is not altogether surprising in view of the interest rate environment, which has exhibited low rates for the last decade. Figure 3 and Figure 4 highlight the cost of capital. The prime rate was directly cited in the 1985 DFAIR study because the very high rates that persisted in the early to mid-1980s were considered detrimental to the defense industrial base.85 Extremely high rates were deemed a reason to increase DoD progress payments.

![Figure 3. U.S. Prime Rate 1955–2021](image)

Figure 4 presents data on the 3-month London Interbank Offered Rate (LIBOR) rate.86 Firms often seek short-term financing from financial institutions to pay for labor and material inputs prior to receiving payments from buyers for final products. This practice is commonly referred to as “working capital.” The 3-month LIBOR is commonly used as a

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85 DFAIR, IV-4.

baseline by financial institutions to set the cost of capital. Typically, the cost is LIBOR plus a fixed percentage (e.g., 1 to 2 percent plus LIBOR). As LIBOR is a moving average, it theoretically reflects the current cost of capital.

![Figure 4. LIBOR 1985–2020](image)

As Figure 4 demonstrates, the cost of LIBOR has been very low for the past decade. Interviews with practitioners indicate that ample capital is available. Recent activity by central banks to increase global financial liquidity following economic shocks has maintained low interest rates across the world. Further, in some instances, national

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export-import banks support capital-intensive industries by offering favorable rates to overseas buyers.89

We found only extremely rare instances of buyers and sellers potentially negotiating price reductions in return for buyers provisioning working capital. Our interviews found one case of such a trade-off due to a financially weak seller. Most firms expressed a reluctance to offer such a trade-off because doing so could call into question the ongoing viability of the seller. We did hear comments from the automobile industry that OEMs may extend advance payments to critical suppliers who are viable in the long term but are experiencing short-term cash flow problems due to economic shocks.90

Overall, the world appears to be awash in capital; thus, interest rates are low. Furthermore, for certain products such as large commercial aircraft, global sources of asset-backed financing exist. In other industries undergoing technological evolution, capital appears to be widely available as in the automobile industry, with both OEM and venture capital investments in battery and software innovations. In this study, we encountered no situations where availability or cost of capital drove PDPs.

C. Legal

Due to the sensitive and proprietary nature of contracts, we were often unable to obtain any contract information to allow significant insight into PDPs and related clauses of interest. Contracts pertaining to large commercial aircraft made up the largest collection of contracts available as many were associated with SEC filings or various publications; however, key side agreements and pricing data were not available or were redacted.

Nonetheless, when examining available materials in the context of our industry interviews, we found no surprising revelations or incongruences. We learned that contractual terms and conditions generally follow business negotiations as driven by economic and financial considerations and a desire among market participants to maintain cordial long-term relationships. We observed a preference to avoid long contract negotiations; thus, most participants use standards pertinent to their industries.

Buyers and sellers focus on price, product, delivery schedules, and payment terms. Universally, the interviews confirmed that most key contracts or contract clauses are standardized by industry. For example, although we could not obtain proprietary materials for the purchase of large aircraft, interviews confirmed general PDP terms and conditions as revealed in business, legal, and academic literature.

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90 Some first-tier suppliers were hit hard by initial closures due to COVID-19, Spring 2020.
Most interviewees did not express any desire to be litigious. The vast majority of interviewees stressed that invocation of clauses relating to remedies and damages is undesirable. Many buyers and sellers focus on long-term relational contracts. If an issue arises, both parties prefer to seek arrangements to resolve dispute amicably. This trend is not unexpected because many of the industries we examined produce high-price capital goods (in line with what DoD purchases), for which there are a limited number of sellers (meaning the industries are rather stable in terms of market participants).

IP is of particular importance—especially with durable capital goods such as aircraft and machinery that require seller maintenance and support. However, in our sample, we found that buyers rarely fund development. IP ownership almost always remains with the seller. The long-term costs of parts, service data, and maintenance are additional factors for buyers to consider when selecting a seller, although these factors are not typically contractual negotiation points.
7. Observations and Conclusions

Our analysis shows that every industrial or market segment has its own particular nuances regarding PDPs. Industry standards and historical customs are important as they literally “grease the wheels of commerce.” No firm wants to endure prolonged negotiations on general contractual terms. Instead, most firms focus on price, product, and timely delivery.

One clear message is that PDPs are not common in the commercial sector, even for large, complex products. Payments in advance of delivery with no direct connection to production are exceptionally rare. When they do occur, the drivers are seller market power or scarcity. Payments premised upon clear milestones or well-defined progress are more common, but exist due to specific practical economic drivers.

We did not find any evidence that the difference in the cost of capital between buyers and sellers drives PDPs. Although the cost of capital will determine investment decisions and financing of capital goods, it is not a point of purchase negotiations.

We did find that the following factors drive PDPs:

- **Seller market power vis-à-vis buyer.** If there is seller market concentration such as in a monopoly or duopoly, or product scarcity as seen with prestige or luxury items, there is a greater likelihood that PDPs are required.

- **Production cycle length.** Products with many inputs requiring long production timelines create the need for a seller to seek PDPs (to act as working capital). These PDPs are often driven by milestones or well-defined progress.

- **Customization.** Custom builds with no or minimal resale value often involve PDPs because the seller has no easy means to mitigate financial distress if the buyer reneges on their commitment.

Although the objective of this paper is not to compare and contrast these industries with the DoD’s acquisition of major weapon systems, it is appropriate to comment upon commonalities and differences between the commercial sector and the DoD. In terms of commonalities for PDP drivers, the DoD faces a small number of sellers for like products that often involve long production cycles. In some instances, PDPs are driven by milestones (performance-based payments in DoD jargon) or payments based upon estimates of work complete to date (progress payments based on cost in DoD contracting language). On the other hand, DoD is a monopsony (single buyer) purchaser of weapons systems (including foreign military sales procured by DoD on behalf of its foreign partners). In the last
decades, there has been relatively minimal private R&D funding of large weapons, and what may be funded by internal contractor R&D funds is often limited to the extent necessary to win new DoD contracts. The maximum amount of DoD PDPs (progress and performance) on fixed-price contracts for weapon systems as a percentage of cost and final price (inclusive of fee or profit) is most likely greater than similar items in the commercial sector.

Overall, the incentives, risks, and market forces that drive PDPs in the commercial sector are different from the objectives and motivations in the public space for major defense items. Nonetheless, it would be prudent to consider current commercial practices and macroeconomic conditions, in particular the cost of capital (interest rates), in any review of DoD contract financing policies.

Furthermore, when considering current interest rates in view of our findings, DoD may want to undertake the following actions as part of its larger examination of contract financing practices to provide insight possible policy revisions:

- DoD could examine the market concentration of industries from which it buys products or services.
- DoD could compare practices in the commercial sector for purchases of the same or similar goods or services to determine whether its contract financing practices mirror or parallel buyer financing arrangements by commercial firms.
- DoD could analyze whether the types of items it buys involving contract financing have unusually long production cycles, custom builds, product requirements, or regulatory and administrative production oversight in excess of those typically observed in the commercial sector.
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October 26, 2020.

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## Abbreviations

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<tr>
<td>AGTA</td>
<td>Aircraft General Terms Agreement</td>
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<tr>
<td>COVID-19</td>
<td>Coronavirus Disease 2019</td>
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<tr>
<td>CR$_4$</td>
<td>Four Firm Concentration Ratio</td>
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<tr>
<td>CR$_N$</td>
<td>Largest Firms in a Market or Industry</td>
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<tr>
<td>DCMA</td>
<td>Defense Contracting Management Agency</td>
</tr>
<tr>
<td>DFAIR</td>
<td>Defense Financial and Investment Review</td>
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<tr>
<td>DFARS</td>
<td>Defense Federal Acquisition Regulation Supplement</td>
</tr>
<tr>
<td>DoD</td>
<td>Department of Defense</td>
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<tr>
<td>DPC</td>
<td>Defense Price and Contracting</td>
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<tr>
<td>EVA</td>
<td>Earned Value Analysis</td>
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<tr>
<td>EXIM</td>
<td>Export-Import</td>
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<tr>
<td>FAR</td>
<td>Federal Acquisition Regulation</td>
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<tr>
<td>GAO</td>
<td>Government Accountability Office</td>
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<tr>
<td>GS</td>
<td>Geosynchronous Satellites</td>
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<tr>
<td>HHI</td>
<td>Herfindahl–Hirschman Index</td>
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<tr>
<td>IDA</td>
<td>Institute for Defense Analyses</td>
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<tr>
<td>IP</td>
<td>Intellectual property</td>
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<tr>
<td>LA</td>
<td>Letter Agreement</td>
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<tr>
<td>LIBOR</td>
<td>London Inter-Bank Offered Rate</td>
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<tr>
<td>NDA</td>
<td>Non-disclosure agreement</td>
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<tr>
<td>NPV</td>
<td>Net Present Value</td>
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<tr>
<td>OECD</td>
<td>Organization for Economic Cooperation and Development</td>
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<tr>
<td>OEM</td>
<td>Original Equipment Manufacturer</td>
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<tr>
<td>OUSD (A&amp;S)</td>
<td>Office of the Under Secretary of Defense for Acquisition &amp; Sustainment</td>
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<tr>
<td>PA</td>
<td>Purchase Agreement</td>
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<tr>
<td>PBP</td>
<td>Performance Based Payments</td>
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<tr>
<td>PCF</td>
<td>Price, Cost, and Finance</td>
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<tr>
<td>PDP</td>
<td>Pre-delivery Payment</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>Research and Development</td>
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<tr>
<td>SEC</td>
<td>Securities and Exchange Commission</td>
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<tr>
<td>SME</td>
<td>Subject Matter Expert</td>
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<tr>
<td>UCS</td>
<td>Union of Concerned Scientists</td>
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<td>U.S.</td>
<td>United States</td>
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DEPARTMENT OF DEFENSE

Contract Finance Study

APPENDIX H

REGULATORY FLOW-DOWN ANALYSIS
BY THE DEPARTMENT OF DEFENSE
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Introduction

One of the great benefits of doing business with DoD, and with the Federal Government as a whole, is cash flow in the form of contract financing and the Government’s ability – and commitment - to pay its bills in a timely manner. While this benefit is clearly available to prime contractors, the extent to which favorable financing and payment terms are flowed down to subcontractors performing under Government contracts, in the absence of Government contract terms requiring it, is not known. On major weapon system procurements, it is common for primes to subcontract over 50% of the effort to other vendors. Further, subcontractors represent a significant and critical portion of the Defense Industrial Base, so ensuring their financial health is vital to accomplishment of the acquisition mission of DoD. Therefore, it is important to assess the degree to which the DoD subcontractor community may be able to benefit from the favorable regulatory financing and payment terms the Government affords to prime contractors.

This study was conducted by the Price, Cost and Finance Directorate within Defense Pricing and Contracting to assess the extent to which FAR and DFARS clauses governing contract financing and payment establish contractual obligations for prime contractors to flow down to their suppliers the favorable financing and delivery payment terms the Government provides to prime contractors. As demonstrated during the 2020 COVID Pandemic, cash flow is a critical issue for both prime contractors and their suppliers. DoD took unprecedented measures in the context of the pandemic, through the issuance of its 16 Apr 2020 Class Deviation, Revision 1, to improve cash flow for prime contractors through the increase of the progress payment rate to 90% for large businesses (LB) and 95% for small businesses (SB). These increased rates were also flowed down to subcontracts receiving progress payments. This study, conducted in the context of the regulations in effect on 31 Aug 2022, addresses the contractual obligations of supplier flow down, as captured in FAR and DFARS clauses, rather than measures taken voluntarily by prime contractors, during the pandemic or otherwise.

Definitions (FAR 32.001):

Contract financing payment means an authorized Government disbursement of monies to a contractor prior to acceptance of supplies or services by the Government.

Delivery payment means a payment for accepted supplies or services, including payments for accepted partial deliveries. Delivery payments are invoice payments for prompt payment purposes.

FAR and DFARS clauses and regulations which are key to beneficial cash flow for prime contractors:

- FAR 52.232-25, Prompt Payment: Establishes a requirement that invoices for delivery payments will be paid within 30 days of the later of receipt of a proper invoice or acceptance of the supplies or services (shorter timeframes apply for some commodities, e.g. perishable foodstuffs); interest will be paid if the 30-day timeline is not met.
• FAR 52.232-26, Prompt Payment for Fixed-Price Architect-Engineer Contracts: Establishes a requirement that invoice payments will be made within 30 days of the later of receipt of a proper invoice or acceptance of the work or services; interest will be paid if the 30-day timeline is not met. Specifies that the due date for progress payments is 30 days after Government approval of Contractor estimates of work or services accomplished. The clause also establishes criteria for constructive acceptance or approval. Unlike under 52.232-25, Prompt Payment, progress payment requests subject to this clause incur interest if not paid within 30 days after Government approval of Contractor estimates of work or services covered by the payment request.

• FAR 52.232-27, Prompt Payment for Construction Contracts: Establishes that invoice payments (delivery payments) for purposes of this clause may include progress payments, retainage payments, or final payments. Establishes a requirement that invoice payments will be made as follows:

  - For progress payments, within 14 days of receipt of the Contractor’s payment request, provided the designated billing office receives a proper payment request and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

  - For retainage payments, as specified in the contract or, if not specified, within 30 days after approval by the Contracting Officer for release to the Contractor.

  - For final payments based on completion and acceptance of all work and presentation of release of all claims against the Government arising by virtue of the contract, and payments for partial deliveries that have been accepted by the Government (e.g., each separate building, public work, or other division of the contract for which the price is stated separately in the contract), within 30 days after the later of receipt of a proper invoice or acceptance of the work or services.

The clause establishes a Government obligation to pay interest if the invoices are not paid within the timeframes specified above based on type of invoice.

• FAR 52.212-4(i)(2) requires that the Government will make payment in accordance with the Prompt Payment Act (31 U.S.C.3903) and prompt payment regulations at 5 CFR Part 1315.

• FAR 32.007(a)(1) provides that “Unless otherwise prescribed in agency policies and procedures or otherwise specified in paragraph (b) of this section, the due date for making contract financing payments by the designated payment office is the 30th day after the designated billing office receives a proper contract financing request”, unless an audit or review is required to ensure compliance with contract terms. The referenced paragraph (b) notes that “For advance payments, loans, or other arrangements that do not involve recurrent submission of contract financing requests, the designated payment office will make payment in accordance with the applicable contract financing terms or as directed by the contracting officer”.

• DFARS 232.007 establishes that it is DoD policy to make contract financing payments as quickly as possible, and identifies standard due dates of 7 days for progress payment requests, and 14 days for performance-based payments and interim payments on cost-type contracts.
• DFARS 232.009-1 notes that Section 852 of the National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) requires DoD to provide accelerated payments to small business contractors and subcontractors, to the fullest extent permitted by law, with a goal of 15 days.

• DFARS 232.903 also cites section 852 of the National Defense Authorization Act for Fiscal Year 2019, stating that DoD shall assist small business concerns by providing payment as quickly as possible, to the fullest extent permitted by law, with a goal of 15 days after receipt of proper invoices and all required documentation, including acceptance, and before normal payment due dates established in the contract.

Methodology

The following FAR clauses related to the primary types of financing and contract payment were reviewed as well as relevant regulatory content (click on each link to go to the content on that clause in this report):

- FAR 52.232-16, Progress Payments (Progress Payments Based on Cost)
- FAR 52.232-32, Performance-Based Payments
- FAR 52.232-12, Advance Payments (Non-commercial)
- Commercial Advance and Interim Payments (No regulatory clauses, but general guidance provided in FAR 32.206 and in 52.232-29, Terms for Financing of Purchases of Commercial Products and Commercial Services)
- FAR 52.232-5, Payments under Fixed-Price Construction Contracts
- FAR 52.216-7, Allowable Cost and Payment
- FAR 52.232-7 Payments under Time-and-Materials and Labor-Hour Contracts
- FAR 52.232-25, Prompt Payment
- FAR 52.232-26, Prompt Payment for Fixed-Price Architect-Engineer Contracts
- FAR 52.232-27, Prompt Payment for Construction Contracts

In conducting the review, the following elements were considered:

- Types of acquisitions to which each clause is applicable
- The extent to which each clause specifically addresses the prime contractor’s obligations with respect to subcontract financing and subcontract delivery payments
- Is there a requirement to flow down the clause content to subcontractors? (That is, is the prime required to include the substance of the FAR or DFARS clause in the subcontracts issued to its suppliers?)
- Applicability of the Prompt Payment Act to each type of contract financing

The Prompt Payment Act and its implementing FAR clauses and related FAR/DFARS content were reviewed, and the relative benefits conferred on prime contractors in comparison to the payment terms they may establish with their suppliers is considered. Additionally, the applicability of regulatory requirements for accelerated payments to small business subcontractors (FAR 52.232-40, Providing Accelerated Payments to Small Business Subcontractors and DFARS 252.232-7017, Accelerating Payments to Small Business Subcontractors—Prohibition on Fees and Consideration) will be addressed.
It should be noted that, in the context of each clause, subcontract payments were considered in two forms: financing and delivery payments. It is worth noting that not all suppliers receive financing payments – this is dependent on the terms negotiated between the prime contractor and each of its subcontractors or suppliers. From a contractual perspective, DoD generally does not have insight into the extent to which prime contractors make contract financing available to subcontractors nor the timing of financing or delivery payments that primes make to their suppliers. DoD includes limited subcontract payment expectations in some contract financing and payment clauses, with the expectations varying by clause.
FAR 52.232-16, Progress Payments:

Types of acquisitions to which the clause applies: Non-commercial, fixed price contracts

Not applicable to cost-reimbursement contracts; contracts for construction, ship-building, or ship conversion, alteration, or repair, when the contracts provide for progress payments based on a percentage or stage of completion; or commercial contracts. Progress Payments (PP) may not be used in conjunction with Performance-Based Payments (PBPs) (FAR 32.113).

Does the Prompt Payment Act apply?

- Prime: No. (52.232-16(l).) This clause provides for progress payments based on cost (i.e., a type of contract financing) for the prime contractor. Prompt Payment does not apply to contract financing.
- Subcontractors/suppliers: No.

Is there a requirement to flow down any aspect of the clause to subcontractors? The clause does not require flowdown, but it does require the contractor to “provide financing payments to small business concerns, in conformity with the standards for customary contract financing payments stated in FAR 32.113”. (52.232-16(j)(9).) Additionally, the clause indicates that for purposes of progress payments to the prime contractor, subcontractor financing costs in the forms of progress payments, performance-based payments, or commercial product or commercial service financing payments will be recognized, if they meet the criteria set forth in 52.232-16(j). These criteria include the following:

- If subcontractor financing is in the form of progress payments, the subcontract financing terms are substantially similar to the terms of 52.232-16 if the subcontractor is a large business, or 52.232-16, Alt I if the subcontractor is a small business.
- If subcontractor financing is in the form of performance-based payments, the subcontract financing terms are substantially similar to the Performance-Based Payments clause at FAR 52.232-32 and meet the criteria for, and definition of, performance-based payments in FAR part 32.
- If subcontractor financing is in the form of commercial product or commercial service financing payments, the subcontract financing terms are constructed in accordance with FAR 32.206(c) and included in a subcontract for a commercial product or commercial service purchase that meets the definitions and standards for acquisition of commercial products and commercial services in FAR parts 2 and 12 and is in conformance with the requirements of FAR 32.504(g) (that is, the subcontract commercial financing terms are consistent with the guidance at FAR 32.206).

Financing and delivery payments to subcontractors:

- Timing:
  - Prime contractor: A prime contractor may request progress payments “as work progresses, but not more frequently than monthly”. (52.232-16.)
    - FAR 32.007(a)(1) states that “Unless otherwise prescribed in agency policies and procedures or otherwise specified in paragraph (b) of this section, the due date for making contract financing payments by the designated payment office is the
30th day after the designated billing office receives a proper contract financing request”. However, per DFARS 232.007(a), “DoD policy is to make contract financing payments as quickly as possible. Generally, the contracting officer shall insert the standard due dates of 7 days for progress payments...”. DFAS reports that, for the period from 1 Apr 2020 through 31 Jul 2022, it averaged 12.4 days from receipt of a progress payment request to issuance of the progress payment to the contractor.

- **Subcontractors and suppliers:** The clause allows the prime contractor to include in its progress payment requests both “amounts that have been paid by cash, check, or other forms of payment, or that are determined due and will be paid to subcontractors-

  (i) In accordance with the terms and conditions of a subcontract or invoice; and

  (ii) Ordinarily within 30 days of the submission of the Contractor’s payment request to the Government”. (52.232-16(a)(2)) (Emphasis added)

To summarize, prime contractors may request progress payments for subcontractor financing; completed subcontractor work, including partial deliveries; and accepted subcontractor work under Time and Materials (T&M) or Cost Reimbursable (CR) subcontracts, whether or not the prime has actually paid the subcontractor, provided that payments will be made in accordance with subcontract terms and “ordinarily” within 30 days of the **prime’s payment request** to the Government.

- **Amount:**
  
  - **Prime contractor:** 52.232-16(a)(1) directs that “the Government will compute each progress payment as 80 percent of the Contractor’s total costs incurred under this contract whether or not actually paid, plus financing payments to subcontractors (see paragraph (j) of this clause), less the sum of all previous progress payments made by the Government under this contract”. (Note that 80% is the customary progress payment rate for large businesses; Alt I of the clause includes the customary progress rate of 85% for small businesses. At the time this analysis was conducted, the 16 Apr 2020 Class Deviation 2020-00010 Revision 1, Progress Payment Rates, was in effect. That deviation increased the progress payment rates at DFARS 232.501-1 to 90 percent for large business concerns and 95 percent for small business concerns.) Progress payment amounts are calculated as 100% of subcontract financing payments (including commercial product or commercial service financing payments, performance-based payments, or progress payments to a subcontractor) plus the customary progress payment rate times all other incurred costs; these other incurred costs include subcontract delivery payments for accepted goods or services. In other words, while the prime’s progress payment reflects a portion of incurred costs based on subcontractor delivery payments (reduced by application of the prime’s progress payment rate to those costs), 100% of qualifying financing payments paid by the prime to its subcontractors is included in the prime’s progress payment from the Government.

  - **Subcontractors and suppliers:** The clause does not address the amounts of payments to subcontractors and suppliers, except to say that subcontract amounts included in the prime’s progress payment requests must be “in accordance with the terms and conditions of a subcontract or invoice” (52.232-16(a)(2)(i)).
Analysis:

Note that the italicized text in the above bullets, citing clause content, allows the contractor to request progress payments against costs incurred in the performance of the contract, but not yet paid. Prior to 27 Mar 2000, the FAR required that progress payments under non-construction contracts with large businesses be calculated against performance costs already paid out by the contractor in support of the contract. This was referred to as the “paid cost rule”. A May 1993 GAO report titled “Techniques to Ensure Timely Payments to Subcontractors” characterized the paid cost rule as providing a significant payment protection for subcontractors, because the large business prime contractors receiving progress payments were “required to make payment to subcontractors before billing the government”. (GAO report, p.8.) However, the paid cost rule was eliminated in March 2000.

Effective 27 Mar 2000, and applicable to solicitations issued on or after 26 May 2000, the FAR Case 98-400 final rule replaced the “paid cost rule” with the “incurred cost rule”. Per the Federal Register publication of the FAR Case 98-400 final rule, “[t]he final FAR rule allows a large business to include, in its billings, subcontract costs that it has incurred but not actually paid, provided the payment to the subcontractor will be made in accordance with the terms and conditions of a subcontract or invoice, and ordinarily prior to the submission of the contractor's next payment request to the Government”.

The final rule recognized the potential significant impact of replacement of the “paid cost rule” with the “incurred cost rule” on small entities, and addressed it as follows:

“The Department of Defense, the General Services Administration, and the National Aeronautics and Space Administration stated in the proposed rule that the rule was not expected to have a significant economic impact on a substantial number of small entities within the meaning of the Regulatory Flexibility Act, 5 U.S.C. 601, et seq., because most contracts awarded to small entities have a dollar value less than the simplified acquisition threshold, and, therefore, do not require the progress payment or performance-based payment type of financing. However, some of the commentors expressed the concern that elimination of the “paid cost rule” may have a significant impact on a substantial number of small entities. Accordingly, even though an Initial Regulatory Flexibility Analysis had not been done, the Councils prepared a Final Regulatory Flexibility Analysis (FRFA) as a result of those comments. The FRFA is summarized as follows:

The small entities that may be impacted by elimination of the “paid cost rule” are subcontractors to large businesses. That is, the current FAR requires large businesses to pay its subcontractors by cash or check before the large business can request payment from the Government under cost reimbursement contracts or progress payments for amounts owed to subcontractors. The final rule will permit prime contractors to request payment of those amounts from the Government when it incurs a cost based on a request for payment from its subcontractors.

We do not have any reporting mechanisms or central data collections that reveal how many subcontractors may be impacted by this rule. However, we have concluded that the number may be substantial.

In order to mitigate any potential impact this portion of the rule may have on small businesses, the Councils adopted a range of safeguards to provide further assurances that payments to subcontractors will not be delayed. These safeguards were adopted rather than merely applying the policies previously
used for small businesses that permitted small business prime contractors to recognize subcontract costs immediately after they were incurred, even if they were not yet paid to the subcontractor. This final rule requires that both large and small business prime contractors pay these incurred subcontract amounts in accordance with the terms of the subcontract and ordinarily before submittal of the next payment request sent to the Government.” (Emphasis added.)

It would seem that both the final rule and the regulatory clause anticipate that the prime contractor will make monthly progress payment requests, and will include in each monthly progress payment request all costs incurred since the submission of the previous progress payment request. Thus, the expectation is that incurred costs will be reflected in a prime progress payment request within 30 days of when the cost is incurred.

While the above excerpt from the final rule addressed the impact of elimination of the “paid cost rule” on “small entities”, the impact applies equally to large business subcontractors and suppliers, although the LB suppliers may be in a better position to absorb the impact. Reading 52.232-16(a)(2)(ii) together with the final rule’s discussion of its approach to mitigating the impact of the elimination of the “paid cost rule” on small entities helps to clarify the intent of the clause wording. FAR 52.232-16(a)(2)(ii) currently provides for payment of incurred costs “[o]rdinarily within 30 days of the submission of the Contractor’s payment request to the Government”. It’s apparent from the final rule that the drafters’ intention was to ensure payment of all subcontract costs claimed by the prime as incurred, though not yet paid, within the 30-day cycle between the prime’s progress payment requests. However, the wording in the FAR clause is somewhat ambiguous, as “ordinarily” is not defined in the clause. Further, the clause reference to payments “[i]n accordance with the terms and conditions of a subcontract or invoice” (52.232-16(a)(2)(i)) may open the door for a prime contractor to comply with its established payment terms with its subcontractors, which may be less favorable than the terms established between the prime and the Government, in lieu of paying the subcontractor within 30 days of the prime’s progress payment request to the Government, assuming that the progress payment request including the subcontract invoice is made timely. Although 52.232-16(a)(2) is written in such a way as to require compliance with both of the subcontract payment criteria (“(i) In accordance with the terms and conditions of a subcontract or invoice; and (ii) Ordinarily within 30 days of the submission of the Contractor’s payment request to the Government”), as the prime’s payment terms with its subcontractors become less favorable than the (30-day) payment terms offered by the Government, a disconnect between the two criteria is introduced. For example, if the prime contractor’s payment terms with its subcontractor are net 90 days, compliance with the subcontract terms (the first of the two criteria) means the prime will not comply with the second criterion. There is no explicit policy or guidance on which of the two criteria identified in 52.232-16(a)(2) takes precedence when they are inconsistent. Lastly, the Progress Payments clause lacks an enforcement mechanism for timely payment to subcontractors, other than reduction or suspension of progress payments if the contractor “is delinquent in payment of the costs of performing this contract in the ordinary course of business” (52.232-16(c)(4)). The term, “in the ordinary course of business” is introduced here but is undefined.

What might the timing of subcontractor and prime contractor payments under the FAR Progress Payment clause terms (implementing the “incurred cost rule”) look like? Below is a table illustrating the potential timing of submission of delivery payment requests (invoices) from the subcontractor to the prime contractor, the prime’s inclusion of these incurred costs in its progress payment request to the
Government, the prime’s financing payment received from the Government, and the prime’s subsequent payment to the subcontractor.

Table I:

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<th>Column 1</th>
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<th>Column 4</th>
<th>Column 5</th>
<th>Column 6</th>
<th>Column 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of</td>
<td>Payment</td>
<td>Subcontract</td>
<td>Likely Date of</td>
<td>Subcontract</td>
<td>Likely Prime</td>
<td></td>
</tr>
<tr>
<td>Subcontractor</td>
<td>Terms</td>
<td>Payment Due</td>
<td>Prime’s Progress</td>
<td>Payment</td>
<td>Float if</td>
<td></td>
</tr>
<tr>
<td>Submission</td>
<td>Between</td>
<td>per</td>
<td>Payment Request to the</td>
<td>Expected per</td>
<td>Subcontract</td>
<td></td>
</tr>
<tr>
<td>Invoice to</td>
<td>Prime and</td>
<td>Subcontract</td>
<td>Government</td>
<td>52.232-16(a)(2)(ii)</td>
<td>Payment Made per</td>
<td></td>
</tr>
<tr>
<td>Prime</td>
<td>Subcontractor</td>
<td>Terms</td>
<td></td>
<td></td>
<td>Subcontract Terms</td>
<td></td>
</tr>
<tr>
<td>15-Dec-21</td>
<td>Net 30 days</td>
<td>14-Jan-22</td>
<td>1-Jan-22</td>
<td>16-Jan-22</td>
<td>31-Jan-22</td>
<td>-2</td>
</tr>
<tr>
<td>15-Dec-21</td>
<td>Net 60 days</td>
<td>13-Feb-22</td>
<td>1-Jan-22</td>
<td>16-Jan-22</td>
<td>31-Jan-22</td>
<td>28</td>
</tr>
<tr>
<td>15-Dec-21</td>
<td>Net 90 days</td>
<td>15-Mar-22</td>
<td>1-Jan-22</td>
<td>16-Jan-22</td>
<td>31-Jan-22</td>
<td>58</td>
</tr>
</tbody>
</table>

- In column 2, this table presents three different possible payment terms that might have been agreed to between the prime and the subcontractor: payment 30 days after receipt of invoice, 60 days after receipt of invoice, or 90 days after receipt of invoice.

- Column 3 shows the subcontract payment due dates under each set of payment terms, based on an invoice submission date of 15 Dec 2021.

- In column 4, we chose a notional (theoretical) date of 16 days after receipt of subcontractor’s invoice for the invoiced amount to be included in the prime’s progress payment request to the Government. (Per 52.232-16, progress payments may be requested “not more frequently than monthly”.) At this point, the subcontractor’s invoiced amount represents “amounts … that are determined due and will be paid to subcontractors (i) In accordance with the terms and conditions of a subcontract or invoice; and (ii) Ordinarily within 30 days of the submission of the Contractor’s payment request to the Government” as described in 52.232-16(a)(2). The prime’s progress payment request will include the subcontract invoice amount times the applicable progress payment rate.

- The 5th column shows a progress payment receipt date 15 days after the prime’s submission of a progress payment request. (DFAS reports that, for the period from 1 Apr 2020 through 31 Jul 2022, it averaged 12.4 days from receipt of a progress payment request to issuance of the progress payment to the contractor.)

- Column 6 shows the date by which the subcontract invoice would be paid by the prime, regardless of the payment terms established between the prime and the subcontractor, IF the prime complies with the expectation at 52.232.16(a)(2)(ii) that the invoiced subcontract amount claimed in the progress payment request will be paid “within 30 days of the submission of the Contractor’s payment request to the Government”.

- Column 7 shows the potential number of days of float for the prime contractor, presuming the prime makes payment in accordance with the subcontract payment terms (columns 2 and 3). The float represents the period of time after the prime has received the progress payment from the Government but before the prime pays the subcontract invoice. For example, in this scenario, if the subcontract
included payment terms of net 60 days, for a subcontract payment due date of 13 Feb 2022, and the prime received the progress payment which included this invoiced subcontract amount on 16 Jan 2022, the float is 28 days – the number of days between 16 Jan 2022 and 13 Feb 2022.

As the above table illustrates, when the payment terms between the prime and the subcontractor approximate the Government standard of (delivery) payment within 30 days (per the Prompt Payment requirements), there is no tension between the two subcontract payment criteria at 52.232-16(a)(2). If the prime/subcontractor payment terms are net 30, compliance with the first criterion (prime payment in accordance with the terms and conditions of the subcontract) will result in compliance with the second criterion (prime’s payment to the subcontractor will be within 30 days of the inclusion of the subcontract amount in the prime’s progress payment request to the Government). However, as the days to pay the subcontractor grow, the delta between the two dates cited in paragraph 52.232-16(a)(2) of the clause grows as well. Additionally, as the number of days to pay the subcontractor increases, the likely number of days of prime contractor float increases commensurately. The float seen here is a benefit to the prime contractor, but results in financial pressure for the subcontractor, because of the length of time between the subcontractor having paid its cost of performance and the receipt of payment from the prime. This scenario demonstrates how the first tier subcontractor might experience cash flow challenges as a result of its obligation to pay its suppliers before (and potentially significantly before) it is paid by the prime. Alternately, to protect its own financial circumstances, the 1st tier subcontractor may delay in making payments to its suppliers, transferring the cash flow challenges to lower tier subcontractors. Recognizing the criticality of cash flow to members of the Defense Industrial Base, Table I demonstrates that while the prime may be receiving favorable financing and payment terms from the Government, there is no assurance that subcontractors are benefiting from equally favorable terms.

In the Table I scenario, had the subcontractor submitted a request for contract financing instead of an invoice, it’s expected that the subcontractor’s financing request would have been paid much timelier. This expectation is based on the FAR 52.232-16(j) requirement that subcontract financing terms (for progress payments and performance-based payments) be “substantially similar” to 52.232-16 for progress payments or 52.232-32 for performance-based payments. Each of those clauses requires financing payments to be made within 30 days of the receipt of the payment request unless the agency head has prescribed a different timeframe; DFARS 232.007 directs contracting officers to specify 7 days for progress payments and 14 days for performance-based payments. (DFAS reports that, for the period from 1 Apr 2020 through 31 Jul 2022, it averaged 12.4 days from receipt of a progress payment request to issuance of the progress payment to the contractor.)

It must be noted that subcontractors generally are not aware of whether their prime contractor is receiving progress payments, nor the timing of the prime’s submission of a progress payment request to the Government which includes an amount invoiced by the subcontractor. Neither will the subcontractor have any insight into when the prime receives such a progress payment from the Government. Without these insights, the subcontractor cannot advocate for a timely payment in conformance with 52.232-16(a)(2)(ii) (incurred costs claimed in a progress payment request but not yet paid will be paid “ordinarily within 30 days of the submission of the Contractor’s payment request to the Government”).
The “incurred cost rule” was implemented in 2000, replacing the “paid cost rule”. What would this scenario have looked like under the “paid cost rule”?

Considering the timing of payment of the 1st tier subcontractor’s invoice and the prime’s receipt of the progress payment which includes the amount of the paid subcontractor invoice, the following table demonstrates that the “paid cost rule” would result in carrying costs in lieu of float for the prime.

Table II:

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
<th>Column 4</th>
<th>Column 5</th>
<th>Column 6</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Date of Subcontractor Submission of Invoice to Prime</strong></td>
<td><strong>Payment Terms Between Prime and Subcontractor</strong></td>
<td><strong>Subcontract Payment Due per Subcontract Terms</strong></td>
<td><strong>Date of Inclusion of Subcontract Payment in Prime's Progress Payment Request to the Government</strong></td>
<td><strong>Likely Date of Prime's Progress Payment Receipt</strong></td>
<td><strong>Likely # of Days Prime Must Carry 1st Tier Subcontract Payment</strong></td>
</tr>
<tr>
<td>15-Dec-21</td>
<td>Net 30 days</td>
<td>14-Jan-22</td>
<td>1-Feb-22</td>
<td>16-Feb-22</td>
<td>33</td>
</tr>
<tr>
<td>15-Dec-21</td>
<td>Net 60 days</td>
<td>13-Feb-22</td>
<td>1-Mar-22</td>
<td>16-Mar-22</td>
<td>31</td>
</tr>
<tr>
<td>15-Dec-21</td>
<td>Net 90 days</td>
<td>15-Mar-22</td>
<td>1-Apr-22</td>
<td>16-Apr-22</td>
<td>32</td>
</tr>
</tbody>
</table>

- Columns 1, 2, and 3 include the same data set as Table I.

- Column 4 shows that, unlike under the “incurred cost rule” scenario presented in Table I, here the prime contractor cannot include the amount of the subcontract invoice in its progress payment request to the Government until the invoice has been paid. The date of the progress payment request selected under each payment term is a notional (theoretical) date within a month after the subcontract invoice has been paid. 52.232-16 limits submission of progress payment requests to “not more frequently than monthly”.

- Column 5 shows a progress payment receipt date 15 days after the prime’s submission of a progress payment request. (DFAS reports that, for the period from 1 Apr 2020 through 31 Jul 2022, it averaged 12.4 days from receipt of a progress payment request to issuance of the progress payment to the contractor.)

- Column 6 presents the likely number of days the prime might have to carry the amount of the paid subcontract invoice before receipt of a progress payment which will cover 90% or 95% (the LB or SB progress payment rate under Class Deviation 2020-O0010, Revision 1) of the subcontract invoice amount.

Table II demonstrates that while the “incurred cost rule” pushes the carrying costs to the 1st tier subcontract level or lower, and yields an increasing prime float as the subcontract payment terms lengthen, in the case of the “paid cost rule”, the prime is responsible for having paid the costs of performance in advance of receiving a progress payment covering those costs from the Government. This same circumstance will be reflected through all tiers of suppliers, in that all levels will likely need to pay some costs of performance prior to being paid for their performance. Under the “paid cost rule”,...
there is no ambiguity about when the subcontractor payment is due, as is introduced by the potentially conflicting conditions at 52.232-16(a)(2) in the current version of the Progress Payments clause. The former “paid cost rule” negated the opportunity for a prime to rely on the Government’s favorable financing payment terms while simultaneously establishing significantly less favorable financing and delivery payment terms with their own subcontractors and vendors. Conversely, under the “incurred cost rule”, primes may receive progress payments on amounts they owe to subcontractors, significantly in advance of the point in time at which the subcontract terms require payment to the subcontractor.

It is also worth noting that, while one might conclude that an 80% progress payment rate always means that the contractor must carry 20% of its cost, there are circumstances where the effective progress payment rate will exceed the customary progress payment rate at some points during contract performance. This is attributable to the 52.232-16(a)(1) instructions for computing the amount of a progress payment. That clause paragraph directs that progress payments be calculated as “80 percent of the Contractor’s total costs incurred under this contract whether or not actually paid, plus financing payments to subcontractors”. Note that subcontract financing amounts are not reduced by the progress payment rate. Thus, when the amount of subcontracted activity which is financed is significant in comparison to the contract price, the recognition of 100% of subcontract financing payments may result in an effective progress payment rate higher than the published, customary rate. This is demonstrated in the following table.

Table III:

<table>
<thead>
<tr>
<th></th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contract cost</td>
<td>$100,000,000</td>
</tr>
<tr>
<td>Profit at 12%</td>
<td>$12,000,000</td>
</tr>
<tr>
<td>Contract Price</td>
<td>$112,000,000</td>
</tr>
<tr>
<td>52.232-16(a)(6) cap on progress payments (80% LB rate)</td>
<td>$89,600,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Composition of costs included in a progress payment request</th>
<th>Amount recognized in progress payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs incurred, excluding subcontract financing</td>
<td>$4,000,000</td>
<td>$3,200,000</td>
</tr>
<tr>
<td>Subcontract financing</td>
<td>$6,000,000</td>
<td>$6,000,000</td>
</tr>
<tr>
<td>Total cost claimed</td>
<td>$10,000,000</td>
<td></td>
</tr>
<tr>
<td>Total Progress payment</td>
<td></td>
<td>$9,200,000</td>
</tr>
</tbody>
</table>

Effective progress payment rate for this progress payment submission 92%
In this simple scenario, the contract price of $112M is comprised of $100M in cost plus profit at 12%. Per 52.232-16(a)(6), which states that “[t]he total amount of progress payments shall not exceed 80 percent of the total contract price”, the contractor is eligible to receive progress payments up to a total of $89.6M (contract price of $112M X 80%). (Note that as the profit rate goes up, the upper limit on the total amount of progress payments the contractor may receive also goes up. For example, a profit rate of 15% in this scenario would yield a total contract price of $115M, and the upper limit on the amount of progress payments the contractor could receive would be $115M X 80%, or $92M.)

For purposes of this example, the costs claimed in the progress payment request are $4M in cost incurred, excluding subcontract financing, plus $6M in subcontract financing, for a total of $10M. Per 52.232-16(a)(2), these costs may have already been paid by the contractor, or may be amounts which “are determined due and will be paid” in accordance with the two criteria discussed above, “(i) In accordance with the terms and conditions of a subcontract or invoice; and (ii) Ordinarily within 30 days of the submission of the Contractor’s payment request to the Government”.

Per 52.232-16(a)(1), the progress payment amount calculated against this $10M claimed cost is 80% of incurred costs excluding subcontract financing, plus 100% of subcontract financing. (($4M X 80%) + $6M = $3.2M + $6M = $9.2M) Although the progress payment rate in this scenario is 80%, the effective progress payment rate as of this snapshot of time is 92%, calculated as the progress payment amount of $9.2M divided by the $10M in incurred cost claimed in the progress payment request.

The below table uses the same scenario depicted in Table III, but applies the 90% LB progress payment rate established by Class Deviation 2020-O0010, Revision 1, which was in effect as of the time this analysis was conducted.
Table IV:

<table>
<thead>
<tr>
<th>Composition of costs included in a progress payment request</th>
<th>Amount recognized in progress payment</th>
</tr>
</thead>
</table>

| Costs incurred, excluding subcontract financing | $ 4,000,000 | $ 3,600,000 |
| Subcontract financing | $ 6,000,000 | $ 6,000,000 |
| Total cost claimed | $ 10,000,000 |
| Total Progress payment | $ 9,600,000 |

Effective progress payment rate for this progress payment submission 96%

Per the deviation version of 52.232-16(a)(6), “[t]he total amount of progress payments shall not exceed 90 percent of the total contract price”. Thus, the contractor is eligible to receive progress payments up to a total of $100.8M (contract price of $112M X 90%). Interestingly, under the (LB) deviation progress payment rate of 90%, the total amount of progress payments the contractor may receive exceeds the anticipated cost of $100M. While progress payments under 52.232-16 are based on costs incurred (no profit will be included in the progress payments), this higher deviation progress payment rate and commensurately higher limit on the total amount of progress payments mean that, should the contract overrun the estimated cost, the contractor will still be able to receive progress payments on some portion of the overrun.

As in the previous example, the costs claimed in the progress payment request are $4M in cost incurred, excluding subcontract financing, plus $6M in subcontract financing, for a total of $10M. Per 52.232-16(a)(2) in the deviation version of the clause, these costs may have already been paid by the contractor, or may be amounts which “are determined due and will be paid” in accordance with the two criteria discussed above, “(i) In accordance with the terms and conditions of a subcontract or invoice; and (ii) Ordinarily within 30 days of the submission of the Contractor’s payment request to the Government”. (No change from the previous example.)

Per the deviation version of the clause, 52.232-16(a)(1) directs the progress payment amount to be calculated against this $10M claimed cost as 90% of incurred costs excluding subcontract financing, plus
100% of subcontract financing. \( (\$4\text{M} \times 90\%) + \$6\text{M} = \$3.6\text{M} + \$6\text{M} = \$9.6\text{M} ) \) Although the progress payment rate in this scenario is 90%, the effective progress payment rate as of this snapshot of time is 96%, calculated as the progress payment amount of $9.6M divided by the $10M in incurred cost claimed in the progress payment request.

The higher, effective progress payment rate at some points during contract performance as a result of covering 100% of a prime’s contract financing payments to its subcontractors would vary by contract as well as during performance of an individual contract, depending on the composition of contract costs, the extent to which subcontract costs are financed, and the contract’s expenditure profile. The potential higher effective progress payment rate (which would vary across the period of performance) is not calculated nor considered by the Government in negotiations, such as through profit analysis.

**Does the clause provide any subcontractor payment protections?** Limited. Clause paragraph 52.232-16(c) identifies circumstances under which the CO may reduce or suspend progress payments; one such circumstance is the prime contractor’s delinquency in paying the costs of performing the contract “in the ordinary course of business”. Otherwise, the clause only requires that the prime make subcontract financing and delivery payments “[i]n accordance with the terms and conditions of a subcontract or invoice” (52.232-16(a)(2)(i)). As discussed, a prime contractor could elect to establish subcontract payment terms which are substantially less favorable than those offered by DoD. Additionally, while the Prompt Payment clause (52.232-25) requires the Government to pay interest when it fails to pay a proper invoice for accepted supplies or services within 30 days of the later of receipt of the invoice or acceptance of the supplies/services, neither the Progress Payments clause nor the Prompt Payment clause (52.232-16 and 52.232-25) apply such a requirement to a prime contractor’s delivery payments to its subcontractors.

**Certification requirement**: FAR 52.232-16(g)(3) requires that each progress payment request be submitted on a Standard Form 1443 (or the electronic equivalent as required by agency regulations). The SF 1443 includes a Certification statement, paragraph (b) of which states that “All the costs of contract performance (except as herewith reported in writing) have been paid to the extent shown herein, or where not shown as paid have been paid or will be paid currently, by the contractor, when due, in the ordinary course of business”. This certification requirement set forth on the standard form is not found in regulation or United States Code.
FAR 52.232-32, Performance-Based Payments

Types of acquisitions to which the clause applies: Non-commercial, fixed price contracts

Not applicable to cost-reimbursement contracts or line items; contracts for architect-engineer services; contracts for construction, ship-building, or ship conversion, alteration, or repair, when the contracts provide for progress payments based on a percentage or stage of completion; contracts awarded under sealed bid procedures; or commercial contracts. Performance-Based Payments may not be used in conjunction with Progress Payments (FAR 32.113).

Does the Prompt Payment Act apply?

- Prime: No. (52.232-32(c)(2) and 32.1001(d).) This clause provides for performance-based payments (i.e., a type of contract financing) for the prime contractor. Prompt Payment does not apply to contract financing.
- Subcontractors and suppliers: No.

Is there a requirement to flow down any aspect of the clause to subcontractors? The Performance-Based Payments clause does not require flowdown of any aspect of the clause to subcontractors. Aside from the wording of the certification accompanying each prime contractor request for performance-based payment, confirming that the contractor is not delinquent in paying the costs of contract performance (52.232-32(m)(2)), there is no reference to subcontractors or suppliers.

Prime contractors may provide financing in any form to subcontractors, or may choose to provide no financing whatsoever per their subcontract terms. However, while the requirements of 52.232-32 are not flowed down within the clause, FAR clause 52.232-16, Progress Payments, recognizes subcontractor financing in the form of PBPs, and paragraph (j)(4) of that clause requires that the terms of subcontractor PBP financing be “substantially similar to the Performance-Based Payments clause at FAR 52.232-32 and meet the criteria for, and definition of, performance-based payments in FAR part 32”.

Financing and delivery payments to subcontractors:

- Timing:
  - **Prime contractor**: Per 52.232-32(b) and (c)(1), “[t]he Contractor may submit requests for payment of performance-based payments not more frequently than monthly”, but “[t]he Contractor shall not be entitled to payment of a request for performance-based payment prior to successful accomplishment of the event or performance criterion for which payment is requested”.
  - FAR 32.007(a)(1) states that “Unless otherwise prescribed in agency policies and procedures or otherwise specified in paragraph (b) of this section, the due date for making contract financing payments by the designated payment office is the 30th day after the designated billing office receives a proper contract financing request”. However, per DFARS 232.007(a), “DoD policy is to make contract financing payments as quickly as possible. Generally, the contracting officer shall insert the standard due dates of 7 days for progress payments, and 14 days for performance-based payments...”. DFAS reports that, for the period from 1 Apr 2020 through 31 Jul 2022, it averaged 13.9 days from receipt of a
performance-based payment request to issuance of the performance-based payment to the contractor.

- **Subcontractors and Suppliers**: In the certification accompanying each PBP request, the contractor certifies that “(Except as reported in writing __________), all payments to subcontractors and suppliers under this contract have been paid, or will be paid, currently, when due in the ordinary course of business” (52.232-32(m)(2)). (Emphasis added.) This wording refers only to the payment terms included in each subcontract or supplier purchase order, and establishes no nexus between the timing of the PBP payments and the timing of payments to suppliers.

- **Amount**:
  - **Prime contractor**: Per 52.232-32(a), “the amount of payments and limitations on payments shall be specified in the contract’s description of the basis for payment”. In other words, “in accordance with 10 U.S.C. 2307(b)(2), performance-based payments shall not be conditioned upon costs incurred in contract performance, but on the achievement of performance outcomes” (DFARS 232.1001(a)), and the amount associated with each payment event will be as specified in the performance-based payment schedule in the contract, which sets out payment events, completion criteria, and event values. (Note: the DFARS reference to 10 U.S.C. 2307(b)(2) is obsolete; the current, correct reference is 10 U.S.C. 3902(b).)
  - **Subcontractors and Suppliers**: Because of the nature of performance-based payments, there is no direct link between the contractor’s incurrence of costs (subcontract or otherwise) in performance of the contract and the timing or amount of a performance-based payment.

**Analysis**: The Government, and DoD specifically, have committed to making timely financing payments to prime contractors (FAR 32.007(a) and DFARS 232.007(a)(1)). However, there is nothing in the PBP clause that would require or motivate a prime contractor to pass on similar favorable terms to its suppliers. The clause only requires the prime to comply with the subcontract payment terms, which could be distinctly less favorable than those conferred on the prime by the Government. This potential disconnect between the prime’s receipt of financing payments from the Government and its own payments to its suppliers may be further exacerbated to the extent that the performance-based payment schedule negotiated between the prime and the Government could be “front-loaded”, or not well aligned with the contractor’s true expenditure timing. In fact, in accordance with 10 U.S.C. 3802(b), DoD is prohibited from limiting PBP payments to costs incurred by the contractor.

The following table provides an illustration of the relative timing of payment of a 1st tier subcontract invoice in comparison to the prime contractor’s receipt of a Performance-Based Payment, using the same subcontract scenario presented in Table I under the discussion of Progress Payments.
Table V:

<table>
<thead>
<tr>
<th>Date of Subcontractor Submission of Invoice to Prime</th>
<th>Payment Terms Between Prime and Subcontractor</th>
<th>Subcontract Payment Due per Subcontract Terms</th>
<th>Date of Prime's Submission of a Performance-Based Payment Request</th>
<th>Likely Date of Prime's Performance-Based Payment Receipt</th>
<th>Likely # of Days of Prime Float or Prime Carrying Cost of Subcontract Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-Dec-21</td>
<td>Net 30 days</td>
<td>14-Jan-22</td>
<td>15-Nov-21</td>
<td>30-Nov-21</td>
<td>45</td>
</tr>
<tr>
<td>15-Dec-21</td>
<td>Net 60 days</td>
<td>13-Feb-22</td>
<td>15-Nov-21</td>
<td>30-Nov-21</td>
<td>75</td>
</tr>
<tr>
<td>15-Dec-21</td>
<td>Net 90 days</td>
<td>15-Mar-22</td>
<td>15-Nov-21</td>
<td>30-Nov-21</td>
<td>105</td>
</tr>
<tr>
<td>15-Dec-21</td>
<td>Net 30 days</td>
<td>14-Jan-22</td>
<td>25-Mar-22</td>
<td>9-Apr-22</td>
<td>-85</td>
</tr>
<tr>
<td>15-Dec-21</td>
<td>Net 60 days</td>
<td>13-Feb-22</td>
<td>25-Mar-22</td>
<td>9-Apr-22</td>
<td>-55</td>
</tr>
</tbody>
</table>

- Columns 1, 2, and 3 include the same data set as Table I. Three different possible sets of subcontract payment terms (net 30 days, net 60 days, net 90 days) are shown.

- Column 4 shows two possible dates of submission of the prime’s performance-based payment request. The first possible submission date precedes all the possible subcontract payment due dates under the varying payment terms, while the second shows a circumstance where the prime’s PBP request occurs after all of the varying subcontract payment terms. Because performance-based payment requests are submitted based on completion of events specified in the PBP schedule, and have no correlation to cost incurred, either circumstance is possible.

- Column 5 shows a performance-based payment receipt date 15 days after the prime’s submission of a performance-based payment request. (DFAS reports that, for the period from 1 Apr 2020 through 31 Jul 2022, it averaged 13.9 days from receipt of a performance-based payment request to issuance of the performance-based payment to the contractor.)

- Column 6 presents the number of days of float the contractor might experience in this scenario (when the PBP request is submitted significantly in advance of the subcontract payment due date) and the number of days the prime might have to carry the amount of the paid subcontract invoice before receipt of a performance-based payment (when the PBP request is submitted subsequent to the subcontract payment due date.)

Unlike under the Progress Payments clause, there is no ambiguity in the required timing of the payment to the subcontractor, because the Performance-Based Payments clause does not address timing of subcontract payments. Therefore, timing of subcontract payment is simply based on the terms established between the prime and the subcontractor. The downside of the clause’s silence on timing of subcontract payment is that the subcontractor could go for many days, even months, without a
payment from the prime, long after the prime has been paid by the Government. This may be further exacerbated by the de-linking of cost incurred to payment amounts. Conversely, the prime may be responsible for paying a subcontractor long before the opportunity to submit a PBP request arises. Like the Progress Payments clause, the Performance-Based Payments clause lacks an enforcement mechanism for timely payment to subcontractors, other than reduction or suspension of performance-based payments if the contractor “is delinquent in payment of any subcontractor or supplier under this contract in the ordinary course of business” (52.232-32(e)(3)).

**Does the clause provide any subcontractor payment protections?** Very Limited. Paragraph 52.232-32(e) identifies circumstances under which the CO may reduce or suspend performance-based payments; one such circumstance is the prime contractor’s delinquency in “payment of any subcontractor or supplier under this contract in the ordinary course of business”. Otherwise, the clause only requires that the prime certify in conjunction with each PBP request that “(Except as reported in writing on __________), all payments to subcontractors and suppliers under this contract have been paid, or will be paid, currently, when due in the ordinary course of business” (52.232-32(m)(2)). (Emphasis added.) As discussed, a prime contractor may elect to establish subcontract payment terms which are substantially less favorable than those offered by DoD. Additionally, while the Prompt Payment clause (52.232-25) requires the Government to pay interest when it fails to pay a proper invoice for accepted supplies or services within 30 days of the later of receipt of the invoice or acceptance of the supplies/services, this clause applies no such requirement to prime contractor payments to its subcontractors.

**Certification requirement:** 52.232-32(l)(5) requires that each contractor request for a performance-based payment include a “certification by a Contractor official authorized to bind the Contractor, as specified in paragraph (m) of this clause”. The certificate wording prescribed in 52.232-32(m)(2) requires the contractor to confirm that “(2) (Except as reported in writing on __________), all payments to subcontractors and suppliers under this contract have been paid, or will be paid, currently, when due in the ordinary course of business”. This regulatory certification requirement is not found in statute.
FAR 52.232-12, Advance Payments

**Types of acquisitions to which the clause applies:** Any type of non-commercial negotiated or sealed bid contract. Advance payments may be used in addition to progress payments or partial payments. (FAR 32.402(d))

Not applicable to commercial contracts.

**Does the Prompt Payment Act apply?**

- **Prime:** No. Per FAR 32.001, Advance Payments are a type of contract financing payment. Per 32.901(b), Prompt Payment does not apply to contract financing.
- **Subcontractors/suppliers:** No.

**Is there a requirement to flow down any aspect of the clause to subcontractors?** There is no requirement for a prime contractor receiving advance payments to provide that type of financing to its subcontractors. However, when the prime does offer its subcontractors financing in the form of advance payments, 52.232-12(a) requires that “[t]he Contractor shall apply terms similar to this clause to any advance payments to subcontractors”. Paragraph (f)(2) says “[t]he Contractor shall charge interest on advance payments to subcontractors in the manner described above and credit the interest to the Government”.

**Financing and delivery payments to subcontractors:**

- **Timing:**
  - **Prime:** The Advance Payments clause does not establish a specific timeframe for contractor submission of financing requests; rather, the clause specifies that “[a]dvance payments will be made under this contract (1) upon submission of properly certified invoices or vouchers by the Contractor, and approval by the administering office … , or (2) under a letter of credit”. (52.232-12(a)) Because of the nature of advance payments, it is not expected that this form of financing will necessarily align with incurrence of the costs of performance. However, “the contractor may withdraw funds from the special account into which advance payments are deposited “only to pay for properly allocable, allowable, and reasonable costs for direct materials, direct labor, and indirect costs”. (52.232-12(c)) This gives the contractor access to the funds to pay subcontractor financing or delivery payments when the obligation is incurred.
  - **FAR 32.007(a)(1) states that “Unless otherwise prescribed in agency policies and procedures or otherwise specified in paragraph (b) of this section, the due date for making contract financing payments by the designated payment office is the 30th day after the designated billing office receives a proper contract financing request”.
  - **Subcontractors and suppliers:** The clause is silent as to the relative timing of the prime’s access to the advanced funds versus its actual payment of the related subcontractor financing or delivery payments.
• **Amount:**
  
  - **Prime:** The contractor controls the timing and amount of its withdrawals from the special account into which advanced funds were deposited, subject only to the caveat that the withdrawals must be “to pay for properly allocable, allowable, and reasonable costs for direct materials, direct labor, and indirect costs”, in accordance with Generally Accepted Accounting Principles (GAAP) and applicable FAR Part 31 content. (52.232-12(c))
  - **Subcontractors and Suppliers:** The clause does not specifically address either subcontract financing or subcontract delivery payments in the context of withdrawals from the special account.

**Analysis:** Aside from the 52.232-12(a) requirement for the prime to “apply terms similar to this clause to any advance payments to subcontractors”, there is no clause requirement for the contractor to offer financing and payment terms as generous as those it receives from the Government to its subcontractors. Because of the lack of specificity with regard to costs which may form the basis for withdrawals from the advance payment account, it is possible for the prime to withdraw funds related to subcontractor financing or delivery payments from the special account significantly in advance of when the owed amounts are actually paid out to the subcontractors.

**Does the clause provide any subcontractor payment protections?** Limited. 52.232-12(k)(1)(ii)(E) identifies “delinquency in payment of taxes or of the costs of performing this contract in the ordinary course of business” (emphasis added) as one of the events which would trigger the contracting officer to withhold further withdrawals from the special account holding the advance payment financing. However, it should be noted that the prime may avoid delinquency in paying costs of performance of the contract without offering its suppliers financing and payment terms as favorable as those it receives from the Government.
Commercial Advance Payments and Commercial Interim Payments (no regulatory clauses)

**Note:** FAR 32.202-1(b) delineates the standards that must be met in order for the contracting officer to authorize inclusion of financing terms in contracts for commercial purchases. These include:

- a determination that it is appropriate or customary in the commercial marketplace to make financing payments for the item;
- authorizing this form of contract financing is in the best interest of the Government (10 U.S.C.2307(f) and 41 U.S.C.4505 do not allow contract financing unless it is in the best interest of the Government);
- adequate security is obtained;
- prior to any performance of work under the contract, the aggregate of commercial advance payments shall not exceed 15 percent of the contract price;
- the contract is awarded on the basis of competitive procedures or, if only one offer is solicited, adequate consideration is obtained (based on the time value of the additional financing to be provided) if the financing is expected to be substantially more advantageous to the offeror than the offeror’s normal method of customer financing; and
- the contracting officer obtains concurrence from the payment office concerning liquidation provisions when required by 32.206(e).

In the context of commercial acquisitions, the expectation is that the Government should utilize approaches and financing terms that are customary in the specific commercial market applicable to the item or service being acquired. Since there is wide variability in customary terms and practices across the commercial marketplace, the FAR and DFARS do not include regulatory clauses addressing commercial advance payments or commercial interim payments. Instead, per FAR 32.206(a), “[i]f the contract will provide for contract financing, the contracting officer shall construct a solicitation provision and contract clause”. FAR 32.206(b) lists expected content of a clause setting forth commercial financing terms, in combination with the terms of 52.232-29, Terms for Financing of Purchases of Commercial Products and Commercial Services. Neither the content delineated in 32.206(b) nor 52.232-29 make any specific reference to subcontract financing or delivery payments, or to any individual components of the cost of performance.

**Types of acquisitions to which the clause applies:** Contracts for commercial products or commercial services with a price in excess of the simplified acquisition threshold, which are awarded under competitive procedures. If only one offer is solicited, commercial advance or interim payments may be provided only if adequate consideration (based on the time value of the financing provided) is obtained.

**Not applicable to** non-commercial contracts, or commercial contracts valued below the simplified acquisition threshold.

**Does the Prompt Payment Act apply?**

- **Prime:** No. (32.001 and 32.202-2; 52.232-29(g)) Prompt Payment does not apply to contract financing. However, it must be noted that this review has identified a disconnect between the FAR and the DFARS regarding applicability of the Prompt Payment Act to commercial advance/interim payments (which are contract financing, per FAR 32.001, and which are not subject to the interest provisions of the Prompt Payment Act, per 52.232-
While FAR 32.901 and 52.232-29(g) state that prompt payment requirements do not apply to contract financing payments, DFARS 232.206(f) provides instructions to incorporate “standard prompt payment terms for commercial item contract financing”.

- Subcontractors and suppliers: No.

Is there a requirement to flow down any aspect of the clause to subcontractors? No. Since there are no regulatory clauses, and the FAR 32.2 instructions and guidance on crafting commercial financing and commercial advance payment clauses do not address subcontracts, this would be at the discretion of the contracting officer and dependent on the contracting officer’s leverage and ability to negotiate terms with the prime contractor, if that contracting officer is even aware of the presence of subcontractors and the need for any contractual coverage.

Financing and delivery payments to subcontractors:

- Timing:
  - Prime: FAR 52.232-29(a) specifies that “[t]he Contractor may request, and the Government shall pay, a contract financing payment as specified elsewhere in this contract when: the payment requested is properly due in accordance with this contract; the supplies deliverable or services due under the contract will be delivered or performed in accordance with the contract; and there has been no impairment or diminution of the Government’s security under this contract”. Paragraph (f) of the clause says contractor financing payments “shall be provided no more frequently than monthly”.
  - FAR 32.007(a)(1) states that “Unless otherwise prescribed in agency policies and procedures or otherwise specified in paragraph (b) of this section, the due date for making contract financing payments by the designated payment office is the 30th day after the designated billing office receives a proper contract financing request”. DFARS 232.007(a) says “DoD policy is to make contract financing payments as quickly as possible. Generally, the contracting officer shall insert the standard due dates of 7 days for progress payments, and 14 days for performance-based payments and interim payments on cost-type contracts, in the appropriate paragraphs of the respective payment clauses. For interim payments on cost-reimbursement contracts for services, see 232.906(a)(i).” The DFARS citation does not refer to commercial contract financing.
  - Subcontractors and suppliers: Neither 52.232-29 nor the FAR 32.206(b) requirements for content of a commercial financing clause address subcontract financing or delivery payments. However, 52.232-40, Providing Accelerated Payments to Small Business Subcontractors, is prescribed for inclusion in all solicitations and contracts, including commercial contracts, and is required to be flowed down to all subcontracts with small business concerns, including for the acquisition of commercial products or commercial services.

- Amount:
  - Prime: FAR 32.206(c) says “Contracts may provide for commercial advance and commercial interim payments based upon a wide variety of bases, including (but not limited to) achievement or occurrence of specified events, the passage of time, or specified times prior to the delivery date(s). The basis for payment must be objectively
determinable. The clause written by the contracting officer shall specify, to the extent access is necessary, the information and/or facilities to which the Government shall have access for the purpose of verifying the contractor’s entitlement to payment of contract financing”. As would be expected for commercial acquisitions, the actual cost of performance is not suggested as a basis for establishing the financing payment amount.

- **Subcontractors and suppliers:** Neither 52.232-29 nor the FAR 32.206(b) requirements for content of a commercial financing clause address subcontract financing or delivery payments.

**Analysis:** The regulatory requirements pertaining to commercial contract financing payments are silent with respect to subcontract financing or delivery payments. This sets up a circumstance where the prime may be able to submit financing requests significantly in advance of the timing of its actual payment of subcontract financing and delivery amounts owed. As with the non-commercial contract financing arrangements, this may result in a positive cash flow (financing provided in excess of need or earlier than actually needed by the prime). Additionally, the financing and payment terms offered by the prime to its suppliers may be distinctly less favorable than the terms offered by the Government to the prime.

**Does the clause provide any subcontractor payment protections?** No. Neither 52.232-29 nor the regulatory commercial financing clause content identified in FAR 32.206(b) address the prime contractor’s obligations to timely pay its suppliers any financing or delivery payments owed. Instead, market pressures would be expected to ensure treatment of subcontractors consistent with the applicable marketplace. Unlike financing clauses applicable to non-commercial contracts, a contractor’s failure to pay the costs of contract performance in the ordinary course of business is not identified as a basis for reduction or suspension of commercial advance or interim payments.
**FAR 52.232-5, Payments under Fixed-Price Construction Contracts**

**Note:** The following discussion of 52.232-5, Payments under Fixed-Price Construction Contracts, will take into account both the clause itself and the content of its companion clause, 52.232-27, Prompt Payment for Construction Contracts. FAR 52.232-27 is prescribed for use in all solicitations and contracts for construction, thus it will be included in every contract which includes 52.232-5. Therefore, 52.232-5 and 52.232-27 must be read together.

**Types of acquisitions to which the clause applies:** Fixed-price construction contracts.

**Not applicable to** commercial contracts, contracts other than construction contracts, or construction contracts which are not fixed price.

**Does the Prompt Payment Act apply?**

- **Prime contractor:** Yes, as set forth in 52.232-27, Prompt Payment for Construction Contracts. The Prompt Payment obligation to pay interest on payments not made timely applies to invoice or delivery payments, but not to contract financing. The FAR 32.001 definition of contract financing payment says contract financing payments include “Progress payments based on a percentage or stage of completion (see 32.102(e)), except those made under the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts”. FAR 32.904(d)(1)(i) and 52.232-27 establish payment due dates for progress payments under construction contracts for purposes of prompt payment. Lastly, 31 U.S.C. 3903(a)(6) specifies that both progress payments and delivery payments made against construction contracts are eligible to receive prompt payment interest if not timely. See 52.232-27, Prompt Payment for Construction Contracts (follow the link to go to the discussion of 52.232-27 in this document).

- **Subcontractors and suppliers:** Yes. 52.232-27(c) requires the prime to include in each subcontract for property or services a payment clause that obligates the Contractor to pay the subcontractor for satisfactory performance under its subcontract not later than 7 days from receipt of payment out of such amounts as are paid to the prime contractor under the contract, as well as an interest penalty clause that obligates the prime to pay to the subcontractor an interest penalty for each payment not made in accordance with the payment clause.

**Is there a requirement to flow down any aspect of the clause to subcontractors?** FAR 52.232-27(c) includes a requirement for a subcontractor to flow down to its subcontractors both the prompt payment and interest penalty clauses, as well as a requirement for second-tier subcontractors to flow those clauses down to lower tier suppliers. This is consistent with 31 U.S.C.3905, paragraphs (b) and (c), which read as follows:

“(b) Each construction contract awarded by an agency shall include a clause that requires the prime contractor to include in each subcontract for property or services entered into by the prime contractor and a subcontractor (including a material supplier) for the purpose of performing such construction contract-
(1) a payment clause which obligates the prime contractor to pay the subcontractor for satisfactory performance under its subcontract within 7 days out of such amounts as are paid to the prime contractor by the agency under such contract; and

(2) an interest penalty clause which obligates the prime contractor to pay to the subcontractor an interest penalty on amounts due in the case of each payment not made in accordance with the payment clause included in the subcontract pursuant to paragraph (1) of this subsection-

(A) for the period beginning on the day after the required payment date and ending on the date on which payment of the amount due is made; and

(B) computed at the rate specified by section 3902(a) of this title.

(c) The construction contract awarded by the agency shall further require the prime contractor to include in each of its subcontracts (for the purpose of performance of such construction contract) a provision requiring the subcontractor to include a payment clause and an interest penalty clause conforming to the standards of subsection (b) of this section in each of its subcontracts and to require each of its subcontractors to include such clauses in their subcontracts with each lower-tier subcontractor or supplier”.

Financing and delivery payments to subcontractors:

- **Timing:**
  - **Prime:** Per 52.232-5(b), “[t]he Government shall make progress payments monthly as the work proceeds, or at more frequent intervals as determined by the Contracting Officer, on estimates of work accomplished which meets the standards of quality established under the contract, as approved by the Contracting Officer”.
    - FAR 52.232-27 identifies the following timelines for prompt payment under construction contracts, dependent upon the type of payment being requested:
      - For progress payments, within 14 days of receipt of the Contractor’s payment request, provided the designated billing office receives a proper payment request and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.
      - For retainage payments, as specified in the contract or, if not specified, within 30 days after approval by the Contracting Officer for release to the Contractor.
      - For final payments based on completion and acceptance of all work and presentation of release of all claims against the Government arising by virtue of the contract, and payments for partial deliveries that have been accepted by the Government (e.g., each separate building, public work, or other division of the contract for which the price is stated separately in the contract), within 30 days after the later of receipt of a proper invoice or acceptance of the work or services.
      - The clause establishes a Government obligation to pay interest if the invoices are not paid within the timeframes specified above based on type of invoice.
  - **Subcontractors and Suppliers:** 52.232-27(c) requires the prime to pay its subcontractors and suppliers for satisfactory performance within seven days of the
prime’s receipt of payment from the Government, and requires the prime to pay
interest on unpaid amounts from the day after the payment due date (the 7th day after
the prime’s receipt of payment from the Government) until payment is actually made.

• Amount:
  o **Prime**: Per FAR 52.232-5(b), the progress payments will be based “on estimates of work
accomplished which meets the standards of quality established under the contract, as
approved by the Contracting Officer”. Note that the amount of the progress payments
is not based directly on actual cost incurred. 52.232-5(b)(1) specifies that the
contractor’s request for progress payments must include:
    “(i) An itemization of the amounts requested, related to the various elements of work
required by the contract covered by the payment requested.
    (ii) A listing of the amount included for work performed by each subcontractor under
the contract.
    (iii) A listing of the total amount of each subcontract under the contract.
    (iv) A listing of the amounts previously paid to each such subcontractor under the
contract.”
  o **Subcontractors and suppliers**: 52.232-5(c)(2) requires that each progress payment
request be accompanied by a certificate, which attests in pertinent part that:
    “(2) All payments due to subcontractors and suppliers from previous payments received
under the contract have been made, and timely payments will be made from the
proceeds of the payment covered by this certification, in accordance with subcontract
agreements and the requirements of Chapter 39 of Title 31, United States Code; [and]
(3) This request for progress payments does not include any amounts which the prime
contractor intends to withhold or retain from a subcontractor or supplier in accordance
with the terms and conditions of the subcontract”. This certification language is
    ▪ The reference to 31 U.S.C. Chapter 39 appears to refer specifically to two
sections within 31 U.S.C. Chapter 39:
      • 31 U.S.C. 3903(a)(11), which requires the agency to accelerate
payments to the prime if the prime has one or more small business
subcontractors under the contract, and agrees to accelerate payments
to the SB subcontractor(s) to the maximum extent practicable (note
there is a goal of 15 days after receipt of a proper invoice), without any
further consideration from the subcontractor(s). (This is covered under
FAR 52.232-40 and DFARS 252.232-7017); and
      • 31 U.S.C. 3905(b) and (c), which establish a requirement for the prime
to flow down to first tier subcontractors the payment timing
expectations applicable to the prime, and requiring the first tier
subcontractors to flow down the requirement to lower tier
subcontractors at all levels. (This is covered under 52.232-27).

**Analysis**: The 52.232-5 requirements with respect to the prime contractor’s payments to its
subcontractors, as set forth in the progress payment request certification at paragraph (c)(2), in
combination with the requirements of 52.232-27, are more explicit with respect to timing of
subcontractor payments than the similar content included in the Progress Payments and Performance-
Based Payment clauses. FAR 52.232-5(c)(2) prescribes certification language affirming that subcontract payments will be made “in accordance with subcontract agreements”. This sounds very similar to the “unspecific” subcontract payment requirements found in the Progress Payments and Performance-Based Payments clauses. However, when 52.232-5 is read with 52.232-27, the prime contractor’s obligation with respect to timely payment of suppliers becomes very specific. (Subcontractors will be paid for satisfactory performance not later than 7 days from the prime’s receipt of payment from the Government.) Taken together, 52.232-5 and 52.232-27 are the only FAR/DFARS contract financing and payment clauses that identify specific requirements for timing of supplier payments, or establish that the prompt payment requirements (i.e., payment of interest when timely delivery or invoice payment is not made) flow down to all subcontract tiers.

The following table presents an example of the timing of a subcontract invoice submission under a construction contract, the prime’s submission of progress payment requests and a final payment request, payment from the Government, and the subsequent payment to the subcontractor.

Table VI:

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
<th>Column 4</th>
<th>Column 5</th>
<th>Column 6</th>
<th>Column 7</th>
<th>Column 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Subcontractor Submission of Invoice to Prime</td>
<td>Payment Terms Between Prime and Subcontractor</td>
<td>Date of Prime’s Submission of a Progress Payment Request</td>
<td>Likely Date of Prime Progress Payment Receipt</td>
<td>Date of Prime’s Submission of a Request for Final Payment</td>
<td>Likely Date of Final Payment Receipt</td>
<td>Subcontract Payment Due Date</td>
<td>Possible # of Days of Prime Float</td>
</tr>
<tr>
<td>15-Dec-21</td>
<td>7 days after prime payment from USG</td>
<td>22-Dec-21</td>
<td>6-Jan-22</td>
<td>13-Jan-22</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-Dec-21</td>
<td>7 days after prime payment from USG</td>
<td>31-Jan-22</td>
<td>15-Feb-22</td>
<td>22-Feb-22</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-Dec-21</td>
<td>7 days after prime payment from USG</td>
<td>15-Mar-22</td>
<td>30-Mar-22</td>
<td>6-Apr-22</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-Dec-21</td>
<td>7 days after prime payment from USG</td>
<td></td>
<td>25-May-22</td>
<td>24-Jun-22</td>
<td>1-Jul-22</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

- Column 2 demonstrates a unique aspect of construction contracts: 52.232-27, Prompt Payment for Construction Contracts, specifies at 52.232-27(c)(1) the requirement for the prime contractor under a construction contract to include in its subcontracts a payment clause that obligates the contractor to pay the subcontractor for satisfactory performance under its subcontract not later than 7 days from receipt of payment out of such amounts as are paid to the contractor under the contract. This constitutes a “pay when paid” arrangement. As noted above, 52.232-27(c)(2) requires the prime to pay interest on late subcontract payments, and 52.232-27(c)(3) requires flowdown of both requirements.
(payment of lower tier subcontracts within 7 days of receipt of payment, and interest on late payments) to all tiers of subcontractors.

- Column 3 sets forth three possible dates for the prime’s submission of a progress payment request (based on milestones or stages of completion). Dates of submission of progress payment requests under construction contracts are dependent on the specifics of each individual contract.

- Column 4 shows a progress payment receipt date of 15 days after submission of the request. (DFAS reports that, for the period from 1 Apr 2020 through 31 Jul 2022, it averaged 12.4 days from receipt of a progress payment request to issuance of the progress payment to the contractor.)

- Column 5 shows a date of prime request for final payment; Column 6 shows the likely payment date 30 days after the request. (DFAS reports that, for the period from 1 Apr 2020 through 31 Jul 2022, it averaged 12.4 days from receipt of a commercial invoice to issuance of the payment to the contractor.)

- Columns 7 and 8 show that the subcontractor payment date will be no more than 7 days after the prime’s receipt of payment from the Government.

As this table demonstrates, the subcontractor under a DoD construction contract can count on receiving payment within 7 days after the prime receives payment from the Government, but this means the timing of the subcontractor’s payment is dependent on the frequency and timing of the prime’s payment requests to the Government. Unlike under the Progress Payments clause, the contracting officer on a construction contract has the latitude to make progress payments more frequently than monthly, which may improve cash flow for both the prime and its subcontractors.

**Does the clause provide any subcontractor payment protections?** 52.232-5 provides some measure of protection via the certificate wording in paragraph (c)(2). This paragraph requires that subcontract amounts reflected in a previous prime progress payment request have been paid as of the date of the current progress payment request. However, companion clause 52.232-27 provides much more specific subcontractor payment protections, by including specific subcontract payment timeframes, imposing prompt payment interest penalties, and requiring flowdown to lower tier subcontractors.

**Certification requirement:** 52.232-5(c) prescribes a contractor certification that must accompany each progress payment request under a construction contract; if this certification does not accompany the progress payment request, it will not be paid. Paragraph (2) of the certificate wording prescribed at 52.232-5(c) states, “(2) All payments due to subcontractors and suppliers from previous payments received under the contract have been made, and timely payments will be made from the proceeds of the payment covered by this certification, in accordance with subcontract agreements and the requirements of Chapter 39 of Title 31, United States Code”. Note that unlike the certification statements under 52.232-16, Progress Payments, and 52.232-32, Performance-Based Payments, which both assert that all subcontract amounts owed “have been paid, or will be paid, currently, when due in the ordinary course of business”, this certificate goes further, by confirming that “All payments due to subcontractors and suppliers from previous payments received under the contract have been made”.

That statement, combined with the 52.232-27(c) requirement for the prime to “pay the subcontractor for satisfactory performance under its subcontract not later than 7 days from receipt of payment” from the Government, provide significant payment assurances to subcontractors under federal construction contracts. This certification requirement is found in statute at 31 U.S.C. 3903(b)(1)(B).
**FAR 52.216-7, Allowable Cost and Payment**

**Types of acquisitions to which the clause applies:** Non-commercial cost-reimbursement or time-and-materials contracts. If the contract is a time-and-materials contract, the clause at 52.216-7 applies in conjunction with the clause at 52.232-7, but 52.216-7 only applies to the portion of the contract that provides for reimbursement of materials (as defined in the clause at 52.232-7) at actual cost. It should be noted that this clause covers both contract financing and delivery payments for cost reimbursable contracts or cost reimbursable portions of contracts. This is reflective of both the standards for satisfactory performance under cost-reimbursement contracts and the manner in which the amount to be paid under such contracts is determined. Cost type contracts generally require the contractor’s “best efforts”, whether for a fixed term (term form) or for a defined task (completion form). Under fixed price contracts, payment is tied to Government receipt and acceptance of deliverables (goods or services) specified in the contract. Under a firm, fixed price (FFP) contract, upon satisfactory performance, the contractor will be paid the fixed price(s) specified in the contract. By contrast, under cost type contracts, contractors are paid based on the cost of their effort applied to the contract’s work scope. Under this model, the incurred costs which would form the basis for contract financing amounts are the same costs which (with addition of fixed, incentive, or award fee) will establish the contract price. Therefore, there is no need to segregate contract financing from contract delivery payments under this construct.

**Not applicable to** fixed-price contracts, labor hour contracts, commercial contracts.

**Does the Prompt Payment Act apply?**

- **Primes:** The answer depends on whether the contract includes 52.232-25, Alt I. Per 52.216-7(a)(2), “Contract financing payments are not subject to the interest penalty provisions of the Prompt Payment Act. Interim payments made prior to the final payment under the contract are contract financing payments, except interim payments if this contract contains Alternate I to the clause at 52.232-25”. The 52.232-25, Alt 1 exception establishes that prompt payment is applicable to interim payments under cost reimbursement contracts for services. That is, if the Government is accepting services in conjunction with the interim payments, then prompt payment requirements apply.
- **Subcontractors and suppliers:** No.

**Is there a requirement to flow down any aspect of the clause to subcontractors?** No.

**Financing and delivery payments to subcontractors:**

- **Timing:**
  - **Prime:** Per 52.216-7(a), “The Government will make payments to the Contractor when requested as work progresses, but (except for small business concerns) not more often than once every 2 weeks”. Paragraph (c) of the clause authorizes “more frequent payments than every 2 weeks” for small business concerns.
  - **FAR 32.007(a)(1)** states that “Unless otherwise prescribed in agency policies and procedures or otherwise specified in paragraph (b) of this section, the due date for making contract financing payments by the designated payment office is the 30th day after the designated billing office receives a proper contract financing request”.

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However, per DFARS 232.007(a), “DoD policy is to make contract financing payments as quickly as possible. Generally, the contracting officer shall insert the standard due dates of 7 days for progress payments, and 14 days for performance-based payments and interim payments on cost-type contracts, in the appropriate paragraphs of the respective payment clauses. For interim payments on cost-reimbursement contracts for services, see 232.906(a)(i)”.

(DFAS reports that, for the period from 1 Apr 2020 through 31 Jul 2022, it averaged 12.4 days from receipt of a cost voucher to issuance of the payment to the contractor.)

DFARS 232.906(a) says, “(i) Generally, the contracting officer shall insert the standard due date of 14 days for interim payments on cost-reimbursement contracts for services in the clause at FAR 52.232-25, Prompt Payment, when using the clause with its Alternate I. (ii) The restrictions of FAR 32.906 prohibiting early payment do not apply to invoice payments made to small business concerns. However, contractors shall not be entitled to interest penalties if the Government fails to make early payment”.

- Subcontractors and suppliers: The clause (at 52.216-7(b)(1)) allows the prime contractor to include in its contract financing requests:
  
  “(i) Those recorded costs that, at the time of the request for reimbursement, the Contractor has paid by cash, check, or other forms of actual payment for items or services purchased directly for the contract;
  
  (ii) When the Contractor is not delinquent in paying costs of contract performance in the ordinary course of business, costs incurred, but not necessarily paid, for
    
    (A) Supplies and services purchased directly for the contract and associated financing payments to subcontractors, provided payments determined due will be made—
      
      (1) In accordance with the terms and conditions of a subcontract or invoice; and
    
    (2) Ordinarily within 30 days of the submission of the Contractor’s payment request to the Government... and
  
  (iii) The amount of financing payments that have been paid by cash, check, or other forms of payment to subcontractors”. (Emphasis added.)

That is, the prime may submit a financing request for costs actually paid in the form of either financing or delivery payments for items or services or (if the prime is not delinquent in paying the costs of performance) for subcontract costs (delivery payments) incurred but not yet paid, as long as the anticipated payments will be made in accordance with subcontract terms and “ordinarily” within 30 days of the prime’s payment request to the Government”. Note that this language mirrors the terminology used in 52.232-16, Progress Payments.

- Amount:
  
  - Prime: Per 52.216-7(a), invoice or contract financing payments will be made “in amounts determined to be allowable by the Contracting Officer in accordance with Federal Acquisition Regulation (FAR) subpart 31.2 in effect on the date of this contract and the terms of this contract”. In addition, FAR 32.110 sets forth the criteria for contracting officer acceptance of financing payments to subcontractors under cost
reimbursement prime contracts. In general, the subcontract financing payment terms must be consistent with FAR Part 32.

- **Subcontractors and suppliers**: The clause does not address the amounts of payments to subcontractors and suppliers, except to say that subcontract amounts included in the prime’s progress payment requests must be “in accordance with the terms and conditions of a subcontract or invoice” (52.216-7(b)(1)(ii)(A)(1)).

**Analysis**: As has been seen with other FAR financing clauses, 52.216-7 allows the prime contractor to submit invoices or cost vouchers which include subcontract financing or delivery payment amounts which have not yet been paid by the prime to its suppliers. While 52.216-7(b)(1) sets forth an expectation that as-yet unpaid subcontract amounts will be paid “[o]rdinarily within 30 days of the submission of the Contractor’s payment request to the Government”, “ordinarily” is not defined, and the clause includes no enforcement mechanism to ensure timely subcontract payment.

The current version of this clause incorporates the same “incurred cost rule” as 52.232-16, Progress Payments. The clause was revised to reflect the incurred cost rule via the final rule implementing FAR Case 2000-007, issued on 22 Nov 2002, and effective on 23 Dec 2002. That final rule noted that the FAR Case 98-400 inadvertently failed to replace the “paid cost rule” with the “incurred cost rule” throughout the FAR. The Federal Register posting noted that the intent of FAR Case 2000-007 was to correct this oversight and to “[Establish], for both cost-reimbursement and fixed-price contracts, a standard time period of 30 days that contractors have to pay their subcontractors after the contractors have billed the Government for incurred subcontractor costs. As indicated in the previous paragraph, the final rule under FAR case 1998-400 amended the FAR to permit a large business to include, in its billings, certain costs that it had incurred but not actually paid, if the following conditions were met: The unpaid amounts were paid (1) in accordance with the terms and conditions of a subcontract or invoice; and (2) ordinarily prior to the submission of the contractor's next payment request to the Government. The second condition permitted a large business to submit cost vouchers on a cost-reimbursement contract every 14 days, but the large business could bill no more frequently than every 30 days when billing progress payments on a fixed-price contract. Therefore, contractors may need to maintain several systems and procedures to accommodate the timing differences for payments to subcontractors, depending on whether the costs are billed on a cost-reimbursement or fixed-price type prime contract. To eliminate the timing differences, the proposed FAR rule revised the second condition to establish a single standard time period of 30 days.”

The drafters of the final rule went on to note that “As amended by this final rule, the contractor can bill the Government when contractor payment for the amount determined due the supplier or subcontractor is scheduled to be made within 30 days of the submission of the contractor's current payment request to the Government. The Councils believe that a 30-day float period for the prime contractor represents a reasonable time period and do not believe it would be in the best interests of the Government or subcontractors to effectively encourage float periods in excess of 30 days.”

Despite the drafters’ clear intent, as expressed in the final rule, for prime contractors to pay incurred subcontract costs claimed on a request for payment from the Government within 30 days of the prime’s submission of the payment request, it is not clear that the current clause language does, in fact, require this of prime contractors.
**Does the clause provide any subcontractor payment protections?** Limited. While this clause includes a reference to the circumstance “when the Contractor is not delinquent in paying costs of contract performance in the ordinary course of business” (52.216-7(b)(1)(ii)), the only consequence spelled out by the clause is that financing payments will no longer recognize costs incurred but not yet paid. While this serves to protect the Government, it does not assist the subcontractors whose financing and delivery payment claims have gone unpaid. Note that the term, “in the ordinary course of business”, also used in both the Progress Payments clause and the Performance-Based Payments clause, is undefined in the regulations, so any protection the clauses may afford to subcontractors is to some extent mitigated by the ambiguity of the clause requirement. Furthermore, the prime could establish onerous payment terms with the subcontractor and still fulfill this requirement while the subcontractor struggles to pay its bills.
FAR 52.232-7, Payments under Time-and-Materials and Labor-Hour Contracts

Types of acquisitions to which the clause applies: Non-commercial, T&M or LH contracts

Not applicable to contract types other than T&M or LH, or commercial contracts. (The payment terms for commercial T&M/LH contracts are addressed in 52.212-4, Alt I.)

Does the Prompt Payment Act apply?

- Primes: It depends. The prompt payment requirements apply to the final payment under the contract. Additionally, prompt payment applies to interim payments on contracts for services, when the services are accepted in conjunction with the interim payment. (Most T&M and LH contracts are considered service contracts.) Other interim payments are deemed contract financing, and thus are not subject to prompt payment requirements. (52.232-7(h))
- Subcontractors and suppliers: No.

Is there a requirement to flow down any aspect of the clause to subcontractors? No.

Financing and delivery payments to subcontractors:

- Timing:
  - Primes: Per 52.232-7(a)(5), “Vouchers may be submitted not more than once every two weeks, to the Contracting Officer or authorized representative. A small business concern may receive more frequent payments than every two weeks”. Paragraph (a)(6) of the clause adds, “Promptly after receipt of each substantiated voucher, the Government shall, except as otherwise provided in this contract, and subject to the terms of paragraph (e) of this clause, pay the voucher as approved by the Contracting Officer or authorized representative”. (Paragraph (e) refers to the ceiling price on the contract.)
  - Subcontractors and suppliers: For subcontracted labor, the prime’s voucher may only include subcontractor hours which have already been paid (52.232-7(a)(5)). For subcontracted material, on the other hand, paragraph (b)(3) says “Except as provided for in paragraph (b)(2) of this clause, the Government will reimburse the Contractor for allowable cost of materials provided the Contractor-
    - Has made payments for materials in accordance with the terms and conditions of the agreement or invoice; or
    - Ordinarily makes these payments within 30 days of the submission of the Contractor’s payment request to the Government and such payment is in accordance with the terms and conditions of the agreement or invoice. (Emphasis added.) Material costs under a T&M contract will be recognized in accordance with 52.216-7. (52.232-7(b)(4).) Note that under most T&M contracts, material costs are incidental.

- Amount:
  - Primes: Whether deemed contract financing or delivery payments, and whether prime or subcontracted labor, 52.232-7 recognizes labor costs as incurred hours times the fully burdened hourly rates in the contract.
  - Subcontractors and suppliers: The amount actually paid to the subcontractors or suppliers is not addressed in the clause.
Analysis: 52.232-7 applies different standards to subcontracted labor and subcontracts for material. The prime must include evidence that the subcontractor has already been paid in order to include the subcontract labor costs in its voucher, whereas for purposes of subcontracted material, the criteria for including subcontract costs in the voucher are that the contractor either has paid for the subcontract or “ordinarily makes these payments within 30 days of the submission of the Contractor’s payment request to the Government and such payment is in accordance with the terms and conditions of the agreement or invoice”. (Paragraph (b)(3).) While the subcontracted material costs are typically incidental under a T&M contract, this regulatory requirement allows for a significant time differential between when the prime claims and is paid for subcontracted material costs, and the point of time when the subcontractor is actually paid. The term “ordinarily” is not defined, and introduces ambiguity.

Does the clause provide any subcontractor payment protections? Yes, for subcontracted labor: the prime’s voucher must include evidence that subcontract labor has been paid in order to include it in a voucher. No, for subcontracted material: that component of total cost is recognized as a valid prime contractor cost once it has been incurred, whether or not it has yet been paid. The clause includes no enforcement mechanism to ensure suppliers of subcontracted material are paid timely, or at all.
FAR 52.232-25, Prompt Payment

Types of acquisitions to which the clause applies: All non-commercial contracts, except for those which include 52.232-26, Prompt Payment for Fixed-Price Architect-Engineer Contracts, or 52.232-27, Prompt Payment for Construction Contracts.

Not applicable to contracts which include 52.212-4, Contract Terms and Conditions-Commercial Products and Commercial Services, or 52.232-26 (fixed-price A-E contracts) or 52.232-27 (construction contracts). Each of these three clauses applies prompt payment requirements specific to the type of contract to which the clause applies. Neither 52.212-4 nor 52.232-26 address timing of subcontract payments or require flowdown, but 52.232-27, discussed below, does both.

Is there a requirement to flow down any aspect of the clause to subcontractors? No.

Analysis: Under the Prompt Payment Act, the Government is required to pay interest for not paying its bills (delivery payments, based on a proper invoice for accepted goods or services) within 30 days. This provides protections to prime contractors, but no such assurances exist at the supplier level and, in fact, the circumstances for suppliers can be quite the opposite. Prime contractors may use their leverage to establish payment terms with their suppliers which are much less favorable than the terms extended by the Government to the prime.
FAR 52.232-26, Prompt Payment for Fixed-Price Architect-Engineer Contracts

**Types of acquisitions to which the clause applies:** Fixed-price architect-engineer (A-E) contracts.

**Not applicable to** contracts other than A-E contracts.

**Is there a requirement to flow down any aspect of the clause to subcontractors?** No

**Analysis:** This clause establishes a requirement that invoice payments will be made within 30 days of the later of receipt of a proper invoice or acceptance of the work or services; interest will be paid if the 30-day timeline is not met. It specifies that the due date for progress payments is 30 days after Government approval of Contractor estimates of work or services accomplished. The clause also establishes criteria for constructive acceptance or approval. Unlike under 52.232-25, Prompt Payment, progress payment requests subject to this clause incur interest if not paid within 30 days after Government approval of Contractor estimates of work or services covered by the payment request. This clause makes no reference to subcontract financing or delivery payments.
FAR 52.232-27, Prompt Payment for Construction Contracts

Types of acquisitions to which the clause applies: Construction contracts.

Not applicable to contracts other than construction contracts.

Is there a requirement to flow down any aspect of the clause to subcontractors? Yes. In accordance with 31 U.S.C.3905, paragraph (c) of this clause requires subcontractor flowdown as follows:

“(c) Subcontract clause requirements. The Contractor shall include in each subcontract for property or services (including a material supplier) for the purpose of performing this contract the following:

(1) Prompt payment for subcontractors. A payment clause that obligates the Contractor to pay the subcontractor for satisfactory performance under its subcontract not later than 7 days from receipt of payment out of such amounts as are paid to the Contractor under this contract.

(2) Interest for subcontractors. An interest penalty clause that obligates the Contractor to pay to the subcontractor an interest penalty for each payment not made in accordance with the payment clause-

(i) For the period beginning on the day after the required payment date and ending on the date on which payment of the amount due is made; and

(ii)Computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under 41 U.S.C. 7109 in effect at the time the Contractor accrues the obligation to pay an interest penalty.

(3) Subcontractor clause flowdown. A clause requiring each subcontractor to-

(i) Include a payment clause and an interest penalty clause conforming to the standards set forth in paragraphs (c)(1) and (c)(2) of this clause in each of its subcontracts; and

(ii) Require each of its subcontractors to include such clauses in their subcontracts with each lower-tier subcontractor or supplier.”

Analysis: Taken together, 52.232-5 and 52.232-27 are the only FAR/DFARS contract financing or payment clauses that identify specific requirements for timing of supplier payments, or establish that the prompt payment requirements (i.e., payment of interest when timely delivery or invoice payment is not made) are applicable at the subcontract level. 52.232-27 requires flowdown of requirements pertaining to timing of subcontract payments and applicability of prompt payment requirements (to pay interest for non-timely payments to suppliers) to all tiers of subcontractors.

Note that prompt payment interest paid by the prime or lower tier subcontractors may not be charged against the prime contract (if cost reimbursable). (52.232-27(k).)
FAR 52.232-40, Providing Accelerated Payments to Small Business Subcontractors:

**Types of acquisitions to which the clause applies:** This clause, which implements [10 U.S.C. 3801(b)](https://www.law.cornell.edu/uscode/text/10/chapter-45/part-600/subpart-230), is prescribed for use in all solicitations and contracts (including commercial acquisitions). It requires prime contractors which receive accelerated payments from the Government to make accelerated payments to their small business subcontractors, “to the maximum extent practicable and prior to when such payment is otherwise required under the applicable contract or subcontract, after receipt of a proper invoice and all other required documentation from the small business subcontractor”.

**Does the Prompt Payment Act apply?**

- **Primes:** No. Paragraph (b) of the clause specifically states, “The acceleration of payments under this clause does not provide any new rights under the Prompt Payment Act.”
- **Subcontractors or suppliers:** No.

**Is there a requirement to flow down any aspect of the clause to subcontractors?** Yes. Paragraph (c) of the clause requires flowdown of the substance of the clause to “all subcontracts with small business concerns, including subcontracts with small business concerns for the acquisition of commercial products or commercial services”.

**Analysis:** This clause represents a relatively new addition to the FAR, having first been incorporated on 26 Dec 2013 via FAR Case 2012-031, which was issued in response to OMB Memorandum M-12-16. That OPM memo established the Executive Branch policy of accelerating payments to all prime contractors “to ensure that prime contractors are able to pay their small business subcontractors in a prompt fashion”. OPM M-12-16 also emphasized that the policy of accelerating payments to prime contractors did not affect the prime contractors’ entitlement under the Prompt Payment Act. As the memo explained, “a Federal agency is generally required to make payments within 30 days from when the agency receives proper documentation. If an agency does not pay a vendor the amount due by the "required payment date" prescribed by the PPA, the agency must pay the vendor a late-payment interest penalty. ... This memorandum and its implementation do not modify the "required payment date" and do not otherwise modify the operation of the interest penalty.”

Although the clause requires prime contractors, upon receipt of accelerated payments from the Government, to accelerate payments to their SB subcontractors, the clause does not define an accelerated payment from either the prime or the subcontractor perspective. This lack of specificity may have consequences in terms of the effectiveness of the clause in implementing the OMB policy.

**Accelerated payment to the prime:** The clause requirement to attempt acceleration of payments to SB subcontractors is predicated upon the prime’s receipt of accelerated payment from the Government. If a prime is either unaware of receipt of an accelerated payment or uncertain as to whether it has received an accelerated payment, it is unlikely the prime will accelerate payments to its SB subcontractors as a result of this clause. If the prime does not initiate accelerated payments to its first-tier SB subcontractors, no SB subcontractors at any level under that contract will receive the benefit intended by this clause. The clause itself provides no specifics about what constitutes an accelerated payment to the prime, and the regulations provide only limited insights, as follows:

DFARS 232.009-1, addressing only SB contractors, says, “Section 852 of the National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) requires DoD to provide accelerated payments
to small business contractors and subcontractors, to the fullest extent permitted by law, with a goal of 15 days”.

DFARS 232.903, also addressing only SB contractors, reiterates that “In accordance with section 852 of the National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232), DoD shall assist small business concerns by providing payment as quickly as possible, to the fullest extent permitted by law, with a goal of 15 days after receipt of proper invoices and all required documentation, including acceptance, and before normal payment due dates established in the contract (see 232.906(a)).” From this citation, we can perhaps deduce that an accelerated payment occurs “before normal due dates established in the contract”. For example, 52.232-25, Prompt Payment, generally establishes a 30-day timeline after receipt of a proper invoice or Government acceptance of supplies or services, whichever is later. Would this mean, then, that a payment made to a prime 29 days after the later of receipt of an invoice or Government acceptance is an accelerated payment?

DFARS 232.906 does not directly address accelerated payments, but offers:

“(a)(i) Generally, the contracting officer shall insert the standard due date of 14 days for interim payments on cost-reimbursement contracts for services in the clause at FAR 52.232-25, Prompt Payment, when using the clause with its Alternate I.” Would this mean that an interim payment on a cost type contract for services must be made earlier than 14 days after the later of the two triggering events in order to be deemed “accelerated”?

The question of what constitutes an accelerated payment at the prime level becomes even more complicated if “payment” for purposes of this clause encompasses both contract financing payments and delivery payments. For example, while FAR 32.007 specifies that timely financing payments are made within 30 days of receipt of a proper contract financing request, DFARS 232.007 specifies shorter timeframes of 7 days for progress payments and 14 days for performance-based payments. DFARS 232.007(a) instructs contracting officers to “insert the standard due dates of 7 days for progress payments, and 14 days for performance-based payments and interim payments on cost-type contracts, in the appropriate paragraphs of the respective payment clauses”. Similarly, DFARS 232.009-1 says “Section 852 of the National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) requires DoD to provide accelerated payments to small business contractors and subcontractors, to the fullest extent permitted by law, with a goal of 15 days”. This begs the question, should payments within these shorter timeframes be considered accelerated for purposes of 52.232-40? For example, for the purposes of 52.232-40, should small business primes consider a payment on day 15 a timely payment, or an accelerated payment? If contract financing payments are covered by this clause, should a progress payment made 7 days after receipt of the progress payment request be considered accelerated, or timely?

**Accelerated payment to the subcontractor:** 52.232-40(a) says “the Contractor shall make accelerated payments to its small business subcontractors under this contract, to the maximum extent practicable and prior to when such payment is otherwise required under the applicable contract or subcontract”. The caveat that an accelerated payment is “prior to when such payment is otherwise required under the applicable contract or subcontract” seems to mean that a payment made one day before the due date required by the subcontract qualifies as accelerated. DFARS 252.232-7017, discussed below, offers this definition: “‘Accelerated payment,’ as used in this clause, means a payment made to a small business subcontractor as quickly as possible, with a goal of 15 days or less after receipt of payment from the Government or receipt of a proper invoice from the subcontractor, whichever is later.” Note that this definition presumes that the subcontract payment due date agreed to between the prime and the subcontractor would be later than 15 days after the date the prime receives payment from the Government. In many cases, especially if “payment” in the context of this clause refers exclusively to
delivery payments (see discussion on this point, below), this may not be a valid presumption. The general expectation would be that subcontracts supporting a prime contract would need to be completed before the prime contract could be completed. This, in turn, implies that either the subcontractors have payment terms that may be significantly longer than those between the prime and the Government, or the prime may have (should have) already paid its subcontractors by the time the prime receives payment from the Government. In the latter case, there may be no possibility of accelerating the subcontract payment at the point in time when the prime receives payment from the Government, thus reducing the potential benefit of this clause to SB subcontractors.

The following two scenarios demonstrate how the prime contract’s delivery and payment schedule influence the extent to which 52.232-40 is likely to produce a benefit to 1st-tier small business subcontractors. Under the first scenario, the prime contract is an acquisition of a product; under the second, the Government is buying a severable service.

Scenario 1: The prime contract is acquiring a product. There is a single deliverable, which is delivered at the end of the contract period of performance.

The large business prime contract is awarded 1 Oct 2022, with a 12-month period of performance, and a delivery date of 30 Sep 2023. The prime submits its invoice to the Government on 1 Oct 2023, and receives payment on 16 Oct 2023. This constitutes a 16-day acceleration of the invoice payment, which was due 30 days after the later of receipt of a proper invoice or acceptance of the goods or services.

The prime awards five subcontracts to small business subcontractors in support of this contract. The specifics of the five subcontracts are as follows:

Subcontract A: awarded 7 Oct 2022. Delivery is due 15 Mar 2023, with payment terms of net 45 days. Subcontractor A invoices on 18 Mar 2023. Per the subcontract payment terms, the delivery payment from the prime is due on 2 May 2023. The prime pays the invoice on the due date. This
Subcontract has been paid before the prime makes a delivery to the Government or receives a payment. Thus, there was no possibility payment of this subcontract could have been accelerated under 52.232-40.

Subcontract B: awarded 15 Nov 2022. Delivery is due 1 Jul 2023, with payment terms of net 45 days. Subcontractor B invoices on 5 Jul 2023. Per the subcontract payment terms, the delivery payment from the prime is due on 19 Aug 2023. The prime actually pays Subcontractor B on 10 Sep 2023, 22 days late. This subcontract has been paid before the prime makes a delivery to the Government or receives a payment. Thus, there was no possibility payment of this subcontract could have been accelerated under 52.232-40.

Subcontract C: awarded 18 Oct 2022. Delivery is due 16 Sep 2023, with payment terms of net 45 days. Subcontractor C invoices on 16 Sep 2023. Per the subcontract payment terms, the delivery payment from the prime is due on 31 Oct 2023. The prime pays the invoice on 30 Oct 2023, which is 15 days after the prime’s receipt of payment from the Government, and accelerated by one day as compared to the subcontract payment terms.

Subcontract D: awarded 10 Oct 2022. Delivery is due 20 May 2023, with payment terms of net 45 days. Subcontractor D invoices on 1 Jul 2023. Per the subcontract payment terms, the delivery payment from the prime is due on 15 Aug 2023. The prime actually pays Subcontractor D on 5 Sep 2023, 21 days late. Even though this subcontract was paid late, it was paid before the prime makes a delivery to the Government or receives a payment. Thus, there was no possibility payment of this subcontract could have been accelerated under 52.232-40.

Subcontract E: awarded 17 Jul 2023. Delivery is due 25 Sep 2023, with payment terms of net 45 days. Subcontractor E invoices on 25 Sep 2023. Per the subcontract payment terms, the delivery payment from the prime is due on 9 Nov 2023. The prime pays the invoice on 31 Oct 2023, which constitutes a 9-day acceleration.

Scenario 2: The prime contract is acquiring a severable service. Under the terms of the prime contract, the contractor is authorized to invoice monthly.
As under the first scenario, the large business prime contract is awarded 1 Oct 2022, with a 12-month period of performance. Unlike under Scenario 1, in this case, because the contract is acquiring a severable service, the contractor is allowed to invoice monthly. The prime submits an invoice on the last day of each month. The Government makes payment 15 days after receiving each invoice. This constitutes a 15-day acceleration of each invoice payment, which is due 30 days after the later of receipt of a proper invoice or acceptance of the services.

The prime awards three subcontracts to small business subcontractors in support of this contract. The specifics of the three subcontracts are as follows:

Subcontract A: awarded 4 Oct 2022. The subcontract is for labor to augment the prime’s own workforce on the service contract. This subcontract runs through 30 September 2023. The subcontract terms authorize Subcontractor A to invoice monthly, with payment terms of net 45 days.

Subcontractor A submits its first monthly invoice on 30 Oct 2022. Per the subcontract payment terms, the delivery payment from the prime is due on 14 Dec 2022. The prime pays the first monthly invoice on the due date. Unlike under Scenario 1, in this case the prime has received an accelerated payment of the first monthly invoice, 15 days after receipt of Subcontractor A’s invoice, and with 30 days to go before the due date, per the subcontract terms. This pattern continues for the first five months of performance. Beginning with the 31 Mar 2023 subcontract invoice, though, the prime begins to pay the monthly Subcontractor A invoices in 30 days, for a 15-day acceleration. Subcontractor A submits its final invoice on 30 Sep 2023, and the prime pays this last invoice in 25 days, for an acceleration of 20 days. Over the course of the year of performance, Subcontractor A received five on-time payments, 45 days after invoice submission, six monthly payments accelerated by 15 days, and one payment accelerated by 20 days. Its shortest number of days to pay, for the last monthly invoice, was 25 days. By contrast, every one of the prime’s monthly invoices was paid in 15 days.
Subcontract B: awarded 15 Oct 2022. This subcontract is also for labor to augment the prime’s own workforce on the service contract. This subcontract runs through 31 May 2023. The subcontract terms authorize Subcontractor B to invoice monthly, with payment terms of net 45 days.

Subcontract B submits its first invoice, covering its first month and a half of performance, on 30 Nov 2022. Per the subcontract payment terms, the payment from the prime is due on 14 Jan 2023. Although the prime has already received two accelerated payments from the Government as of a month before Subcontractor B’s first payment due date, the prime actually pays Subcontractor B on 25 Jan 2023, 11 days late. For the remaining five monthly invoices under this subcontract, the prime makes payment in 35 days, for an acceleration of ten days each month. Over the course of the 6.5 months of performance, Subcontractor B received one payment which was eleven days late, and five payments which were made 35 days after invoice submission (accelerated by ten days each). By contrast, every one of the prime’s monthly invoices was paid in 15 days.

Subcontract C: awarded 12 Dec 2022. This contract is for a non-severable service (a study), so Subcontractor C must wait until performance is complete to bill the prime. The period of performance for this effort ends on 31 Jul 2023. The subcontract payment terms are net 45 days.

Subcontract C completes performance on 31 Jul 2023, but does not submit its invoice until 27 Aug 2023. Per the subcontract payment terms, the delivery payment from the prime would be due on 11 Oct 2023. At the point when the prime receives Subcontractor C’s invoice, it has received ten accelerated payments from the Government. The prime pays the invoice on 3 Oct 2023, which is 37 days after the prime’s receipt of the Subcontractor C invoice, and accelerated by eight days as compared to the subcontract payment terms.

Each of the subcontractors under this scenario received some degree of accelerated payments, but in every case the actual days to payment experienced by the subcontractor was significantly longer than the time the Government took to pay the prime’s invoices.

While the contractor’s duty under this clause is triggered by an accelerated payment from the Government, it’s not clear how the prime is notified that a payment it receives should be considered “accelerated”. In the absence of a specific Government notification that a payment is deemed accelerated, do we expect the prime to consider any payment made in less than 30 days to be accelerated? If so, how has this been communicated to the prime? It does not appear that the Government overtly claims that a payment is accelerated when making the payment to the prime. Rather, the presumption appears to be that the prime will be aware that a given payment is “accelerated”. This could be a reasonable presumption if a prime has only one or a few active federal contracts, each of which requires few invoice submissions. But consider the challenge this may pose in the context of a large dollar, complex, multiple-year contract with many CLINs and many deliverables under each CLIN. To the extent that the prime has multiple such complex contracts, the challenge is compounded. Add to this that most federal contract payments are made by electronic funds transfer. Are these barriers to a prime contractor being aware that a specific payment has been accelerated?

Since the prime’s obligation under the clause to attempt acceleration of payments to its SB subcontractors is predicated on the prime’s receipt of an accelerated payment from the Government, it is important to understand how the prime becomes aware that the triggering event of an accelerated Government payment has occurred. It appears there is no mechanism for putting the prime contractor on notice that the Government considers a payment to be accelerated. The ambiguity about what constitutes an accelerated payment to the prime, combined with the Government’s apparent failure to overtly identify accelerated payments made to the prime, may serve to diminish the extent to which the
prime even recognizes an obligation to pass on accelerated payments to its small business subcontractors. For flowdown purposes, there is no clause requirement for a prime or higher-tier subcontractor to specify that a payment to the subcontractor or lower-tier vendor is accelerated, so it seems likely that the potential benefit of requiring accelerated payments would increasingly diminish with each successive tier.

Another as-yet unanswered question about implementation of this clause pertains to prime contracts with multiple, identical deliverables which are authorized to be invoiced separately. A subcontract in this context likely pertains to all the identical deliverables, and may be represented by a single subcontract invoice to the prime. If one prime invoice is paid on an accelerated basis, but another is not, what implications does this have for the prime’s obligation to accelerate the payment of the single subcontract invoice which supported both of the prime invoices?

Definition of “payment” for purposes of this clause: The clause does not explicitly state whether the acceleration requirement applies only to delivery payments, or to both financing and delivery payments, at either the prime or subcontract level. However, a review of the OPM memos and FAR/DFARS cases related to acceleration of payments to SB subcontractors showed that the documents consistently referred to a goal of making payment “within 15 days of receiving a proper invoice”, which implies that “payments” for purposes of this clause are delivery payments only. If the clause is interpreted to apply only to delivery payments (a reasonable interpretation based on the plain language of the clause), the potential benefit to small business subcontractors may be significantly reduced. If the prime or higher tier subcontractor is receiving contract financing, they may receive many financing payments throughout performance, each of which is likely supported to some extent by subcontract performance (and associated subcontract invoices), while by comparison the number of delivery payments is likely smaller, and more closely grouped at the end of prime contract performance. Applying this requirement to both prime financing and delivery payments would more significantly improve cash flow for small business subcontractors.

Acceleration and clause flowdown limited to SB subcontractors: While it appears the intent of this clause is to benefit small business subcontractors at all tiers, the construction of the clause (specifically the paragraph (c) flowdown requirement) may pose an (unintended) impediment to achievement of that intent. That clause paragraph directs the prime contractor to:

“(c) Include the substance of this clause, including this paragraph (c), in all subcontracts with small business concerns, including subcontracts with small business concerns for the acquisition of commercial products or commercial services.”

Note that there is no requirement for the prime to accelerate payments to large business subcontractors, or to flow the clause down to LB subcontractors. If all subcontractors at all tiers are SBs, the benefit conferred by this clause may flow through to the bottom of the supply chain for the contract. However, if a first tier subcontractor is a large business, then no lower tier SB subcontractors under that LB will receive the benefit. Additionally, existence of a large business at any point in the supply chain prevents the flowdown to lower tier SB suppliers to that LB. For lower-tier small business subcontractors, whether or not they can benefit from the Government policy is random, depending on whether there was a large business supplier at any point in the tiers between the SB supplier and the prime. This apparent arbitrary application of the flowdown seems to be an unintended consequence of the implementation. In addition, this may confer an unintended benefit on the prime contractor receiving the accelerated payments. The accelerated payments received by the prime do not reflect SB subcontract costs only. If the prime receives accelerated payments in total, but is only expected to
accelerate payments to its SB subcontractors, the prime has the benefit of enhanced cash flow or “float” with respect to its “unaccelerated” payments to LB subcontractors. It may be worth considering whether the accelerated payments should be flowed down to all subcontractors in order to improve the fiscal health of the DoD subcontract community as a whole. In fact, OPM memo M-12-16, issued on 11 Jul 2012, raised this question, saying, “OMB is encouraging the FAR Council to consider as an example the provision in the PPA that, for the purposes of construction contracts awarded by an agency, flows down an accelerated payment schedule to subcontractors for satisfactory contract performance”. (The clause in question is 52.232-27.) The question was again raised in the proposed rule for FAR Case 2020-0007, as follows:

“To further improve cash flow and access to the Federal marketplace, DoD, GSA, and NASA are considering additional regulatory actions to further broaden the reach of accelerated payments to small business subcontractors and welcome public comment on how this broadening might best be accomplished. This proposed rule flows down the requirement for accelerated payments from the prime contractor to small business subcontractors; the accelerated payment requirement does not flow down to other than small businesses, i.e., large business subcontractors. As drafted, large business subcontractors in the supply chain are not required to receive accelerated payments, and therefore are not required to accelerate payments to their small business subcontractors. Should the rule be expanded to apply the accelerated payment requirement to large business subcontractors in order to reach lower tier small business subcontractors? In other words, should all businesses, large and small, be directed to accelerate payment to their subcontractors, all the way down the tiers? What are the benefits, burdens, and unintended consequences, if any, of this type of expansion?

Best efforts: It should be noted that the prime’s (and each lower-tier SB subcontractor’s) obligation under this clause amounts to a “best effort”, since the clause only requires the prime or the SB subcontractor at any tier to accelerate SB subcontract payments “to the maximum extent practicable”. It appears the Government is giving the primes an actual benefit in the form of accelerated payments, in exchange for a “potential” benefit for “some” SB subcontractors, depending on whether the prime finds accelerated subcontract payments practicable, and whether there is a large business subcontractor between the prime and the lower-tier SB supplier. The final rule establishing 52.232-40 responded to a comment asking how compliance would be enforced by noting that “If, upon receipt of accelerated payment from the Government, the prime fails to accelerate payments to the maximum extent practicable, the Government may discontinue accelerated payments to the prime contractor”. Nevertheless, there is no indication the Government is making any coordinated effort to validate that primes receiving accelerated payments are actually accelerating payments to small business subcontractors, nor does the clause wording (requiring the prime to accelerate SB payments “to the maximum extent practicable”) provide a basis for enforcement. In one instance, though, a prime contractor’s failure to comply with the requirements of FAR 52.232-40 was found to be a basis for termination for cause of a commercial contract. (See Appeal of Axxon International, LLC, ASBCA 61549.) ASBCA found that 52.232-40 was a material term of the contract, and that the prime’s failure to timely pay its subcontractor resulted in the subcontractor refusing to continue performance, which in turn resulted in the prime’s inability to complete the contract requirements.

Regulatory limitation on extent of acceleration: The acceleration of payments to prime contractors under 52.232-40 appears to conflict with FAR 32.906, which says:

“(a) General. The Government will not make invoice payments earlier than 7 days prior to the due dates specified in the contract unless the agency head determines-
(1) To make earlier payment on a case-by-case basis; or
(2) That the use of accelerated payment methods are necessary (see 32.903(a)(5)).”

Does the Federal Government’s policy of accelerating delivery payments, as set forth in OPM Memorandum M-12-16 and as implemented FAR 52.232-40, constitute the written determination that the use of accelerated payment methods are necessary, as required by FAR 32.906?

For DoD, FAR 32.906 is supplemented in DFARS 232.906 as follows:

“232.906 Making payments.
   (a)(i) Generally, the contracting officer shall insert the standard due date of 14 days for interim payments on cost-reimbursement contracts for services in the clause at FAR 52.232-25, Prompt Payment, when using the clause with its Alternate I.
   (ii) The restrictions of FAR 32.906 prohibiting early payment do not apply to invoice payments made to small business concerns. However, contractors shall not be entitled to interest penalties if the Government fails to make early payment.”

It should be noted that DFARS only lifts the FAR 32.906 “no earlier than 7 days prior” restriction for small businesses. Therefore, it appears there remains an unresolved conflict between the intent of FAR 32.009-1 as implemented via 52.232-40 and the restriction in 32.906 in the context of large business primes.


“(a)(1) In accordance with 31 U.S.C. 3903 and 10 U.S.C. 2307, within 15 days after receipt of accelerated payments from the Government, the Contractor shall make accelerated payments to its small business subcontractors under this contract, to the maximum extent practicable and prior to when such payment is otherwise required under the applicable contract or subcontract, after receipt of a proper invoice and all other required documentation from the small business subcontractor, if a specific payment date is not established by contract.
(2) The Contractor agrees to make such payments to its small business subcontractors without any further consideration from or fees charged to the subcontractor.
(b) The acceleration of payments under this clause does not provide any new rights under the Prompt Payment Act.
(c) Subcontracts. Include the substance of this clause, including this paragraph (c), in all subcontracts with small business concerns, including subcontracts with small business concerns for the acquisition of commercial items.”

At the time this part of the analysis was conducted, the comment period for this FAR Case had closed, and a final rule had not yet been issued.
DFARS 252.232-7017, Accelerating Payments to Small Business Subcontractors—Prohibition on Fees and Consideration

**Types of acquisitions to which the clause applies:** This clause is prescribed for use in all solicitations and contracts that include FAR 52.232-40. That clause is prescribed for use in all solicitations and contracts (including commercial acquisitions). The clause, which is intended to be read with 52.232-40, offers a definition of an accelerated subcontract payment, and implements the requirement of section 852 of Public Law 115-232 which precludes a prime contractor from requiring any consideration or charging any fees in conjunction with accelerated payments to its SB subcontractors.

**Is there a requirement to flow down any aspect of the clause to subcontractors?** Yes. Paragraph (c) requires flowdown of the substance of the clause in all subcontracts with small business concerns, including those for the acquisition of commercial items.

**Analysis:** Paragraph (a) of the clause defined an accelerated subcontract payment as “a payment made to a small business subcontractor as quickly as possible, with a goal of 15 days or less after receipt of payment from the Government or receipt of a proper invoice from the subcontractor, whichever is later”. As under 52.232-40, the phrase “as quickly as possible” imposes a “best efforts” flavor on the acceleration requirement. Further, as noted in the discussion of 52.232-40, the expectation that an accelerated subcontract payment can occur subsequent to the prime’s receipt of payment from the Government will often be inconsistent with the realities of contract performance. The definition presented here presumes that the subcontract payment due date agreed to between the prime and the subcontractor would be later than 15 days after the date the prime receives payment from the Government. In many cases, especially if “payment” in the context of this clause refers exclusively to delivery payments, this may not be a valid presumption. The general expectation would be that subcontracts supporting a prime contract would need to be completed before the prime contract could be completed. This, in turn, implies that either the subcontractors have payment terms that may be significantly longer than those between the prime and the Government, or the prime may have (should have) already paid its subcontractors by the time the prime receives payment from the Government. In the latter case, there may be no possibility of accelerating the subcontract payment at the point in time when the prime receives payment from the Government, thus reducing the potential benefit of 52.232-40 to SB subcontractors.

This clause implements the section 852 requirement that the prime or higher-tier SB subcontractor may not charge any consideration or fees in connection with its accelerated payment to the SB subcontractor. It is unclear whether the prohibition includes prompt payment discounts. For example, if the subcontract included payment terms of 2/10, net 30, and the prime pays in 9 days, may the prime take the 2% discount in accordance with the subcontract terms? Or is that prohibited by this clause?
FAR 32.112, Nonpayment of subcontractors under contracts for noncommercial items

This FAR paragraph explains how a CO should proceed if a subcontractor notifies the CO that the prime has failed to make payment in accordance with the payment terms of the subcontract, purchase order, or other agreement between the prime and the subcontractor; and also tells the CO how to respond if a subcontractor inquires about financing or delivery payments under a prime contract. If a CO validates the asserted non-payment, the alternatives available to the CO include, per 32.112-1(b),

“(1) Encourage the contractor to make timely payment to the subcontractor or supplier;

or

(2) If authorized by the applicable payment clauses, reduce or suspend progress payments to the contractor”.

Recognizing that the Government does not have privity of contract with subcontractors, these potential actions do not seem especially robust, nor even universally applicable. Although not mentioned in FAR 32.112-1(b), the Performance-Based Payment clause at paragraph (e)(3) offers reduction or suspension of PBPs as a remedy if “the Contractor is delinquent in payment of any subcontractor or supplier under this contract in the ordinary course of business”. However, if the prime is not receiving progress payments or performance-based payments, the only course of action open to the CO under 32.112-1(b) is to “encourage” the contractor to make timely payments.

It is important to note that the FAR 32.112 content is directed toward contracting officers, not subcontractors. It is not clear whether or how subcontractors under DoD prime contracts are put on notice that they are performing under a DoD prime contract. Even if they are aware, perhaps based on inclusion of FAR or DFARS flowdown clauses included in the subcontract, that the prime contract’s customer is DoD, the subcontractor generally will not know either the prime contract number under which they are performing, or the cognizant contracting officer’s name or contact information. Tracking down the prime contract number and cognizant contracting officer in order to elevate payment concerns would require a level of investigative know-how that many DoD subcontractors may not possess. As a result, the avenue of elevating subcontract non-payment concerns to the prime’s contracting officer should not be considered to be routinely available to subcontractors.

Even if a subcontractor is able to identify the cognizant prime CO in order to make the CO aware of the prime’s non-payment of subcontractors, and the CO validates the concern, this subpart merely directs the CO to “encourage” the prime to make timely payments to its subcontractors and suppliers, or reduce or suspend progress payments. It is not clear that either of these actions will be sufficient to motivate the prime to remedy the non-payment.

FAR 52.242-5, Payments to Small Business Subcontractors: While FAR clause 252.242-5, Payments to Small Business Subcontractors, requires prime contractors to self-report reduced or untimely payments to subcontractors, the regulatory intent of this reporting is to support CPARS performance evaluations rather than to trigger the CO to take action to assist the affected subcontractors (see FAR 42.15). (In the context of 52.242-5, “untimely” means more than 90 days past due.) Additionally, it is not clear that
primes proactively self-report their subcontract payment issues to the Government, despite the presence of this clause in the contracts.

**FAR 52.219-8, Utilization of Small Business Concerns:**

**Types of acquisitions to which the clause applies:** This clause is required to be included when the contract amount is expected to exceed the simplified acquisition threshold, unless a personal services contract is contemplated, or the contract, together with all of its subcontracts, will be performed entirely outside of the United States and its outlying areas.

**What it says:** 52.219-8(b) identifies two U.S. policies. The first is that small businesses “shall have the maximum practicable opportunity to participate in performing contracts let by any Federal agency, including contracts and subcontracts”. The second policy, of interest for purposes of this study, is that federal “prime contractors establish procedures to ensure the timely payment of amounts due pursuant to the terms of their subcontracts with small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns.” The clause does not address subcontract payment, aside from this statement of policy. There is no monitoring, reporting, or enforcement mechanism associated with payment of SB subcontractors in this clause.

**Flowdown requirement:** While this clause does not include a flowdown requirement, FAR 52.219-9, Small Business Subcontracting Plan, paragraph (d)(9), requires that the prime’s subcontracting plan include "Assurances that the Offeror will include the clause of this contract entitled "Utilization of Small Business Concerns" in all subcontracts that offer further subcontracting opportunities, and that the Offeror will require all subcontractors (except small business concerns) that receive subcontracts in excess of the applicable threshold specified in FAR 19.702(a) on the date of subcontract award, with further subcontracting possibilities to adopt a subcontracting plan that complies with the requirements of this clause”.

**FAR 52.219-9, Small Business Subcontracting Plan:**

**Types of acquisitions to which the clause applies:** the clause is included in contracts that offer subcontracting possibilities, are expected to exceed $750,000 ($1.5 million for construction of any public facility), and are required to include the clause at 52.219-8, Utilization of Small Business Concerns, unless the acquisition is set aside or is to be accomplished under the 8(a) program.

**What it says:** Of interest for purposes of this study, paragraph (d)(14) of the clause requires that the prime’s subcontracting plan will include assurances that the prime will flow down FAR 52.219-8, Utilization of Small Business Concerns, in all subcontracts that offer further subcontracting opportunities. Note that 52.219-8 includes the statement of policy expressing an expectation that federal prime contractors will make timely payment to SB subcontractors. Additionally, 52.219-9(d)(15) requires that the prime’s subcontracting plan with include “Assurances that the offeror will pay its small business subcontractors on time and in accordance with the terms and conditions of the underlying subcontract, and notify the contracting officer when the prime contractor makes either a reduced or an untimely payment to a small business subcontractor (see 52.242-5)".
Summary

This review of FAR and DFARS contract financing and payment clauses and regulatory guidance has shown that, while the Federal Government, and DoD specifically, have taken steps to ensure good cash flow for prime contractors in the forms of timely contract financing and delivery payments, there are few assurances built into the contract clauses that provide subcontractors similar access to robust cash flow. With the exception of FAR clauses applicable to construction contracts (52.232-5, Payments under Fixed-Price Construction Contracts, and 52.232-27, Prompt Payment for Construction Contracts), the subcontract payment expectations and subcontractor protections reflected in the regulatory financing and payment clauses are generally not robust, nor are there effective enforcement mechanisms.

The Progress Payment and Performance-Based Payment clauses, along with the Allowable Cost and Payment clause, are the most frequently used financing clauses across DoD. Of these three, the Progress Payment and Allowable Cost and Payment clauses base the prime’s financed amounts on cost of performance. Prior to 2000, each of these two clauses was constructed to recognize for financing purposes only those subcontract financing and delivery costs which the prime had already paid to subcontractors. In 2000, under FAR Case 98-400 (Progress Payments) and FAC 2000-007 (Allowable Cost and Payment, as well as 52.232-7, Payments under Time-and-Materials and Labor-Hour Contracts), the “paid cost rule” previously applicable to these clauses was replaced with the “incurred cost rule”. The incurred cost rule allows prime contractors to claim subcontract costs owed but not yet paid in the primes’ payment requests to the Government. It is clear from the content of both final rules that the drafters intended to require contractors to pay subcontractors within 30 days after they claimed the subcontract incurred costs in a payment request to the Government. Yet, the wording in the regulatory implementations of these final rules introduced ambiguity. The wording in each of the clauses sets forth two criteria for inclusion of subcontract costs which are incurred but not yet paid:

- payment will be in accordance with the terms and conditions of a subcontract or invoice; and
- payment will occur “ordinarily” within 30 days of the submission of the Contractor’s payment request.

A literal reading of the two conditions would lead the reader to think that both conditions must be met. Further, it appears that the drafters of the two FAR final rules did not anticipate that there could be a disconnect between the two conditions. But what if the prime contractor’s terms with its suppliers allow for subcontract payment in 60 days, 75 days, etc.? From the Government’s perspective, especially if the prime has received accelerated payments under 52.232-40, we might expect the prime to comply with both conditions by making early payment to the subcontractors. Yet, since ambiguity is construed against the drafter, a prime contractor might be within its rights to choose which of the two conditions to comply with, when they are inconsistent. In any event, it does not appear that there is any coordinated oversight of prime contractor compliance with the expectation set forth in these clauses to make payment against claimed, incurred costs “ordinarily within 30 days of the submission of the Contractor’s payment request”.

While prime contractors enjoy the assurance under the prompt payment provisions of timely payment from the Government, or receipt of interest where timely payment does not occur, these same assurances are only flowed down to subcontractors under construction contracts. In all other circumstances, a prime contractor can generate “float” under Government contracts by relying on the Government’s commitment to make delivery payments within 30 days (if not before; see 52.232-40,
Providing Accelerated Payments to Small Business Subcontractors, as well as the DoD goal of paying Small Business contractors within 15 days, and the DFARS 232.007 timelines of 7 days for progress payments, and 14 days for performance-based payments and interim payments on cost-type contracts) while establishing less favorable payment terms with their subcontractors.

The Government has made an attempt to implement OMB policy to improve the cash flow of SB subcontractors at all levels via addition of clause 52.232-40, Providing Accelerated Payments to Small Business Subcontractors. Yet, the implementation of this policy appears flawed. Among the concerns are the question of how the prime has been put on notice about whether it has received an accelerated payment, and the concern that lower tier SB suppliers will not benefit if there is a large business supplier at any point between the lower tier SB supplier and the prime.

While, in theory, a subcontractor should be able to elevate payment concerns under a federal contract to the cognizant contracting officer, in practice there are significant hurdles for the subcontractor. The subcontractor may not be aware the prime contractor’s customer is the Federal Government, or that the prime contractor is receiving accelerated payments from the Government, and therefore they do not raise the issue that such accelerated payments are not being passed on to the intended recipients. Even if they are aware, they may not know the prime contract number, and almost certainly will not be provided with contact information for the cognizant contracting officer. Without these pieces of information, it will likely be impossible for a subcontractor to avail itself of limited protections offered by FAR 32.112. It is worth noting that for companies that are subject to the requirements of a “Purchasing System”, timely subcontract payments are not covered in the regulatory criteria.

The Federal Government generally and DoD specifically have taken numerous steps to ensure the cash flow of our prime contractors, and these measures go far to make DoD a good customer. However, our attempts to push these cash flow benefits to the subcontractor and supplier level appear, for the most part (with the exception of construction contracts) neither robust nor effective. The Department believes there is more to be done to contribute to the financial health of the subcontractor/supplier component of the Defense Industrial Base.

**Regulatory disconnects**

1. While FAR 32.901 and 52.232-29(g) state that prompt payment requirements do not apply to contract financing payments, DFARS 232.206(f) provides instructions to incorporate “standard prompt payment terms for commercial item contract financing”.

2. FAR 32.906 directs that “The Government will not make invoice payments earlier than 7 days prior to the due dates specified in the contract unless the agency head determines-

   (1) To make earlier payment on a case-by-case basis; or
   (2) That the use of accelerated payment methods are necessary (see 32.903(a)(5)).”

For DoD, FAR 32.906 is supplemented in DFARS 232.906 as follows:

“232.906 Making payments.”
(a)(i) Generally, the contracting officer shall insert the standard due date of 14 days for interim payments on cost-reimbursement contracts for services in the clause at FAR 52.232-25, Prompt Payment, when using the clause with its Alternate I.

(ii) The restrictions of FAR 32.906 prohibiting early payment do not apply to invoice payments made to small business concerns. However, contractors shall not be entitled to interest penalties if the Government fails to make early payment.

It should be noted that DFARS only lifts the FAR 32.906 “no earlier than 7 days prior” restriction for small businesses. Therefore, it appears there remains an unresolved conflict between the intent of FAR 32.009-1 as implemented via 52.232-40 and the restriction in 32.906 in the context of large business primes.

Technical issues

1. DFARS PGI 232.501-2 says “Unusual progress payment arrangements require the advance approval of the Director of Defense Procurement and Acquisition Policy, Office of the Under Secretary of Defense (Acquisition, Technology, and Logistics) (OUSD(AT&L) DPAP). Contracting officers must submit all unusual progress payment requests to the department or agency contract financing office for approval and submission to OUSD(AT&L) DPAP.”

Open questions

1. Note that DFARS 232.007 does not address commercial contract financing, although it provides payment timelines for several other types of contract financing. It is unclear whether this is an intentional or unintentional omission.

2. Does 52.232-40 apply only to delivery payments, or to both financing and delivery payments? How are prime contractors notified that they have received an accelerated payment under 52.232-40? Given DoD’s already-codified acceleration of contract financing payments and the goal of making payments to Small Business primes within fifteen days, what constitutes the baseline for an accelerated payment? For purposes of flowing down accelerated payments to lower tiers, how are first-tier subcontractors put on notice they have received an accelerated payment?

3. How are subcontractors put on notice that they are performing under a prime contract with the Government? If they need to elevate payment concerns to the contracting officer, how should they identify the cognizant CO and obtain their contact information?

The table below lists the contract financing clauses discussed in this study and sets forth timing, amount, and prompt payment requirements for the prime and for the subcontractors.
<table>
<thead>
<tr>
<th>Prime Contractor’s Financing Method under USG Contracts</th>
<th>How the Prime is Paid</th>
<th>Timing of Prime Payments to Subcontractors:</th>
<th>Flowdown to Subcontracts Required?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Progress Payments, 52.232-16</strong></td>
<td><strong>Timing:</strong> Progress Payments may be made monthly. FAR 32.007 requires payment 30 days after receipt of a proper contract financing request; DFARS 232.007 establishes an accelerated payment goal of 7 days</td>
<td>In accordance with the terms and conditions of a subcontract or invoice, and ordinarily within 30 days of the submission of the Contractor’s payment request to the Government</td>
<td>No</td>
</tr>
<tr>
<td><strong>Amount:</strong> 100% of subcontract financing payments plus progress payment rate times all other incurred cost, including subcontract delivery payments; applies to both amounts that have been paid and amounts that have been determined due and will be paid</td>
<td>In accordance with the terms and conditions of a subcontract or invoice</td>
<td>In accordance with the terms and conditions of a subcontract or invoice</td>
<td></td>
</tr>
<tr>
<td><strong>Does Prompt Payment apply?</strong></td>
<td>No (but does apply to prime delivery payments)</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>Performance-Based Payments, 52.232-32</strong></td>
<td><strong>Timing:</strong> PBPs may be made not more frequently than monthly. FAR 32.007 requires payment within 30 days after receipt of a proper contract financing request; DFARS 232.007 establishes an accelerated payment goal of 14 days</td>
<td>Prime contractor’s certification with PBP payment request specifies that all payments to subcontractors and suppliers under this contract have been paid, or will be paid, currently, when due in the ordinary course of business</td>
<td>No</td>
</tr>
<tr>
<td><strong>Amount:</strong> As specified in the PBP Schedule in the contract for the completed event(s)</td>
<td>Not Addressed</td>
<td>Not Addressed</td>
<td></td>
</tr>
<tr>
<td><strong>Does Prompt Payment apply?</strong></td>
<td>No (but does apply to prime delivery payments)</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>Noncommercial Advance Payments, 52.232-12</strong></td>
<td><strong>Timing:</strong> No specific timing for submission of advance payment requests. FAR 32.007 requires payment within 30 days after receipt of a proper contract financing request. The contractor controls the timing and amount of its withdrawals from the special account into which advanced funds were deposited, subject only to the caveat that the withdrawals must be “to pay for properly allocable, allowable, and reasonable costs for direct materials, direct labor,</td>
<td>The clause does not specifically address either subcontract financing or subcontract delivery payments in the context of withdrawals from the special account</td>
<td>No</td>
</tr>
<tr>
<td><strong>Amount:</strong> The contractor controls the timing and amount of its withdrawals from the special account into which advanced funds were deposited, subject only to the caveat that the withdrawals must be “to pay for properly allocable, allowable, and reasonable costs for direct materials, direct labor,</td>
<td>Not addressed</td>
<td>Not addressed</td>
<td></td>
</tr>
<tr>
<td><strong>Does Prompt Payment apply?</strong></td>
<td>No (but does apply to prime delivery payments)</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Prime Contractor’s Financing Method under USG Contracts</td>
<td>How the Prime is Paid</td>
<td>Financing Payments</td>
<td>Delivery Payments</td>
</tr>
<tr>
<td>-------------------------------------------------------</td>
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<tr>
<td><strong>Commercial Advance Payments</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Timing:</strong></td>
<td>No more frequently than monthly (per 52.232-29(f)). FAR 32.007 requires payment within 30 days after receipt of a proper contract financing request.</td>
<td>The regulatory guidance for drafting a commercial advance payments clause appropriate for the circumstance of the specific acquisition does not specifically address either subcontract financing or subcontract delivery payments.</td>
<td>The regulatory guidance for drafting a commercial advance payments clause appropriate for the circumstance of the specific acquisition does not specifically address either subcontract financing or subcontract delivery payments.</td>
</tr>
<tr>
<td><strong>Amount:</strong></td>
<td>Dependent on the customary practices in the applicable commercial marketplace. Per FAR 32.206(c), “Contracts may provide for commercial advance and commercial interim payments based upon a wide variety of bases, including (but not limited to) achievement or occurrence of specified events, the passage of time, or specified times prior to the delivery date(s). The basis for payment must be objectively determinable”.</td>
<td>Not addressed</td>
<td>Not addressed</td>
</tr>
<tr>
<td><strong>Does Prompt Payment apply?</strong></td>
<td>No (but does apply to prime delivery payments)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Progress Payments under Fixed-Price Construction Contracts, 52.232-5 and Prompt Payment</strong></td>
<td>Per 52.232-5(b), “[t]he Government shall make progress payments monthly as the work proceeds, or at more frequent intervals as determined by the Contracting Officer, on estimates of work accomplished which meets the standards of quality established under the contract, as approved by the Contracting Officer”. Per 52.232-27(a)(1), progress payments are due within 14 days after receipt of a proper payment request, while final payments are due within 30 days after the later of receipt of a proper invoice or Government acceptance of completed work or services.</td>
<td>The contractor certificate accompanying progress payment requests under this clause says, “All payments due to subcontractors and suppliers from previous payments received under the contract have been made, and timely payments will be made from the proceeds of the payment covered by this certification, in accordance with subcontract agreements and 31 U.S.C. Chapter 39”. 52.232-27 requires the prime to include in its subcontracts a clause requiring payment to the subcontractor for satisfactory performance within 7 days of the prime’s receipt of payment from the Government.</td>
<td>The contractor certificate accompanying progress payment requests under this clause says, “All payments due to subcontractors and suppliers from previous payments received under the contract have been made, and timely payments will be made from the proceeds of the payment covered by this certification, in accordance with subcontract agreements and 31 U.S.C. Chapter 39”.</td>
</tr>
<tr>
<td><strong>Timing:</strong></td>
<td>Per 52.232-5(b), the progress payments will be based “on estimates of work accomplished which meets the standards of quality established under the contract, as approved by the Contracting Officer”, including work performed by each subcontractor under the contract. CO may consider inclusion of costs for material delivered on-site, and preparatory work done.</td>
<td>Not addressed</td>
<td>Not addressed</td>
</tr>
<tr>
<td><strong>Amount:</strong></td>
<td>Yes, Prompt Payment applies to both progress payments under this clause (which are not considered financing payments) and delivery payments. See 32.102(e) and 31 U.S.C.</td>
<td>Yes. See 52.232-27(c).</td>
<td>Yes. See 52.232-27(c).</td>
</tr>
</tbody>
</table>
APPENDIX I

PUBLIC COMMENTS SUBMITTED IN RESPONSE TO
NOTICE OF REQUEST FOR COMMENTS ON THE
DEPARTMENT OF DEFENSE
CONTRACT FINANCE STUDY
(87 FEDERAL REGISTER 37642, JUNE 17, 2022)
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they would furnish or did furnish negative credit reporting information about you?

4. Have you filed a dispute regarding furnished information about your debt to the furnisher or a consumer reporting agency? How was the dispute handled?

5. Do you believe information about your debt has affected your ability to get subsequent employment, obtain credit, rental housing, or other problems?

Financial Health

1. What is your view of the financial health of your family over the past five years? How have the effects of employer-driven debt been on your family’s well-being?

2. What is your view of the financial health of your family over the past five years? How has the effects of employer-driven debt been on your family’s job security?

3. What is your view of employer-driven debt over the past five years? How has the effects of employer-driven debt been on your family’s mobility, workplace health and safety, and compensation?

4. What has been the impact of employer-driven debt on your family’s employment experience, professional mobility, workplace health and safety, and compensation?

5. What has been the impact of employer-driven debt on your family’s ability to get subsequent employment, obtain credit, rental housing, or other problems?

6. What has been the impact of employer-driven debt on your family’s ability to get subsequent employment, obtain credit, rental housing, or other problems?

7. What has been the impact of employer-driven debt on your family’s ability to get subsequent employment, obtain credit, rental housing, or other problems?

8. What has been the impact of employer-driven debt on your family’s ability to get subsequent employment, obtain credit, rental housing, or other problems?

9. What has been the impact of employer-driven debt on your family’s ability to get subsequent employment, obtain credit, rental housing, or other problems?

10. What has been the impact of employer-driven debt on your family’s ability to get subsequent employment, obtain credit, rental housing, or other problems?

11. What has been the impact of employer-driven debt on your family’s ability to get subsequent employment, obtain credit, rental housing, or other problems?

12. What has been the impact of employer-driven debt on your family’s ability to get subsequent employment, obtain credit, rental housing, or other problems?

13. What has been the impact of employer-driven debt on your family’s ability to get subsequent employment, obtain credit, rental housing, or other problems?

14. What has been the impact of employer-driven debt on your family’s ability to get subsequent employment, obtain credit, rental housing, or other problems?

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departure of Defense

Defense Acquisition Regulations System

[Docket Number DARS–2022–0012]

Department of Defense Contract Finance Study

AGENCY: Defense Acquisition Regulations System, Department of Defense (DoD).

ACTION: Request for information.

SUMMARY: The DoD Contract Finance Study is the first comprehensive contract finance study since publication of the Defense Financial and Investment Review in June 1985. DoD is committed to transparency and is interested in obtaining the perspective of companies of all sizes as well as individuals on a number of relevant topics to contribute to this important study.

DATES: Interested parties should submit written comments to the address shown in ADDRESSES on or before July 18, 2022 to be considered in the Contract Finance Study.

ADDRESSES: Submit comments to the following methods:

1. Federal eRulemaking Portal: https://www.regulations.gov. Search for “Docket Number DARS–2022–0012.” Select “Comment” and follow the instructions to submit a comment. Please include your name, company name (if any), and “Docket Number DARS–2022–0012” on any attached document(s).

2. Email: oss.pentagon.osdf-a.s.mbx.dpc-pc@email.mil. Include “DoD Contract Finance Study” in the subject line of the message.

Comments received generally will be posted without change to https://www.regulations.gov, including any personal information provided. To confirm receipt of your comment(s), please check https://www.regulations.gov, approximately two to three days after submission to verify posting.

FOR FURTHER INFORMATION CONTACT: Ms. Sara Higgins, telephone 703–614–1255.

SUPPLEMENTARY INFORMATION:

A. Background


The Defense Contract Finance Study is being headed by the Defense Pricing and Contracting’s Director of Price, Cost and Finance. The study is comprised of two phases with multiple parts and participants. The first phase includes data collection, research, and analysis focused on areas of study that include the financial health of the Defense Industrial Base, commercial financing trends, the effectiveness of current methods of DoD contract financing, and other aspects of contract financing. The second phase will commence upon completion of the analysis of inputs from the first phase and may include policy recommendations. Through initiatives such as the Defense Contract Finance study, DoD remains committed to enabling the delivery and sustainment of capability to our Warfighters and maintaining a resilient Defense Industrial Base.

This notice requests comments and information from the public, specifically companies currently in the Defense Industrial Base, to assist DoD with this complex and significant study.

B. Topics

DoD is particularly interested in comments and information with regard to contract finance policies as they affect all levels of the defense sector. Note that for the purpose of understanding financial health over time, the DoD Contract Finance Study is not covering impacts of the coronavirus disease 2019 (COVID–19) pandemic. Therefore, unless specifically asked, responses should exclude the period after the presidential declaration of a national emergency concerning the COVID 19 pandemic (March 13, 2020). DoD is seeking input from all business sizes, as identified below, on the following topics:

1. Financial Health

a. What is your view of the financial health of the Defense Industrial Base? Has it improved over the last decade or declined?

b. Please provide your reasons and a description of any financial metrics that you think are relevant to answering these questions.
b. How does the Defense Sector compare to relevant commercial sectors when it comes to financial health? Please explain.

c. How important is cash flow and why? In the context of publicly traded companies, how do cash flow-related metrics influence executive compensation?

2. Financing

a. For companies who perform work on DoD contracts as either a prime contractor or subcontractor, what, if any, obstacles have you encountered in obtaining financing? Please explain and also identify whether you are a large or small business.

b. For companies who perform work both for DoD and in the commercial sector, what is your view on how financing compares between DoD and your commercial customers? Please explain. What about delivery terms? For example, DoD’s terms to prime contractors are 30 days. How does this compare to commercial terms?

3. Prime Contractors (Regardless of Size Status) on Defense Contracts

a. What is your size status (see Federal Acquisition Regulation (FAR) part 19) in the context of your defense work?

b. What percentage of your suppliers receive contract financing (payments prior to delivery) from your firm?

c. Is the answer different for large business suppliers than for small business suppliers? Does one group receive financing more often than the other?

d. What are your criteria for determining which suppliers receive financing?

e. How do your lower-tier suppliers know they are performing under a Government prime contract?

f. If you have been or are receiving a higher progress payment rate due to the COVID–19 pandemic, have you accelerated payments to your suppliers since the COVID–19 pandemic? If so, by how much time have you accelerated payments to your suppliers? Please be specific. Did you provide financing (predelivery payments) to suppliers that were not receiving financing prior to the COVID–19 pandemic?

g. If you did not receive a higher progress payment rate due to the COVID–19 pandemic, e.g., you do not receive progress payments on your defense contract, did you accelerate payments to your suppliers since the COVID–19 pandemic? If so, by how much time have you accelerated payments to your suppliers? Please be specific and address the extent to which you have accelerated payments. Did you provide financing (predelivery payments) to suppliers that were not receiving financing prior to the COVID–19 pandemic?

4. Subcontractors or Suppliers (Regardless of Size Status) Under a Defense Contract

a. When you are performing as a subcontractor or supplier under a defense prime contract, how do you know that the ultimate customer is the Federal Government?

b. Do you know the prime contract number (between the prime and the Government)? If so, how? Do you know who the Federal Government contracting officer is or how to contact them? Would you be willing to contact the contracting officer if you were experiencing issues getting paid?

c. Have financing payments or payments upon delivery from your customer (contractor) been accelerated during the COVID–19 pandemic? What are your normal terms and how much time have payments been accelerated? Did you receive financing (predelivery payments) from your prime or higher-tier contractor that you did not receive prior to the COVID–19 pandemic?

d. Are there any conditions (e.g., changes in terms) associated with receiving payments from your prime or higher-tier contractor in a more expedited manner?

5. Small Businesses Performing on Defense Contracts

a. If you are a small business performing as a prime contractor, what is your experience regarding receipt of timely payments from DoD?

b. If you are a small business performing as a supplier or subcontractor, are you aware of whether the clause at Defense Federal Acquisition Regulation Supplement (DFARS) 252.242–7004, Accelerating Payments to Small Business Subcontractors—Prohibition on Fees and Consideration, is in the prime’s contract? Is the substance of this clause in your subcontract?

c. What are your normal payment terms (e.g., amount of time) for financing and for delivery?

d. Are you receiving accelerated payments from your prime contractor? By how many days are payments being accelerated?
Federal Register Comments - 10 Submitted (9/6/22)

05 - National Defense Industrial Association - pages 4 to 8
02 - ICF Mercantile - Pages 9 to 12
03 - NA (inquiry related to book publishing)
04 - Republic Capital Access - pages 13 to 15
06 - American Apparel & Footwear Association - pages 16 to 20
07 - Professional Services Council - pages 21 to 30
08 - Aerospace Industries Association - pages 31 to 35
10 - Raytheon Technologies pages 36 to 41
11 - Sterling Design pages 42 to 44
09 - Anonymous - pages 45 to 48
NDIA: Comments

Request for Information (RFI) on DoD Contract Finance Study
July 18, 2022

Ms. Jennifer D. Johnson
Editor/Publisher
Defense Acquisition Regulations System
Department of Defense
3010 Defense Pentagon
Washington, DC 20301-3010

Re: Request for Information (RFI) on DoD Contract Finance Study

Dear Ms. Johnson:

The National Defense Industrial Association (NDIA) represents more than 1,600 corporate and over 80,000 individual members from small, medium, and large contractors, educational institutions, and governments; NDIA members and their employees feel the impact of any policy change made to how the United States equips and supports its warfighters to win in all domains of warfare.¹

On behalf of our membership, NDIA appreciates the opportunity to provide inputs pertaining to the ongoing DoD study focusing on contract finance. For the purposes of this response, NDIA will focus on the first section of the RFI, Financial Health, as this is most applicable to the widespread health of the Defense Industrial Base and our membership.

1. What is your view of the financial health of the Defense Industrial Base (DIB)? Has it improved over the last decade or two?

   Overall, NDIA views the financial health of the Defense Industrial Base as at risk. Companies remain innovative and valued partners of the government but continue to encounter numerous obstacles and hinderances unique to this industry. In terms of these barriers, there are several that stand out as among the most difficult.

   Budget stability is of notable consequence as these impact multiple aspects of business operations for companies within the Defense Sector. For example, upon the implementation of budget sequestration nearly a decade ago, the Government Accountability Office observed several concerning changes. Overall reduced spending levels for the DoD required such actions as postponing certain maintenance, re-prioritizing acquisition programs, and reconsidering future purchases of newer and advanced equipment. For the entities within the DIB, budget sequestration was exceedingly disruptive. These companies, whose main customer was the Department of

¹ NDIA is a non-partisan, non-profit, educational association that has been designated by the IRS as a 501(c)3 nonprofit organization - not a lobbying firm - and was founded to educate its constituencies on all aspects of national security. For over 100 years, NDIA has provided a platform through which leaders in government, industry, and academia can collaborate and provide solutions to advance the national security and defense needs of the nation.
Defense, were forced to recalibrate their operations and long-term planning to adjust to this sudden change.

While sequestration ultimately ended, budget stability has remained a persistent problem. The budget has been repeatedly delayed and evolved into a contentious political fight, rendering the need for multiple continuing resolutions to fund the government. These tools, while necessary in the short-term, pose additional challenges for long-term planning due to the limitations placed on budget increases.

The totality of this uncertainty, which has spanned multiple administrations, is the increasing difficulty in correctly ascertaining the market size of the Defense Sector. DIB companies now face increasing difficulty in determining where to invest capital, which programs to prioritize, and what returns can now be reasonably expected for this investment.

In addition to budget instability, there have been other factors at a global macro level that have impacted the financial health of the DIB. For example, the COVID-19 pandemic impacted industries across the entire economic spectrum and did not spare the Defense Sector. This is particularly true for companies that maintain both defense and commercial applications. These companies, due to the pandemic and the subsequent widespread shutdown of the economy, saw their margins eviscerated and internal business planning severely disrupted. This extended across the supply chain, as both large and small companies experienced disruptions, delays, and other hinderances that ultimately had serious ramifications on financial health.

Yet, while the pandemic continues to evolve and impact society in new ways, a new issue has developed which is proving increasingly devastating: Inflation. Historically, inflation has existed at a level between 2-2.5%, allowing for a certain degree of stability when budget planning. However, as this economic indicator has risen dramatically over the preceding year, entities across the DIB have felt the effects of rising prices.

This is especially relevant for smaller companies that operate on firm-fixed price contracts. As costs rise, and with few remedies available to alleviate this, smaller DIB companies are finding their margins eroded. This makes it increasingly difficult to remain financially solvent, leading some to question the wisdom of remaining within this sector at all.

The preceding obstacles characterize the environment that DIB companies find themselves in. Yet despite this, companies within this sector, both big and small, remain innovative and dedicated partners to the DoD. When competing with near-peer adversaries, it is of the utmost importance for the US to possess a strong and private defense industrial base. This sector, along with our friends and allies, remains vital to ensuring that we maintain a strategic advantage over adversaries and cultivate a strong national security.
Therefore, as previously alluded to, the Defense Industrial Base remains resilient. It has been, and continues to be, impacted by various factors including budget stability and inflation. In spite of this, this sector remains dedicated to its mission of ensuring a safe and secure nation.

2. How does the Defense Sector compare to relevant commercial sectors when it comes to financial health?

When examining the financial health of the Defense Sector, relevant to other commercial sectors, it is important to note whether firms are entering or leaving for other opportunities. Due to a high level of regulation, along with the aforementioned obstacles unique to Defense, the rate of attrition is rising and companies are beginning to leave for other industries.

This was further amplified by the COVID-19 pandemic, which impacted numerous economic sectors including Defense. Companies that form the defense industrial base saw their profits impacted, costs rise, and their overall business operations severely disrupted.

However, for companies that operate purely within the defense sector, reliance on government customers blunted some of the most damaging effects. There are multiple reasons for this, but primarily, as an industry reliant on a government customer, profits are more controlled, regulated, and reliable than other commercial industries.

This should not be construed to mean that the Defense Sector is immune from outside influences. To the contrary, due to the heavy reliance on government customers, The Defense Industrial Base encounters obstacles that other industries do not. One primary example that has emerged recently involves Foreign Military Sales (FMS).

According to recent figures released by the Government, the total FMS transaction value for 2021 amounted to $34.8 billion. This figure marks a decrease of 31 percent from fiscal year 2020, when the total reached $50.8 billion. Compounding this concern, the 2021 figure reflects a decline for the second consecutive year and represents the lowest volume of foreign military sales transactions since 2016.

Factors such as FMS, and its decline, represent a unique aspect of the Defense Sector. Due to the sensitive nature of involved products and services, the Government maintains a robust position of authority in numerous aspects of business operations. When combined with other factors, the Defense Sector can be set apart from other commercially-based industries.

In sum, the Defense Sector and its financial health, is heavily reliant on the US Government as a primary customer and facilitator of foreign sales. As a result, companies in the DIB must adhere to specific regulations that other commercial industries do not.
This is directly impacting decision making by some entities on whether to remain in the defense space or leave for other opportunities that are not so regulated and constrained.

3. How important is cash flow and why?

Within the Defense Industrial Base, cash flow occupies a position of extreme importance. This metric represents how efficiently a company can buy inputs, manufacture their goods, and then sell products. Cash flow also represents cash available to creditors or investors.

In studies conducted by NDIA, it has been an effective measure of how companies reacted to the COVID-19 pandemic and its economic ramifications. For example, since the pandemic began—some in the Defense Industrial Base have found it increasingly challenging to meet outstanding financial obligations, especially those with significant exposure to commercial markets.

Cash flow is also significant within the Defense Sector as it touches upon other business operations as well. A company that has strong cash flow, for example, might be in the position to pursue increased innovation through more significant investment in internal R&D activities.

In summation, NDIA views cash flow as a significant indicator of financial health and a company’s ability to operate under trying circumstances (i.e. pandemic). While there are obviously other indicators that provide an overview of financial health, cash flow is key as it enables analysis pertaining to growth, sustainment, and business strategy.

NDIA believes that studies such as this are of vital importance. The national security of the United States is heavily dependent on a private and innovative Defense Industrial Base. Combined with our friends and allies, America’s DIB helps to ensure that we maintain a strategic advantage over near-peer adversaries across the globe. By studying the financial health of the DIB, and more importantly obtaining broad sets of data, studies such as this help to ensure an effective and strong government-industry partnership.

NDIA appreciates the opportunity to provide our input on this important DoD study. NDIA’s point of contact is Jeff Goldberg, Director of Regulatory Policy.

Sincerely,

National Defense Industrial Association
ICF Mercantile: Comments

Request for Information (RFI) on DoD Contract Finance Study
1) Financial Health

Overall, the financial health of the Defense industrial base has remained the same. However, the application of the finances to various Programs is inconsistent. We liken the activity of Defense and other associated Programs similar to riding on a roller coaster. This analogy describes the unevenness of business to our particular Supply Chain.

a. Over the past several years this situation has improved. It is difficult to plan capital investment to support the products necessary to respond in a timely manner to requirements that ultimately end up in the above-mentioned system.

b. In the commercial sector, Programs are more consistent. Qualifying into a specific commercial Program ensures a consistent flow of orders and, therefore, manufacturing activity that can be included in a company's budgeting process to forecast capital requirements, cash requirements, and appropriate personnel to process Programs and orders. In the Defense sector, because of the inconsistent characteristic of order flow, this is quite difficult.

c. Cash flow is the lifeblood of most businesses, most certainly for small businesses. While there is access to working capital, there are times when the Government does not respond to its financial commitments in a timely manner, which requires resources outside of the Government. Currently we have an order for a Strategic Stockpile where a product has been shipped two months' prior, the Government has created new caveats that have delayed payment of significant amounts of money, causing a significant impact on our company’s cash flow.
2) Financing

a. We have not to this point had any difficulties or been impeded by receiving working capital funds, or capital funds. We are a small business, and as stated above, cash flow is of the utmost importance and cannot be impeded.

b. Financing of DoD Projects has not been difficult until recently. Again, this applies to the Strategic Stockpile and the delays based on information received after the initial order was placed which was not stipulated in the Contract. Also, there is a lack of knowledge by the Purchasing Agency regarding textile rules and language which applies to the selling of fiber products to the DoD in the commercial markets. The understanding of these laws, requirements, and principles are clearly not understood.

3) Prime Contracts or Defense (Regardless of Size Status) on Defense Contracts

a. Small Business

b. Do not have this information

c. Do not know about this information and pre-funding, but would be interested in learning about it

d. N/A

e. N/A

f. N/A

4) Subcontractors or Suppliers (Regardless of Size Status) Under a Defense Contract

a. We are not always informed about ultimate customers or Programs when orders are placed either through the Primes or the Subcontractors. This, however, has improved over previous years.

b. We are not aware of the Prime Contractor Number. We do not know who the Federal Contracting Officer is. Yes, we would always want to know who to contact regarding issues getting paid. We currently have a significant amount of money owed by the Government that needs to be paid immediately. Hopefully we can resolve this as it has a severe impact on cash flow.
c. There have been no accelerated payments received due to the Covid Pandemic. We have experienced (as stated prior) delays in receiving payments based on additional conditions applied to the PO that did not appear on the Purchasing Agreement and the lack of experience by the Purchasing Agent on the rules associated with purchasing fiber.

5) **Small Businesses Performing on Defense Contracts**

a. Our experience receiving timely payments as a small business so far has not been adequate.

b. I am not aware of DFARS 252.237-2017 providing accelerated payments. We certainly need this to be enacted for the Stockpile purchase we currently have from the DLA.

c. Our normal payment terms are 30 days from date of order. Due to the late payment after shipment we require immediate payment. However, the normal 30 day terms if followed will suffice.

d. We are not receiving accelerated payments from any Contractor.
Republic Capital Access: Comments

Request for Information (RFI) on DoD Contract Finance Study
2. Financing

a. For companies who perform work on DoD contracts as either a prime contractor or subcontractor, what, if any, obstacles have you encountered in obtaining financing? Please explain and also identify whether you are a large or small business.

Republic Capital Access, LLC is not a government contractor. However, as the leading commercial finance company for U.S. Government contractors, we would like to submit comments.

Republic Capital Access, LLC, a DOD Trusted Capital Marketplace Provider, was formed in 2009. Our mission is to provide working capital for US Government contractors by financing receivables, both billed and unbilled. Most of our customers are small, veteran-owned, women owned, 8(a), or HubZone businesses. Since 2009, we have financed over 1,200 companies and over 4,000 contracts. On average, the annual amount of financing we are able to provide to our customers is just over $1 billion. Typically, our fees on a $100 invoice, paid in 30 days, have ranged from $.33 to $1.50, so very affordable. Finally, we can increase a customer’s facility limit within 24 hours should they win additional work.

In our experience, there are few barriers to a small government contactor getting adequate working capital to execute on a contract. This is due to the competitive nature of government contract financing and the willingness of firms like ours to assist small businesses win awards.

Republic is not the only organization providing financing to small government contractors. Competition to provide working capital to small government contractors is intense and growing. Banks and commercial finance companies located in geographic regions that have large concentrations of government contractors have dedicated teams that exclusively service government contractors. Recently several commercial finance companies have established programs to provide financing for government contractors. This increased competition is benefiting small government contractors in terms of price and structure.

In addition to providing working capital to execute on contracts, we also help the U.S. Government achieve their small business goals by issuing commitment letters to small government contractors bidding on RFP’s so that they can demonstrate their “financial capability” to execute on a contract. This allows small contractors to compete on equal footing with large contractors. In a typical year, we will provide commitment letters for between $500 million and $1 billion in financing volume. Because of our structure, we can provide an 8-figure facility for a small startup. For example, in the 4th calendar year of 2021, companies using our letters won approximately $900 million in contracts; all were small businesses and eligible for our financing.

To the extent that there are challenges with respect to working capital for small government contractors, our experience is that they are usually related to work in process for long lead-time manufacturing. For example, a small company manufacturing a product for a Tier I prime may need to acquire inventory that will be used for the manufacturing process, but not billable for a year or longer. Republic does not finance this and few others do. Therefore, DoD may want to consider a program to help with this specific need.

One final comment under this subsection concerns the Federal Assignment of Claims (FACA) process. Because we are not a commercial bank, our program requires payment direction to an account other than the contractor’s; therefore, we use the FACA process as directed by the FAR. Educating contract officers
on FACA so that it can move expeditiously would be very useful to small contractors needing non-bank financing.

*b. For companies who perform work both for DoD and in the commercial sector, what is your view on how financing compares between DoD and your commercial customers? Please explain. What about delivery terms? For example, DoD's terms to prime contractors are 30 days. How does this compare to commercial terms?*

All of Republic’s customers are U.S. Government contractors. We do, on occasion, finance receivables that a customer will have with a commercial entity. The payment terms under government contracts – whether as a prime or subcontractor – are superior to commercial contracts we have seen. While some commercial contracts may have 30-day payment terms, most commercial contracts that we are aware of have payment terms in the 60 - 90 day range. In fact, given the competitive nature of government contract financing, reinstating the terms of the Prompt Payment Act (30-day payment) for small contractors, rather than the 15-day payment DoD strives to meet, would have a negligible effect on small contractors and likely have a positive effect on the contracting corps, which is under significant strain at the moment trying to process invoices quickly and without error.
American Apparel & Footwear: Comments

Request for Information (RFI) on DoD Contract Finance Study
July 18, 2022

Department of Defense
Defense Acquisition Regulations System

Ref: RIF Department of Defense Contract Finance Study (87 FR 36472, June 17, 2022)
Docket Number DARS–2022–0012

To Whom It May Concern:

On behalf of the American Apparel & Footwear Association, and the U.S. manufacturers who constitute the AAFA Government Contracts Committee (GCC), I am pleased to submit these comments in response to the June 17, 2022, Federal Register Request for Information: Department of Defense Contract Finance Study (87 FR 36472)

AAFA is the national trade association representing apparel, footwear, travel goods, and other sewn products companies, and their suppliers, which compete in the U.S. and global markets. We represent approximately 300 companies, including many who proudly make uniforms – clothes and shoes – for the U.S. military. They do so under the auspices of the Berry Amendment, which requires the U.S. armed forces to purchase domestically made textiles, apparel, footwear, and related gear.

While we welcome this study, we are concerned that this well-documented problem will be endlessly studied until the domestic manufacturing industrial base that services the men and women in uniform will cease to exist. It is our hope that the study will yield an early harvest of recommendations that can be swiftly deployed so that factories do not close and the workers they employ do not lose their jobs.

Our comments will focus on the first question as that is most appropriate for our aggregate industry view. We’ve encouraged members to provide their own direct perspectives to those questions, although we note that some of our answers should help inform the study on those questions as well.
1. Financial Health

a. Overall View

The apparel, footwear, travel goods, and sewn products supply chain for the Department of Defense remains fragile, with few players and with vulnerability to disruption from external causes. The commercial base has been shrinking steadily over the past few decades.

The base has been harmed by lack of consistent and predictable demand for the products our industry manufactures. That has hindered the ability to continue to produce in a sustainable manner that enables companies to plan their production, order materials, and train and retain their workforce.

Unlike many of the other industry partners, domestic clothing and footwear manufacturers have few options beyond the military. With import penetration in the commercial sector stubbornly stuck at about 98 percent, the opportunities to produce domestically made clothing and footwear are limited outside the needs of the U.S. military. Numerous studies, including reviews commissioned by DoD and the Commerce department, have highlighted the very high dependence this sector has on military contracting and, as a result, the importance of smart management of this contractor base. U.S. end item manufacturers that are unable to survive in the government contracting space are generally unable to stay in business. This, of course, has ramifications for U.S. textile and other input manufacturers who depend on that business as well.

U.S. private uniform contractors face unfair competition coming in the form of Federal Prison Industries (FPI). FPI (which also does business under the name UNICOR), is a U.S. government-owned complex of federal prison factories that produces its products in the United States – and promotes them as American made – but at a significant, unfair advantage over private Made in USA manufacturers. That unfair advantage takes many forms, but always results in lost contracting opportunities, lost sales, declining private sector employment, and closed factories. It is impossible to have an effective conversation about pricing and competitiveness in our industry while the government continues to put a preference on a large supplier that is in effect immune from the pricing pressures that affect the rest of the industry.

What’s particularly frustrating is that UNICOR is currently able to bid for and win contracts that are set aside for small businesses, HUBZone facilities, and service-disabled veteran owned facilities. UNICOR has also been awarded contracts as a subcontractor for small businesses even though the award documents show that UNICOR will be doing more than the legally allowed amount it is permitted to perform under such arrangements. It is bad enough that such arrangements are allowed to erode the small business set asides in the first place, but it is even worse if the flimsy protections designed to preserve some small business support is not even enforced.

The manufacturing crisis -- precipitated by COVID-19, labor shortages, and inflation -- threatens the existence of an industrial base already severely eroded by the failures to nurture the base that are noted above.
Failure to maintain a healthy base has made DoD vulnerable to supply disruption when a sole source encounters any difficulty in performing. For example, in the current labor shortage one sole-source producer of a critical article is unable to perform and, as a result, the acquiring agency has sought, and obtained, a waiver allowing non-domestic sourcing.

b. Comparison to Commercial Sector:

The financial health of the Defense Sector is extremely poor compared to relevant commercial sectors. We operate under fixed price contracts. Building upon a still present bias to award contracts to the lowest technically acceptable bidder, the practice of fixed price contracts has had a corrosive effect on the health of contractors in our industry. Fixed price contracts make it impossible for companies to react to changing business conditions – such as those that have whipsawed our industry over the past two-and-a-half years. Labor costs, health care costs, freight costs, and materials costs have all increased – suddenly and unexpectedly – over the past 29 months, and they show no sign of abatement. These higher costs without any economic price mechanisms mean companies are often forced to perform on contracts at a financial loss (simply to retain business and keep the workers employed in the hopes that a future contract will make up for current losses). Even if they can eke out a slim profit, these companies rarely have enough to reinvest in their business for training or equipment. In the commercial environment vendors and customers strive to find some way to share the burden of unanticipated and persistent cost increases, so both vendor and customer can stay in business through the bad times to be around for good times.

c. Cash Flow:

The lack of sufficiently funded contracts is only part of the problem. At several points over the past two-and-a-half years members have been forced to move to a one-month order model for months at a time. While this system is currently not being deployed, there are concerns that it could re-emerge. We would strongly oppose any reliance on this practice’s future use as it punches a huge hole in that systematic contracting process, effectively tripling the cost and workload without increasing the revenue associated with a particular contract. This dynamic squeezed our members’ margins, worsening the situation noted above.

Likewise, for a lengthy period during the pandemic, cash flow was further squeezed by the loss of the accelerated payment schedule that had been in place prior to the pandemic. While this situation was recently resolved, we still find it incredible that accelerated payments were allowed to stop at a time in which our industry was least prepared to sustain this hit. As with the above concern connected to longer term orders, we would recommend that safeguards be put in place so that there is no discretion to move away from accelerated payments.

As a final note, we stress that it is vital for the defense contracting agencies and for the domestic industrial base to work together on some creative solutions that can preserve a healthy, and sustainable, industrial base. As we have stressed in other fora, we no longer have the luxury of using auto pilot to weather bad times – slack demand, budget pressures, supply chain disruptions, etc – until things improve. What we need now is a concerted public private partnership to plan and
execute a series of strategic actions to ensure the financial health and stability of this domestic industrial base.

Thank you for your timely consideration of our views. We look forward to working with you on these critically important issues in the months to come.

Sincerely,

Stephen Lamar  
President and CEO
PSC: Comments

Request for Information (RFI) on DoD Contract Finance Study
Ms. Sara A. Higgins  
Defense Pricing and Contracting  
Office of the Under Secretary of Defense for Acquisition and Sustainment  
3000 Defense Pentagon  
Washington, DC 20301-3000  

July 18, 2022  


Dear Ms. Higgins:  

On behalf of the 440+ member companies of the Professional Services Council (PSC), I am pleased to submit comments in response to a recent request for information (RFI) regarding the Department of Defense’s (DoD’s) contract finance policies as they affect all levels of the defense sector. This request was published in the Federal Register on June 17, 2022, as Docket Number DARS-2022-0012 to help inform DoD’s ongoing Contract Finance Study, the first such comprehensive study on this issue set since a Defense Financial and Investment Review (DFAIR) report in 1985.¹  

PSC recognizes that this current study results from the 2019 Government Accountability Office (GAO) recommendation that DoD “ensure it conducts a comprehensive assessment of the effect that its contract financing and profit policies have on the defense industry and update that assessment on a recurring basis.”² That GAO report followed a cancelled 2018 proposal by DoD to slash progress payments to its government contractors, generating an outcry from Congress as well as industry. PSC waited with great anticipation for DoD to solicit industry input on this current study, including on, but not limited to, issues such as financial health of the defense industrial base (DIB), subcontractor financing, and the impact of DoD current contract financing policies on small businesses. We appreciate the opportunity to offer such input on behalf of our member companies who are part of the DIB.  

Overarching Comments  

Before we provide feedback on specific questions in the RFI, it is useful for DoD to consider several overarching observations and recommendations.  

1. The financial marketplace in which DoD contractors operate has changed dramatically and irreversibly since the DFAIR report.  

Compared to the 1980s, the financial community today plays a much larger role in the ability of any contractor to bid, win, and deliver on DoD contracts. Nearly every company, whether publicly traded or not, is measured today by financial metrics that significantly affect their access to needed funds.  

The 1985 DFAIR report does not mention many of these financial metrics. Company performance in areas such as free cash flow, earnings per share, and return on invested capital determines both access to and the cost of financing, independent of any DoD contract financing policies. These metrics affect the entire government contracting industry, not just individual companies.

With that fact in mind, PSC recommends that DoD expand the RFI, which focuses on the “financial health” of individual companies, to incorporate the broader relationship of the financial marketplace with every contractor and subcontractor, including the nature and use of financial metrics across the board.

2. DoD contracting financing policies and practices are important not just for individual companies but for the entire market.

Financial investors allocate funds based on return on invested capital. DoD contractors compete in this marketplace with all other avenues to generate return. In recent decades, government contracting has been an attractive area for investors, due in part to uncertainties and low returns in other areas of the global economy. DoD cannot depend on that dynamic lasting forever, and we have already seen some erosion in investment support for government work as purely commercial options attract greater interest.

Therefore, PSC recommends that DoD consider in this study the competitiveness of the overall government contracting industry in the global market for investment. DoD contract financing policies and practices must enable contractors to be able to provide returns that are competitive in that global economy.

3. More than half of DoD contract obligations are to companies that provide services, not products.

Contract financing policies and practices need to recognize this reality and be structured and implemented to accommodate it.

Today, DoD procures capabilities and capacity as a service in many realms where, in the past, DoD might have owned the product. In a wide range of capability areas, from data management and storage to access to space and much more, DoD buys solutions, not products. DoD contract financing policies and practices have failed to keep up with this evolution. Progress payments for products contracts focus on costs incurred for which reimbursement may be delayed until delivery. Under services contracts, DoD procures access to capability and performance and pays on invoice. However, for many services contracts, costs are incurred months or even years in advance of invoicing. The RFI questions do not acknowledge this reality or address how contract financing policies should be updated to reflect the changing nature of buying solutions.

In this area, PSC recommends that DoD expand the scope of the study to accommodate today’s reality for contracting for services and solutions, not just products.

4. DoD small business contracting practices do not reward growth over the long term.

DoD and the U.S. Government as a whole follow policies to award contracts to small businesses in various categories. While this practice provides opportunities for thousands of small businesses,
it does not reward growth. Once a company loses eligibility for small-business set-aside contracts, it must compete for full and open contracts. Past PSC research showed that, within seven years of that transition, 60 percent of such firms no longer receive prime contracts from the U.S. Government.

On this issue of rewarding companies for growth, PSC recommends the DoD contract finance study gather full information on this issue set and address it in the study options.

5. Markets focus on quarterly performance, not long-term outlooks.

Publicly traded firms report financial results quarterly, and those results are compared to financial market expectations. To the federal government, there is little difference between paying a contractor invoice on June 30 or July 1. To the financial community, that difference is significant. Companies that fall short of quarterly expectations see drops in share prices and may have to pay a premium for access to capital.

PSC recommends that DoD examine the impact of the market’s focus on quarterly financial performance and develop options to adjust, as needed, contract finance policies and practices to best support DIB companies.

6. Defense contractors must compete with the commercial economy for their workforce.

The costs to hire, train, promote, and retain workers have risen dramatically in recent years, as fewer people seek more jobs. Recent reports from the federal government indicate there are more than 11 million job openings in America with fewer than 6 million people looking for work. In addition, a recent study reported that compensation for technology workers in the National Capital Region is 97 percent of that in Silicon Valley, the New York metropolitan area, and the Seattle area. DoD policies and practices fail to account for this heightened (and reportedly growing) competition and the related increased cost of workforce.

PSC recommends that DoD incorporate additional mechanisms to enable its contractors to be successful in the competition for workers, whether in manufacturing or in services.

7. DoD needs appropriate scenarios to develop and assess options for changes to contract finance policies and practices.

The topics in the DoD RFI are relevant. Expanding them to include the recommendations above will make them more useful. That said, it is equally important that DoD and the academic institutions supporting this contract finance study use a broad range of scenarios to develop and assess options for changes to current contract finance policies and practices. It is unlikely that either DoD or the academic institutions can adequately and appropriately develop such scenarios in a vacuum.

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3 Peter Walker, The state of startup compensation, H1 2022, June 27, 2022.
Therefore, PSC recommends that, before analysis is conducted and options developed, DoD publish and seek comment from industry on the full range of scenarios needed for a comprehensive consideration of options.

8. The DIB would benefit significantly from increased inclusion of relevant Economic Price Adjustment (EPA) clauses in competitive proposals and as modifications of existing contracts for both products and services.

Historically, the U.S. Government has been reluctant to use EPA clauses. Recent DoD guidance\(^4\) reinforces this reluctance and does not encourage programs and contracting officers to add EPA clauses to existing contracts or options when exercised. This reluctance fails to recognize today’s cost pressures, particularly with respect to contractor workforces (see item 6 above). Delaying changes in policy will make it more difficult for companies to catch up as negative economic impacts increase.

In light of current and foreseeable economic instability, PSC recommends the contract finance study examine the use of EPA clauses in contracts under the kinds of conditions facing the DIB now. For example, an approach that leveraged Federal Acquisition Regulation 16.203-3—which contemplates using fixed-price contracts with EPAs when labor rates or prices for materials fluctuate and are highly variable—can save the Department money by allowing DoD to negotiate contracts that do not include a risk premium for spikes in inflation and can decrease the agreed-upon costs if inflation subsides significantly. The study team should also leverage industry thought leadership and expertise and solicit industry feedback on ideas such as this one.

**Comments Specific to the Subject RFI**

On the specific topics identified in the recent RFI, PSC offers the following comments.

1. **Financial Health**

   a. **In general**

   The overall health of the defense industrial base has suffered in recent years, impacted of course by the COVID-19 global pandemic but also by worsening conditions in industrial security, production inputs, supply chain performance, political and regulatory activities, innovation, and production capacity / surge readiness.\(^5\) For example, the National Defense Industrial Association has for several years tracked the health and readiness of the defense industrial base, noting a steady decrease across key indicators. For the first time ever, NDIA in 2022 gave the DIB a failing grade.

   Financial health is similar to these trends in overall health. PSC companies report that DIB financial health within the last decade has remained “flattish to declining,” due in part to:

   - The frequent failure to begin government fiscal years with a full-year DoD appropriation – and often under the specter of a possible government shutdown. This

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funding uncertainty creates and/or exacerbates financial uncertainties that can force companies to make resource decisions that can impact their financial health.

- **Vastly different priorities between Administrations.** These differences introduce planning uncertainties that again can force companies to make resource decisions under conditions of uncertainty.

- **Economic fallout of the COVID-19 global pandemic,** which prompted mergers, acquisitions, consolidations, and other diversification or alliances of businesses among prime and sub government contractors seeking to achieve economies of scale in a lower budgetary-spend environment or seeking to cross-pollinate domain expertise into innovative technologies underpinned by sustainable vectors.

- **Supplier fragility.** DoD officials should be aware that prime contractors are seeing a record number of suppliers walking away from valid contracts because they are “upside down” on pricing arrangements signed before the supply chain shortages and inflationary pressure. This is an unprecedented situation. Addressing supplier fragility will require creative thinking and financial flexibility to address significant price growth on fixed price contracts. Similar to the flow-down benefits derived from the higher progress payment rate (see 1.c. below), addressing inflation on prime contracts affords the ability to provide comparable relief throughout the supply chain.

As companies look to the future, U.S. Government budgets appear to support defense industry growth for DoD (RDT&E, O&M) and federal civilian information technology (IT) markets, particularly as geopolitical tensions and the threat of cyber attacks rise. To support this directional industry growth, an important consideration is access to (and cost of) financing, whether in a public or private company.

**b. Compared to the commercial sector**

PSC members, who operate both defense and commercial businesses, have observed a difference in financial health between the government and commercial sectors.

There are many metrics measuring a company’s financial health. **Profitability** is critical. In general, the higher risk associated with a commercial sector is rewarded by higher profitability. The defense sector is considered lower risk, and profitability is substantially lower than in the commercial sector.

**Cash flow** is another metric. Again, the risk in the commercial sector is higher; subject to the availability of funds, government work is a low default risk as government customers often pay their invoices. The Federal Acquisition Regulations can also be used to reduce risk as it is more balanced between customer and supplier than most commercial contracts.

**Return on assets** is also a key indicator of financial health. As with profit, the commercial sector demands a higher return for risk. Lower risks in government work result in lower profitability, which can in turn limit a company’s ability to invest. This can be an issue when capital investments or top talent are required to fulfill mission requirements. In most cases the profitability for government customers is insufficient to finance the investments, and limits on allowable salaries as well as labor category requirements for education and years of experience combine to impair an
ability to attract top talent. This requires advance funding on investments, or reduce profitability due to unallowable salaries, both of which impair the financial health of the government sector.

In general, DIB companies may have lower credit ratings and therefore a higher cost of capital than their commercial counterparts. In addition to lower profitability and constraints on allowable salaries, these factors inhibit the defense sector’s ability to invest in both working capital and talent relative to the commercial sector. This puts the defense sector at a competitive disadvantage in the war for talent. It is particularly true in key technologies such as cyber, engineering, science, and math which are critical for success in defense missions. This disadvantage is exacerbated by the lengthy time needed to obtain security clearances and by the failure of many agencies to provide reciprocal recognition of existing clearances.

c. Importance of cash flow

Cash flow is the lifeblood of a company. Cash flow is essential to hire and retain employees, purchase products and services, service debt, and reward investors for risk. The reality of the marketplace is that there are many profitable companies that failed because of lack of cash, and many unprofitable companies with cash that are still in business.

A company’s cashflow statement must reconcile to the amount of cash in the bank, while a company’s income statement includes many accounting estimates and judgments. Cash flow is a top metric for executive compensation, generally along with growth and profitability.

With that in mind, PSC recognizes the actions taken by the U.S. Government to support the DIB during the COVID-19 pandemic. Specifically, DoD’s increase in progress payments in March 2020 benefitted the industry as a whole, as prime contractors flowed down the appropriate funding to suppliers and sub-contractors and helped bolster the defense industry ecosystem. That said, it is also important to recognize that the economic crisis stemming from the pandemic and unstable economic conditions (e.g., risk to material non-availability, U.S. inflation at a decades-high rate that is two to four times the anticipated rate) is not over.

Therefore, it is critically important that these increased progress payments continue. Timely payments to prime contractors and flow down to sub-tier contractors will provide the cash flow necessary to maintain their ability to provide much-needed products and services in support of contracts. This is especially true for smaller companies.

2. Financing

a. Obstacles

The following obstacles to financing exist regardless of company size:

- **Access to capital/credit markets and cost of debt/financing.** Many companies rely on the availability of (and access to) credit markets, including bank credit lines, letters of credit, and surety bonds. The ability to leverage these tools on acceptable terms depends in

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part on prevailing market conditions, as well as a company’s operating results. Of note, companies with non-investment-grade corporate family credit ratings cannot access credit markets otherwise available to similarly rated companies during financial markets downturn. As a result, inadequate access to funding on acceptable terms could have a material adverse effect on business and financial performance.

In addition, companies may enter into contracts with vendors, suppliers or subcontractors that may be negatively affected by capital market events. If those counterparts are unable to perform their obligations to the prime contractor or government customer, the prime may be required to provide additional services or make alternate arrangements on less favorable terms with other parties to ensure adequate performance and delivery of service to our clients.

- **Disruptions in financial or credit markets.** In general (and including investment-grade companies that can more readily access capital under acceptable terms), disruptions within the markets could adversely affect customer's ability to finance projects, potentially resulting in contract cancellations or suspensions, project delays, and payment delays or defaults by the customers. Additionally, customers may be unable to fund new projects, may choose to make fewer capital expenditures, or may otherwise slow spending or seek more favorable contract terms. In particular, government and/or DIB customers may face budget deficits that prohibit them from funding proposed and existing projects or cause them to exercise their right to terminate contracts with little or no prior notice. Furthermore, any financial difficulties suffered by subcontractors or suppliers could increase costs or adversely impact project schedules. These disruptions could materially and negatively impact backlogs and financial performance.

- **Interest rates.** In light of globalization of financial markets and supply chains, volatile geo-political events, and monetary policies adopted by the Federal Reserve Bank (Fed) to reset equilibrium in consumer demand and supply, it remains difficult for companies to appropriately budget near term interest expense and cost of capital impacts over the next 12 to 18-months. The Fed has increased the interest rate benchmark the largest interest rate increase since 1994. The increase in the underlying interest rate benchmark has resulted in an “all-in” borrowing spread cost of at least ~1.25 to 1.5 percent, with the expectation for the Fed to continue to increase the benchmark index by up to 75 basis points (0.75 percent) per quarter. The net impact of these increases on debt servicing can be in the tens of millions of dollars for a large company and is significant for companies of all sizes.

- **Foreign currency exchange.** If operating under U.S. Government contracts with performance outside of the United States, a company may be subject to currency risk exposure, primarily when contract revenues are denominated in a currency different from the contract costs—e.g., a portion of consolidated revenues and consolidated operating expenses in a foreign currency can expose that company to risks associated with fluctuations in currency exchange rates. It also limits the ability to reinvest earnings from operations in one country to fund the financing requirements of operations in other countries. In addition, governments of certain countries have imposed—or may in the future impose—restrictive exchange controls on local currencies, making it impossible for

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7 In this context, the term “customer” may be the government/DoD customer or another contractor with which the company holds a subcontract.
companies to engage in effective hedging transactions to mitigate risks associated with currency fluctuations.

b. Companies who perform work both for DoD and in the commercial sector

On the commercial side, customers may require companies to provide credit enhancements, including but not limited to letters of credit, bank guarantees, or surety bonds, in order to be eligible to bid, win, or comply with contracts. They can also be required to provide performance guarantees to indemnify the customer. Any inability to bid on or win new contracts due to the failure of obtaining adequate letters of credit, surety bonds, or other customary credit enhancements could have a material adverse effect on business prospects and future revenues. Due to events that affect the banking and insurance markets, letters of credit or surety bonds may be difficult to obtain or may only be available at significant cost.

Moreover, large and complex projects may require use of a joint venture to bid and perform on a contract. Entering into joint ventures, alliances, or partnerships does expose companies to the credit and performance risk of third parties.

In addition, there may be restrictions or requirements on how a company may operate its finances. For example, a revolving credit facility may contain covenants restricting, *inter alia*, the ability to incur liens and indebtedness, sell assets, repurchase equity shares, and make certain types of investments. Other covenants may include maintenance of a maximum consolidated net leverage ratio and a consolidated interest coverage ratio as defined in the credit facility agreement, and such facility may not be available if financial covenants are violated or if default occurs. (Note: A breach of any covenant or inability to comply with the required financial ratios could result in a default.)

3. Prime Contractors (Regardless of Size Status) on Defense Contracts

b. Percentage of suppliers who receive contract financing

PSC notes that available data about DIB companies’ contract financing to subcontractors and suppliers are sparse⁸, but it remains important for DoD to solicit, collect, analyze, and interpret such data as the necessary underpinnings for any potential policy changes. For example, if DoD considers changes to increased progress payments (as mentioned earlier in these comments), those changes must reflect rigorous analysis of data so that DoD understands the range of possible second, third, and other order effects of those policy adjustments.

d. Criteria for supplier financing

PSC members noted that major factors include the ability of the supplier to self-finance, supplier size, criticality of the required part or service to the mission, speed required to perform the mission, and availability of alternate suppliers. Note: For many PSC members, the majority of suppliers receiving financing are small businesses.

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⁸ Note that this was not the case in the 1985 DFAIR report, because at that time, many DoD contracts included cost reimbursement clauses for prime contractors to collect subcontractor data and provide it to DoD. That practice largely ceased after the end of the Cold War.
e. Lower-tier suppliers’ knowledge of Government contract

Below the second tier of contractors who might see a Government contract referenced in a purchase order and might receive communications in pre-award discussions, it is likely that sub-tier contractors are unaware that they are working under a U.S. Government contract—or what that might mean for their business. There is currently no requirement or practical structural way to inform all levels of contract of the nature of the original prime contract. The Department and academic institutions participating in this DoD Contract Finance Study may want to consider ways in which an approach could be structured and implemented, as well as the advantages and disadvantages of such implementation. For example, a structured approach could facilitate the sharing of contract financing and other information so that DoD officials could better track and monitor the health and readiness of the entire DIB. It could also encounter legal challenges, given the lack of privity of contract with sub-tier contractors. The potential benefits of such an approach make it worth exploring.

Conclusion

It is the stated policy goal of DoD and the federal government to increase the number of companies contracting with the federal government. A corollary goal is to increase competition where it makes sense. In addition, many of the more than 90 executive orders issued by the current Administration rely in part on government contracting to achieve their objectives.

Success on all of these goals depends on contract financing policies and practices. As reflected in the comments, observations, and recommendations above, the current DoD Contract Finance Study needs to be broadened, deepened, and more interactive with industry partners in order to support that success.

I would especially like to underscore the importance of that last elements: this RFI and the resulting responses should signify the beginning of robust industry engagements on this important set of issues. PSC looks forward to helping to facilitate discussions and information exchanges, as needed.

Yours respectfully,

David. J. Berteau
President & CEO
AIA: Comments
Request for Information (RFI) on DoD Contract Finance Study
AIA Input to Contract Finance RFI, Questions 1 and 2.

In response the Request for Information on Contract Financing published on 17 June 2022, in the Federal Register, the Aerospace Industries Association (AIA) provides this consolidated response to questions one and two, and anticipates additional responses by individual aerospace and defense companies to questions three, four, and five. This response is intended to offer overarching concepts of financial health indicators and risk sharing with regards to contract financing that are common to AIA members.

1. Financial Health

a. What is your view of the financial health of the Defense Industrial Base? Has it improved over the last decade or two? Please provide your reasons and a description of any financial metrics that you think are relevant to answering these questions.

b. How does the Defense Sector compare to relevant commercial sectors when it comes to financial health? Please explain.

c. How important is cash flow and why? In the context of publicly traded companies, how do cash flow-related metrics influence executive compensation?

AIA Consolidated response:

The financial health of the defense industrial base (DIB) can be characterized as fair to poor. For the large defense primes, their financial performance and stability is generally good, but it must be pointed out that periods of uneven funding for the industry have resulted in significant consolidation over the proceeding decades resulting in the top of the industry being less than robust. Whether you measure financial health based on return on capital, profitability, size of industry or other measures, the DIB (or broadly Aerospace and Defense (A&D)) doesn’t compare well against other industries. See link for just an example of other industries that are more robust. [15 Most Profitable Industries in the World in 2021 (yahoo.com)]

Attempting to measure the entire DIB paints a much more tenuous picture. The marks of a financially robust industry would be an increase of entrants into the industry and robust competition. Both DoD and industry associations have noted the steep decline in companies associated with the DIB and an overall unwillingness of innovative companies to participate in the DIB (despite some isolated successes). Clearly, businesses are drawn to industries that provide for strong profitability, cash flow and positive returns. Given the exit of a significant portion of companies in the DIB, the reliance on single or sole source suppliers, and in many cases no domestic providers for certain items, it is difficult to score the health of the industrial base anything better than fair to poor.

The oft used phrase “Cash is King” truly is poignant. Consistent cash flow is necessary to run a business as that business has daily operating costs- employee payroll, supplier invoices, etc. A company needs cash to flow to make investments, to improve or develop products, build capacity, and pay its owners/stakeholders. To put it bluntly, a company cannot survive long without a steady and favorable cash flow.
AIA Input to Contract Finance RFI, Questions 1 and 2.

A deeper look into the importance of cash flow and the interconnectedness of the entire corporate financing structure is provided below. The following concepts are universal; not just limited to the US based A&D, but all who operate globally.

Corporations both public and private need operating capital for:

- Continuing operations
- Capital expansion and maintenance
  - Most A&D Contractors that support the DoD are in a capital-intensive business model
    - Manufacturing (heavy / light) facilities
    - Test Chamber/Research and Evaluation (R&E) facilities
- Contractors have set “lines of credit” with their established banks that they draw on when cash-flow does not meet the operating needs or Capital expansion / maintenance needs of the enterprise
- Interest on lines of credit (or any interest) is expressly unallowable per the FAR Cost Principles Section 31
- Even if USG made interest an allowable cost, each contractor only has a set amount in their “line of credit”
  - As such contractors must be judicious in the use of Corporate Capital
  - Decision making processes to use Capital are heavily scrutinized
    - Each decision is made with targets of return (ROI) as the outcome
    - The amount of and level of certainty of return provides the decision makers with data for decision making
    - Typically, each company has a threshold of a return expected to even bring forward a Capital request
    - Not all Capital requests are approved due to the limited dollars available and the cost of that capital. This includes the opportunity cost of passing on the instant request in favor of a higher return.

This construct is even more important to Small/Medium sized businesses. This situation lends requires A&D firms to make trade-off decisions on using their limited lines of credit for operating capital to make payroll, pay vendors, pay indirect expenses (benefits, Overhead, telecom) and the like or facilitate Contractors, in lieu thereof, to make Capital Improvement & Maintenance investments, Technology & Intellectual Property and other investments to further the United States capabilities to mitigate, neutralize current and emerging threats in a dynamic global environment.
2. Financing

a. For companies who perform work on DoD contracts as either a prime contractor or subcontractor, what, if any, obstacles have you encountered in obtaining financing? Please explain and also identify whether you are a large or small business.

b. For companies who perform work both for DoD and in the commercial sector, what is your view on how financing compares between DoD and your commercial customers? Please explain. What about delivery terms? For example, DoD's terms to prime contractors are 30 days. How does this compare to commercial terms?

AIA Consolidated Response

Beginning in 2010, DOD’s ‘Better Buying Power’ initiatives created challenges to the use of performance-based payments, the preferred contract financing method since 1994, through new DFARS-unique clauses that limited PBPs to 100% of incurred cost, added additional administrative burdens through actual cost data reporting requirements, and required contracting officers to first negotiate price on the basis of progress payments at 80% of cost, and then allow the contractor to request PBPs in exchange for price consideration. Following a sharp decrease in PBP use, from 76% in 2010 to 36% in 2016, Sec. 831 of the FY17 National Defense Authorization Act (NDAA) reestablished the preference for PBPs, noting that “...[DOD] has become even more focused on measuring cost as an output rather than focusing on measuring outcomes for the taxpayer and rewarding contractors for meeting those performance objectives.”

When DOD issued a proposed rule in 2018 to implement Section 831, it also made significant changes to policies governing progress payments; notably, lowering the customary progress payment rate (and maximum PBP rate) to 50% and installing an ‘enterprise-wide’ ‘performance’ construct to determine a contractor’s finance rate on an annual basis. AIA and the aerospace and defense industries fought vigorously for the proposal to be rescinded; DOD formally withdrew the proposed rule and promised greater collaboration with industry moving forward.

Sequestration and decades-long low inflation rates added an additional degree of volatility within the DOD Financing process in the push for fewer cost-sensitive efforts. The movement of contracts to fixed price efforts vice cost-sensitive contract arrangements tilts the risk towards industry. This has the ultimate effect of suppressing innovation as the aerospace and defense companies must hedge and take mitigating actions against risk. This suppresses innovation as companies must guard against taking an unrecoverable risk.

During the COVID Pandemic, contract financing was recognized as a unique mechanism capable of infusing additional cash into local economies by way of small business, by way of prime contractors. This fact was acknowledged with the class deviation that increased progress payments from 80% for larges business, and 85% for small to 90% and 95 respectively. Of the
nearly $6B provided in increased rate percentage payments, A&D companies generally affirmed that the payments were passed along to their subcontractors.

Additionally, if aerospace and defense firms do make the determination to conduct internal research and development for Government applications, these companies must find their own financing. This financing incurs a cost that is unallowable. In the case the firm chooses to invest additional dollars that are ultimately unrecoverable expenditures.

Given the fair-to-poor assessment of the DIB’s financial health, DOD should look at all possible avenues be looking at all possible levers to improve those situations. One important one would be cash flow. Instead of trying to determine if DoD policies are “just good enough” or on par with what other industries follow, DOD might take advantage of their remaining ability to drive the marketplace. Conversely a question DOD could ask is “how to create positive incentives around cash flow such that the DIB could become more financially robust and processes that attract vice repel new entrants”?

These concerns are common threads throughout the aerospace and defense industry. The DIB, infused with adequate, timely, and appropriately risk-assessed financing is in and of itself a national strategic asset and must be safeguarded. With contract financing for DOD efforts being such an integral facet of industrial base, more effort should be concentrated on removing barriers wherever and whenever possible.
Raytheon Technologies

Request for Information (RFI) on DoD Contract Finance Study
1. Financial Health

a. What is your view of the financial health of the Defense Industrial Base? Has it improved over the last decade or two? Please provide your reasons and a description of any financial metrics that you think are relevant to answering these questions.

Considering the pre-pandemic environment and looking back 10-20 years, the biggest negative impact to the financial health of the DIB was caused by sequestration. The reduction of spend during this time made the sector less attractive to small and mid-size businesses and also led to attrition of knowledge from larger companies as growth stalled. More recently, challenges to the DIB have come in the form of increased economic and operational uncertainty driven by the global pandemic and geopolitical turbulence. Worker retention is having an increasing impact on the DIB, as the instability initially experienced as the “great resignation” continues to reverberate, and as DIB partners find themselves competing with large commercial entities (e.g., Amazon, Microsoft) to attract and retain talented, affordable labor. The global impact of supply chain disruption has become nightly news, with prohibited sources for increasingly rare materials and commodities posing vexing challenges to the DIB’s (and DoD’s) need to compete for technological superiority. The resulting effect of heightened inflation, driven by the preceding factors, is reducing DoD’s purchasing power and resulting in a marketplace with less allure for non-traditional firms whose technology is desperately needed in modern defense systems.

Relevant strategic metrics include domestic defense-oriented spending as a percentage of GDP, as well as the US defense-oriented spend as a percentage of global defense spending. Foreign military spending on US systems is another relevant metric to consider. Tactically, the cash conversion cycle (CCC), as well as the potential impacts to the CCC of certain proposed legislation that would inhibit access to cash inflow or further mandate expedited payment to select business partners, are metrics that should be closely examined.

b. How does the Defense Sector compare to relevant commercial sectors when it comes to financial health? Please explain.

Overall, commercial sectors tend to see both higher risks and higher rewards due to the nature of the economic environment and relative stability of defense by comparison. Defense is less prone to peaks and valleys on a relative basis (sequester aside). Many companies that support defense also support commercial aerospace, as expected, given the complementary nature of the technologies.

c. How important is cash flow and why? In the context of publicly traded companies, how do cash flow-related metrics influence executive compensation?

Cash flow is the life blood of any organization, whether commercial or defense, for profit or non-profit. The ability to generate cash inflows, over the long run, that exceed the cost of operating the current business is necessary to sustain an organization. Without access to disposable cash (similar to personal disposable income) the organization cannot reinvest capital funds to sustain current operational levels in factories and engineering labs, invest funds in researching new technologies, and develop new and more efficient ways of operating or expanding capacity to provide more output than it currently has available.
The two ways to generate cash are to borrow money or to operate a profitable business that creates excess cash through operations; a combination of both is often used. As expected, borrowing creates a drag on cash flow via interest expense.

It is common for total executive compensation to be based, in part, on the company’s performance against an established cash flow metric, given the importance of generating cash. Publicly traded companies provide details of those metrics in their proxy statements made available through SEC documents and company investor relations websites.

2. *Financing*

   a. For companies who perform work on DoD contracts as either a prime contractor or subcontractor, what, if any, obstacles have you encountered in obtaining financing? Please explain and also identify whether you are a large or small business.

      As a large business, we generally have no issues obtaining financing as a normal course of performing work on DoD contracts. On production contracts, we traditionally obtain either progress payments or milestone payments depending on the service offered or history for annual production lots. Obstacles are sometimes encountered when requesting milestone payments. The need to identify mutually agreed-upon criteria, valuation, and approval for milestone payments requires additional effort and approvals for both Contractor and DoD.

      As a large business, we do not take avail of much (if any) advance payment financing.

   b. For companies who perform work both for DoD and in the commercial sector, what is your view on how financing compares between DoD and your commercial customers? Please explain. What about delivery terms? For example, DoD’s terms to prime contractors are 30 days. How does this compare to commercial terms?

      In the commercial sector, each situation is unique, so it’s difficult to draw a consistent conclusion or comparison. For example, DoD is often the sole customer of a product, and no other market exists. In such cases, financing is necessary given the guidelines on pricing. In addition, DoD contract durations can often extend two to three years before deliveries may occur. In a commercial setting for large industrial types of efforts, some form of down payment and milestone cash events would be expected and required to fund the effort as it progresses.

      Commercial payment terms vary widely, and in some situations where extended terms are requested, parties often work in conjunction with a supplier financing arrangement that relies upon a third party to finance the effort.

3. *Prime Contractors (Regardless of Size Status) on Defense Contracts*

   a. What is your size status (see Federal Acquisition Regulation (FAR) part 19) in the context of your defense work?
Large Business

b. What percentage of your suppliers receive contract financing (payments prior to delivery) from your firm?

Less than 30% of suppliers receive contract financing

c. Is the answer different for large business suppliers than for small business suppliers? Does one group receive financing more often than the other?

Since COVID, RTX has made a concerted effort to support small and small diverse suppliers through increased use of contract financing.

d. What are your criteria for determining which suppliers receive financing?

Suppliers must initiate the request for contract financing and are then considered based upon supplier financial need, contract type, amount and duration.

RTX follows FAR PART 32 in providing contract financing to suppliers.

e. How do your lower-tier suppliers know they are performing under a Government prime contract?

A tier-one supplier first knows whether they will be performing under a Government prime contract during the request for proposal (RFP) phase, when RTX indicates the name of the program (as permitted) and the good or service requested.

When RTX places an order with a tier-one supplier, the purchase order document will reference the good or service being procured and it will include a reference to the prime contract number under which the relevant order is being placed.

In turn, in each instance in which RTX places an order with a tier-one supplier in support of a USG prime contract, RTX incorporates by reference our Contract Clause Flowdown documents (“Flowdown T&Cs”) in effect as of the date of the particular order. These documents contain all mandatory contract clauses applicable to the particular order. Moreover, the Flowdown T&Cs require our tier-one suppliers to incorporate the Flowdown T&Cs in each lower-tier subcontract placed in support of the relevant order, thereby ensuring awareness among lower tier suppliers.

f. If you have been or are receiving a higher progress payment rate due to the COVID-19 pandemic, have you accelerated payments to your suppliers since the COVID-19 pandemic? If so, by how much time have you accelerated payments to your suppliers? Please be specific. Did you provide financing (predelivery payments) to suppliers that were not receiving financing prior to the COVID-19 pandemic?

RTX has increased the use of accelerated payments to small businesses since COVID and had provided over $3B in accelerated payments to small and small diverse businesses between April of 2020 and December of 2021. We have continued to accelerate payments to small businesses in 2022, with no change to our practice since the start of the pandemic. In 2022 over 4,000 suppliers have received accelerated payments. The extent to which these payments have been accelerated depends upon the original contract payment terms. In
general, suppliers receiving accelerated payments are paid between two weeks to a month early.

g. If you did not receive a higher progress payment rate due to the COVID-19 pandemic, e.g., you do not receive progress payments on your defense contract, did you accelerate payments to your suppliers since the COVID-19 pandemic? If so, by how much time have you accelerated payments to your suppliers? Please be specific and address the extent to which you have accelerated payments. Did you provide financing (predelivery payments) to suppliers that were not receiving financing prior to the COVID-19 pandemic?

N/A

4. Subcontractors or Suppliers (Regardless of Size Status) under a Defense Contract

a. When you are performing as a subcontractor or supplier under a defense prime contract, how do you know that the ultimate customer is the Federal Government?

As a large, traditional member of the Defense Industrial Base, we are usually aware of the status of the Requiring Agent as a matter of common practice. DoD contracts are typically indicated at the subcontract level through a variety of means, to include indication within the original RFP and accompanying SOW/PWS language; through terms and conditions that are mandatorily flowed to us or negotiated with us based upon the decision of the Prime; and through traditional markings on the subcontract or purchase order identifying the original Requiring Agent and contract.

b. Do you know the prime contract number (between the prime and the Government)? If so, how? Do you know who the Federal Government contracting officer is, or how to contact them? Would you be willing to contact the contracting officer if you were experiencing issues getting paid?

We are typically aware of the Prime contract number due to the fairly standard industry practice of placing the original contract number on a subcontract or purchase order for the purpose of tracing requirements, financing activity, contract administration, payment, etc. from Prime contract to suppliers. We are also comfortable in determining contact information for the Contracting Officer, but rarely find the need to effect direct contact due to privity. It has been our traditional chosen approach to work through the Prime contractor for matters of contract administration, and to only make mention of select problematic issues during rare occasions, such as at Program Management Reviews (PMRs) when such notifications are provided with full transparency.

c. Have financing payments or payments upon delivery from your customer (contractor) been accelerated during the COVID-19 pandemic? What are your normal terms and how much time have payments been accelerated? Did you receive financing (predelivery payments) from your prime or higher-tier contractor that you did not receive prior to the COVID-19 pandemic?

As a large, traditional member of the Defense Industrial Base, we did not experience any routine improvements to contract financing or payments when performing in a subcontract role during the pandemic. Typical negotiated terms and conditions prevailed (e.g., Net 15 to Net 30).
d. Are there any conditions (e.g., changes in terms) associated with receiving payments from your prime or higher tier contractor in a more expedited manner?

We noted no COVID-induced improvement to payment conditions. Rather, we observed an environment of general expediency throughout the DIB as a result of Federal/DoD attention being placed on the importance of cash flow during the pandemic.

5. Small Businesses Performing on Defense Contracts

a. If you are a small business performing as a prime contractor, what is your experience regarding receipt of timely payments from DoD?

Not applicable

b. If you are a small business performing as a supplier or subcontractor, are you aware of whether the clause at Defense Federal Acquisition Regulation Supplement (DFARS) 252.232-7017, Accelerating Payments to Small Business Subcontractors – Prohibition on Fees and Consideration, is in the prime’s contract? Is the substance of this clause in your subcontract?

Not applicable.

c. What are your normal payment terms (e.g., amount of time) for financing and for delivery?

Not applicable.

d. Are you receiving accelerated payments from your prime contractor? By how many days are payments being accelerated?

Not applicable.
Sterling Design

Request for Information (RFI) on DoD Contract Finance Study
Sterling Design, cage 4LLQ0, has been designing, manufacturing and sustaining weapons systems with zero defects for the past 30+ years for all the services, plus the Coast Guard and some NATO members.

We are a small business. All of our work has generally been below the simplified acquisition threshold and has been firm fixed price.

I speak ONLY for Sterling Design and no other company.

All of our revenue is with the USG or NATO members and none is commercial.

We are a closely held corporation not publically traded. All of our work has been as a prime contractor.

For any business including the USG cash flow is imperative, if you don’t have the money to pay for something it doesn’t get done.

In all our work we pay our people and suppliers immediately, therefore we draw down from retained earnings of past contracts or company owner loans to pay these expenses while we await payment from the USG. We do not use accounts receivable financing for several reasons including in some contracts this is prohibited.

If it is required that we need to notify sub contractors of say DPAS ratings we do so and therefore they are notified of that rating. Since some purchased parts are commercial off the shelf yet contractual we often do not tell them it is for USG use for fear of them not performing their promises. A lot of commercial companies in the US will not take USG related orders.

Where the current fars are deficient is twofold.

When a firm fixed priced contract is terminated for the convenience of the government there is no allowance for interest on loans from any source (commercial or private including owner loans). These are prohibited by the so called part 31 no interest rule. Attempts to put interest on loans to perform the contract are never considered to be facilities expense which is open for reimbursement to the very large prime contractors under cost plus. Thus in a termination interest even though paid or imputed is not currently reimbursable. This is a serious deficiency. This should be allowed just like any other cost in a termination proceeding including part 12 contracts.

Secondly, we have a termination for convenience going back 6 years that is a 6 x multiple of our total annual revenues. DCMA termination officer and the original service agency DLA’s pc0 have completely ignored our requests for partial payment despite multiple requests and complete documentation. Since servicing this enormous debt for a small business represents a serious threat to the continued existence of our small business, having an interest provision as part of post termination expenses is a vital and important part to the continued survival of a small business including ours. This provision should be added to the current allowable post termination costs as both a reasonable expense and as a deterrent to unreasonable delay of processing a termination for the convenience of the government.

All of these new provision could look just like interest assessed in the situation where payment is not
made in accordance with fast pay regulations.

I am available for further discussion of these two issues.

Best
Dick Kessler
Sterling Design
Cage 4LLQ0
Anonymous: Comments

Request for Information (RFI) on DoD Contract Finance Study
3. Prime Contractors (Regardless of Size Status) on Defense Contracts

a. What is your size status (see Federal Acquisition Regulation (FAR) part 19) in the context of your defense work?

A: Large business

b. What percentage of your suppliers receive contract financing (payments prior to delivery) from your firm?

A: Roughly a quarter of our suppliers receive some form of contract financing.

c. Is the answer different for large business suppliers than for small business suppliers? Does one group receive financing more often than the other?

A: Of those suppliers who receive contract financing, over 2/3 of those suppliers are large businesses.

d. What are your criteria for determining which suppliers receive financing?

A: A number of factors are considered and reviewed when deciding whether it is appropriate to provide a supplier contract financing payments, including the type of prime contract and specific prime contract clauses included, the type of deliverables, the period of performance required, the adequacy of the suppliers accounting system (if applicable), needed government approvals, supplier business size, any potential risk to the contractor and a number of other considerations to ensure that financing serves the purpose identified.
e. How do your lower-tier suppliers know they are performing under a Government prime contract?

A: USG Contract name and number are incorporated by reference into the subcontracts that lower-tier suppliers are performing on under these prime contracts with, additionally, applicable general terms and conditions as well as Department and/or specific program flow downs being included. It is expected that each supplier in the supply chain in turn flows down such terms, as applicable, to the sub-tier suppliers that they are using in performance of their work under that Government prime contract.

f. If you have been or are receiving a higher progress payment rate due to the COVID–19 pandemic, have you accelerated payments to your suppliers since the COVID–19 pandemic? If so, by how much time have you accelerated payments to your suppliers? Please be specific. Did you provide financing (predelivery payments) to suppliers that were not receiving financing prior to the COVID–19 pandemic?

A: In general, our standard payment terms are Net 30. Since the pandemic, our average days payable is ~17 days overall. For small businesses, our average days payable is ~7 days. Accelerated payments were made to suppliers with contract financing and without (payment triggered at delivery). In limited cases, we provided financing to suppliers that were not receiving financing prior to the COVID–19 pandemic where appropriate and warranted.

4. Subcontractors or Suppliers (Regardless of Size Status) Under a Defense Contract

a. When you are performing as a subcontractor or supplier under a defense prime contract, how do you know that the ultimate customer is the Federal Government?

A: There are generally a number of ways that a subcontractor is made aware. Generally, the prime contract number and CPAS rating is included on the Purchase Order. If the contract exceeds the simplified acquisition threshold, the sub would be asked for cost and pricing data in support of a government contract. Failing all else, the sub may query the buyer upon the receipt of the RFP/Q, depending on the nature of the goods requested as to whether or not the request was in response to a USG contract.
b. Do you know the prime contract number (between the prime and the Government)? If so, how? Do you know who the Federal Government contracting officer is, or how to contact them? Would you be willing to contact the contracting officer if you were experiencing issues getting paid?

Generally, the prime contract number and CPAS rating is included on the Purchase Order. The Contracting Officer is not known, but often may be determined by additional resources. Most supplier Purchase Orders prohibit the subcontractor from contacting the prime’s customer directly. As the sub would not have privity of contract with the prime’s customer, if we were having issues with our prime we would address those issues directly with the prime.
DEPARTMENT OF DEFENSE

Contract Finance Study

APPENDIX J

PROGRESS PAYMENT DEVIATION REVIEW
BY THE DEPARTMENT OF DEFENSE
DEPARTMENT OF DEFENSE

Progress Payment Deviation Review

Office of the Under Secretary of Defense for Acquisition and Sustainment

November 2022
Section 1. Progress Payment Deviation

A. Purpose.
Class Deviation 2020-00010 was issued on March 20, 2020, shortly after the Presidential declaration of a National Emergency due to COVID-19, to address what Industry identified as the number one issue the Defense Industrial Base was facing due to the pandemic: liquidity or cash flow challenges at all levels of the supply chain and in particular with respect to small businesses. Specifically, through the class deviation, the progress payment rate for large business concerns was increased from 80% to 90% and the small business progress payment rate was increased from 90% to 95%. The determination of urgency issued in conjunction with this class deviation explained that the deviation was needed to prevent the loss of critical skilled labor, sources of supply, and warfighter capabilities due to reduced cash flow that could negatively impact the ability of members of the Defense Industrial Base to make payroll, maintain pre-pandemic manning levels, and support material throughput levels. Through the deviation, the Department was able to increase cash flow at the prime contract level by providing additive progress payments. (“Additive progress payments” refers to the increase in progress payment amounts received as a result of the higher progress payment rates implemented via the class deviation.)

The deviation also required flow-down of the applicable increased progress payment rate to large and small business subcontractors receiving progress payments, resulting in additive progress payments for these suppliers, as well. Although it was not intended to be a permanent change, the class deviation did not identify a termination date, as it was unknown how long it would be needed. It should be noted that the deviation versions of FAR clause 52.232-16 and DFARS clause 252.232-7004 were incorporated into prime contracts via unilateral “mass modifications” issued by DCMA for contracts under their cognizance (i.e. where they are performing Contract Administration Services), along with a small sub-set of contracts to which they do not have cognizance. It was not possible for the deviation versions of these clauses to add new requirements, e.g. for the prime to pay its subcontract invoices on an accelerated basis, because modifications incorporating such a change would have needed to be issued bilaterally. Due to the sheer volume of affected contracts, and the urgency of the needs expressed by the contractor community, the Department elected to focus on actions which could be quickly and unilaterally implemented.

B. Primary Recipients of the Deviation.
As of August 31, 2022, 183 prime contractors have received the benefit of additive progress payments provided by the deviation. DoD estimates $8.17B in additive progress payments have been made through August 2022. Of this total, over 99% went to large businesses and the remainder went to small businesses. The top five recipients received 83.7% of the additive progress payments, and the top ten recipients (all large businesses) received 95.4% of the increased progress payments. In the aggregate, DoD does not have insight into the additive progress payment amounts that were provided to subcontractors due to the increased progress payment rates that were flowed down, however, Section 2 of this document provides insight into the extent of additive subcontract progress payments based on the selection that was reviewed.
C. Actions Taken by Defense Contractors Receiving Additive Progress Payments.

While there was no formal tracking of the cash flow infusion, the Department did receive early feedback in Spring of 2020 from major beneficiaries of the deviation that addressed how the additive progress payments were being used to assist suppliers. Examples included targeting distressed suppliers to provide support, quick flow-down of funds coming from the increased progress payment rate, accelerated delivery payments to small businesses, and subcontract payment turn-around time of less than fifteen days. It is also worth noting that aid in the form of accelerated payments to suppliers could be (and to some extent was) provided even under contracts which did not authorize progress payments at the prime level. In late 2020, the Department issued a data call to 28 DoD contractors to obtain additional information, with mixed results, as noted by the US Government Accountability Office (GAO) Review (see subsequent paragraph).

D. GAO Review.

The GAO conducted a review of DoD’s oversight of payments made under the class deviation, and in February 2022 issued GAO Audit GAO-22-105007, “Defense Contracting – More Insight into Use of Financing Payments Could Benefit DOD in Future Emergencies”. According to the GAO report, House and Senate conferees supported DOD’s actions to increase cash flow but raised questions about whether and how companies that received those funds increased the rate of payments to subcontractors, and GAO was directed to examine the extent to which DoD established effective oversight procedures to ensure that the recipients of the additive progress payments provided, as appropriate, increased payments to their subcontractors and other suppliers (HRpt 116-617 to accompany the National Defense Authorization Act (NDAA) for FY 2021). GAO found that DoD’s efforts resulted in minimal insight – 12 of 28 contractors responded to DoD’s data call, and DOD did not validate reported information, follow up on missing information, or request additional information. GAO recommended that DoD determine what data would be needed and identify options for collecting these data in order to maximize the impact of using progress and advance payments to help support the industrial base should it decide to follow a similar approach in future national emergencies.

E. Questions about Stock Buybacks and Dividends.

The Department received questions about whether some major defense contractors were using the additional funds that came from the progress payment deviation for the purpose of buying back shares of stocks and paying dividends, including at record rates. The Deviation did increase available cash, not just for materials and subcontracts, but for all costs incurred, including labor and indirect costs. However, a company must “incur” costs on a specific contract to receive progress payments and therefore, a direct link cannot be made between this use of Government funds and these specific cash outlays. Once a company has received a progress payment, it is free to decide how it will use the financing received from the Government. The ability of a company to use available cash for buybacks and dividends would be indicative of a financially healthy company.

F. Need for a More Detailed Review.

After two years of the deviation being in effect, in March 2022, the Department determined a detailed review was in order. In addition to responding to the GAO’s recommendation to look at options that might be used in the event of future national emergencies, the Department determined it was
important to “look under the hood” and see impacts of the deviation at the supplier level. Clearly, prime contractors were (and are) benefiting from the effects of the deviation, but it was unclear what was happening at the supplier level (outside anecdotes), including the extent to which supplier payments were actually being accelerated. Due to the importance of cash flow, the Defense Industry has repeatedly stressed the criticality of keeping the deviation in place, including to help suppliers. However, other COVID actions taken by the Government had started to expire as follows:

- CARES Act SBA – Debt Relief – Ended Sep 2020; extended to Feb 2021 for some businesses
- American Rescue Plan – Employee Retention Credit – Ended Dec 2020
- CARES Act – COVID-19 Stimulus checks for individuals – Final payments Mar 2021
- CARES Act SBA – Paycheck Protection Program – Ended May 2021
- Financial Assistance for Housing – Rental Assistance – CDC moratorium ended Aug 2021
- CARES Act Section 3610 – Reimburse Paid Leave – After 3 extensions, final expiration Sep 2021
- CARES Act SBA – Economic Injury Disaster Loans – Ended Dec 2021
- CARES Act – Advance Child Tax Credit – Ended with 2021 tax year
- CARES Act Federal Unemployment Benefits – Ended Sep 2021
- Student Loan Repayments – Suspension of Payments – Ending Dec 2022

The decision to put the progress payment rate deviation in place was a subjective one, based on very serious events that required swift and decisive action by the Department. The deviation was not intended to be permanent. The purpose of the Progress Payment Deviation Review was to look at actual progress payments, both pre-Deviation and post-Deviation, to evaluate the impacts of the deviation on a selection of contracts. DPC partnered with Defense Contract Management Agency to conduct the review.

Section 2. Description and Results of the Progress Payment Deviation Review

A. Description.
With the assistance of DCMA, DPC conducted a review of the extent to which the additional cash flow to prime contractors due to the increase in progress payment rates authorized by Class Deviation 2020-O0010 was flowed down to suppliers, as well as the extent to which supplier payments have been accelerated. This review was performed to better understand how the increase in cash flow has benefitted the defense industrial base at lower supplier tiers. The information gathered will also be used to inform the ongoing DPC Finance Study.

DPC selected twenty-two contracts which received progress payments from 2020 through March 2022 for review. Two progress payment requests from each contract (one from early 2020 and the other being the most recent progress payment request submitted prior to March 2022) were selected for analysis. A total of 745 subcontract invoices associated with the prime progress payment requests were reviewed. The selection included four instances of contracts awarded to two different divisions of the same corporation. The companies and subcontractors in the population reviewed (twenty-two contracts) received $516,988,716 in “additive progress payments.”
B. Results.

(1) Subcontract Flowdown
The deviation required prime contractors receiving progress payments to flow down the increased progress payment rate to subcontractors. The following graphic shows how the additive progress payments were distributed between the prime contract level and first tier subcontractors under the 22 contracts analyzed by the Progress Payment Deviation Review through March 2022.

![Graphic: $517M Additive Progress Payments Distribution]

This data shows that prime contractors benefited from increased cash flow as a result of the additive progress payments due to the deviation. The prime contractors under the twenty-two contracts received a total of $517M in additive progress payments. Of that total, the prime contractors received $277.5M in additive progress payments applicable to incurred labor costs, other direct costs, and indirect costs, that would generally be retained at the prime level. The remainder of the additive payments are associated with materials, subcontract deliverables and subcontract financing. The remaining $239.5M represents additive progress payments that were provided to prime contractors to assist in paying their subcontract obligations. $226.2M of that amount benefited prime contractors, which received a higher percentage of their incurred subcontract delivery costs, thus reducing the amount of their own resources needed to pay for subcontract deliveries. The $13.3M remainder was flowed down to nine subcontractors in the form of additive progress payments. Of the $13.3M in additive subcontract progress payments, $0.7M went to four small business subcontractors/suppliers. Ultimately, the deviation flowdown requirement was of limited benefit to the thousands of subcontractors/suppliers performing on the contracts, as the vast majority did not receive progress payments.

(2) Accelerated Payments
Due to the need to quickly issue the deviation, the scope of the deviation was limited to actions that could be implemented unilaterally. Therefore, the deviation did not and could not require companies to make accelerated payments to their subcontractors as a result of the increase to the progress payment
rate. For the population reviewed, the aggregated data shows on average, subcontract invoice payments made after the issuance of the class deviation were accelerated by 0.2 days in comparison to the subcontract payment terms, which is a 0.6 day improvement in comparison to the 2020 pre-deviation average. The data indicated that some companies made concerted efforts to accelerate payments, in particular to small business suppliers, but the average subcontract payment timelines for other companies actually increased after issuance of the class deviation. There was no consistent trend with respect to acceleration of subcontract invoice payments. The data analyzed in the context of the Progress Payment Deviation Review shows a negligible impact overall.

The following table displays the average subcontract payment terms (e.g., net 30) for the selected subcontracts related to each reviewed prime progress payment request, and the average number of days it took prime contractors to make payments to their subcontractors, measured from the subcontractor invoice date to the paid date. Between March 2020 and March 2022, the average subcontract payment terms increased 2.6 days, and the actual payment days increased 2.0 days. While the average payment terms increased slightly in 2022 as compared to 2020, the actual payment days in 2022 reflect an acceleration of 0.2 days in comparison to the average 2022 payment terms.

<table>
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<th>Average Payment Terms from 2022</th>
<th>Actual Payment Days-2020</th>
<th>Actual Payment Days-2022</th>
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</thead>
<tbody>
<tr>
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<td>32.0 days after receipt of invoice</td>
<td>34.6 days after receipt of invoice</td>
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</tr>
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<td>10 – 90</td>
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<td>Days Accelerated</td>
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<td></td>
<td>(0.4)</td>
<td>0.2</td>
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Section 3. Recommendations Going Forward.

The Class Deviation was one of many steps taken by the Federal Government in the wake of the Presidential declaration of a National Emergency, to attempt to insulate individuals, families, and businesses from the economic impacts of the COVID-19 Pandemic. Specifically, the objective of the deviation was to infuse additional cash flow and liquidity in all levels of the Defense Industrial Base. As this Progress Payment Deviation Review has shown, the impact of the deviation at the supplier level was limited, because accelerated subcontract payments were not contractually required. Further, the contractually required aspect of the deviation, flowdown of the higher progress payment rates to the supplier level, also had limited impact because of the small number of subcontractors receiving progress payments. Lastly, the review showed that small business subcontractors, which were arguably most at risk during the pandemic, received only a very small portion of the additive progress payments distributed as a result of the deviation. As prime contractors, they received less than one percent. These are excellent lessons learned for the future and the on-going DoD Contract Finance Study.
The following recommendations are made:

**Recommendation 1.** Retain the deviation rate of 95% for small businesses.

**Recommendation 2.** Return to a customary progress payment rate of 80% for large businesses. It should be recognized that retaining the higher progress payment rate for small businesses will not harm large businesses who will be required to pay small business subcontractors receiving progress payments at the higher rate. Under the progress payment regulations, Government progress payments recognize 100% of subcontractor financing payments, which means that the “effective” rate of progress payments to prime contractors (or subcontractors) can be higher than the customary rates.

**Recommendation 3.** Due to the importance of cash flow to industry, it is recommended that the return to 80% be implemented in a manner that minimizes disruption. It is important to give advance notice to Industry, such as two to three months.

**Recommendation 4.** Future deviations must be constructed in a manner that ensures that the primary objectives of the deviation are linked to contractually binding requirements. The intent behind the deviation was well-founded and some companies made serious efforts to use their own increased cash flow as a result of the deviation to aid suppliers and continue to do so, today. However, the only contractually binding requirement of the deviation was to flow down the progress payment rate to subcontractors receiving progress payments, and any actions beyond that, such as accelerating payments to suppliers, were at the discretion of the company receiving the additive progress payments. Any future deviations issued with the intent of benefiting lower-tier suppliers must include contractually binding requirements to produce the intended outcomes.

**Recommendation 5.** DoD should explore the use of a higher than customary progress payment rate to motivate or reward large businesses for behaviors the Department wants to encourage. For example, based on this review, one possibility would be to tie incremental increases in the prime’s progress payment rate to the speed with which the prime contractor pays its subcontractors.

**Recommendation 6.** Follow up on “other matters” that came to the Department’s attention as a result of this review, including use of FAR clause 52.232-40 Providing Accelerated Payments to Small Business Subcontractors and its DFARS companion clause 252.232-7017 in contracts and the potential effectiveness of these clauses; options for addressing late payments to small businesses; actions to take when a company declines to provide data; and the extent of DoD oversight of progress payments, including the roles of DCMA and DCAA.

**Recommendation 7:** Pursue regulatory changes and statutory changes, as appropriate, with a focus on flowing down the benefits of contract financing to suppliers throughout the supply chain.