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**ANALYSIS OF THE SCALE OF ANNUAL
APPROPRIATION RETURNED TO THE U.S. TREASURY**

June 2022

**By: Laura Maple
 John B. Pomy**

**Advisor: Robert F. Mortlock
Second Reader: Raymond D. Jones**

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RETURNED TO THE U.S. TREASURY**

Laura Maple, Civilian, Department of the Navy
John B. Pomy, Major, United States Marine Corps Reserve

Submitted in partial fulfillment of the
requirements for the degree of

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from the

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Approved by: Robert F. Mortlock
Advisor

Raymond D. Jones
Second Reader

Robert F. Mortlock
Academic Associate, Department of Defense Management

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Future research could investigate the COVID-19 impacts due to restricted movement, remote work, and hindrances to the supply chain to identify additional areas to increase the flexibility of the PPBE process.

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LIST OF ACRONYMS AND ABBREVIATIONS

ARP	Acquisition Research Program
BA	Budget Authority
BAA	Budget Accounting Act
BES	Budget Estimate Submission
CAPE	Cost Assessment and Program Evaluation
CR	Continuing Resolution
CY	Calendar Year
DAS	Defense Acquisition System
DCMA	Defense Contract Management Agency
DPG	Defense Planning Guidance
DOD	Department of Defense
DON	Department of the Navy
FY	Fiscal Year
FYDP	Future Year Defense Program
GAO	Government Accountability Office
HASC	House Armed Service Committee
JCIDS	Joint Capabilities Integration and Development System
NDAA	National Defense Authorization Act
NDS	National Defense Strategy
NSS	National Security Strategy
OMB	Office of Management and Budget
O&M	Operation and Maintenance
OMN	Operation and Maintenance, Navy
POM	Program Objective Memorandum
PPBE	Planning, Programming, Budget, and Execution
R&D	Research and Development
SASC	Senate Armed Service Committee
U.S.	United States

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I. INTRODUCTION

In 1920, after World War I, the United States became a world power but also took on a substantial amount of debt (\$24.5 billion; Candreva, 2017, p. 93). As a result, in 1921, the Budget Accounting Act (BAA) was established to create a modern budget process and structure for the executive branch of the federal government. The BAA gave the president the power to shape the federal government and make resource allocations and proposals to Congress. It also created what is now the Office of Management and Budget (OMB), which governs the executive branch processes. They prepare, submit, and execute budgets. To balance the powers, Congress created a central audit agency that aligned with the legislature and is now called the Government Accountability Office (GAO).

Fielding a new warfighting capability or technology is achieved, in part, by obtaining proper funding. The future of U.S. military operations revolves around budgets and appropriation sources. Every year there is a budgetary action, which is initiated on the first Monday in February. When the U.S. president submits a budget request to Congress, they initiate Congressional review in the yearly budget process (United States Senate, n.d.). The U.S. military and defense acquisition system relies on Congress to pass all appropriations bills, based on the president's recommendations and congressional priorities, by October 1 (United States Senate, n.d.). The approved budget appropriations act provides legal authority to obligate funds from the U.S. treasury to pay for labor, goods, and services (Brien et al., 2020). If not approved, Congress must enact a continuing resolution (CR), or stopgap funding legislation, to allow the government to maintain operations. Unfortunately, CRs are considered the norm over an approved appropriation, which hinders the ability to maintain defense superiority. According to the GAO, Congress passed CRs to keep agencies running between budgets in all but 4 out of the 40 years before 2018 (Krause, 2018). Either an appropriation or a CR is required, or the government risks a partial shutdown (Krause, 2018). CRs can keep the government afloat, but they can cause a cascade of funding issues, especially for efforts operating under operations and maintenance (O&M) appropriations. Additionally, unapproved new programs may not be initiated while under the CR. All O&M appropriated activities are impacted during CRs;

this includes the cost of operating and maintaining equipment in a state of readiness, civilian salaries, travel, minor construction projects, base operational support, training, education, and operational capability of U.S. military forces.

O&M appropriations experience organic constraints with their 1-year obligation period. When CRs are enacted, there is a reduced periodicity for Operation and Maintenance, Navy (OMN) expenditures, and end-year obligations tend to surge (Defense Technical Information Center [DTIC], 2019). Frederico Bartels (2021) reported that “the DOD manages around \$700 billion annually, where budget requests for funding are developed years before their execution” (p. 1). A 10% allocation error could result in \$70 billion unappropriated and thus not applied to meet national security challenges. Some types of funding allow for carryover. However, the current O&M fund’s policy does not allow the obligation of funds in later years (AcqNotes, n.d.-b). When a rollover option to the next fiscal year (FY) is not available, termed “use it or lose it,” funds are canceled. From FY2013 through FY2018, the Department of Defense (DOD) had over \$81 billion canceled, where over half (\$49 billion) was from O&M accounts (Bartels, 2021). Within the same report, the GAO determined that the DOD has canceled \$127.61 billion within a 10-year span (2009–2019), where OMN was the account most affected (Bartels, 2021).

Even with funding deadlines and constraints, the Navy must maintain a state of readiness, where military readiness is the ability of the United States to produce, deploy, and sustain military forces that will successfully perform in combat or a state of adversarial events (Herrera, 2020). The Fundamentals of Military Readiness, a Congressional Research Service report, states that warfighter readiness is principally funded through O&M appropriations supplied annually through Congress (Herrera, 2020).

For the fiscal year 2021, the DOD requested approximately \$290 billion in operational and maintenance funding, amounting to approximately 41% of the department’s overall discretionary budget request. In addition, both DOD and Congress have acknowledged that other types of appropriations may also be used to contribute to readiness (i.e., acquisition funding, 3-year appropriation or obligation window). An important consideration for Congress is the oversight of readiness funding (Herrera, 2020).

Without the proper level of funding oversight, funding can be misappropriated and result in funds being returned to the treasury. When projects are under-obligated at designated expenditure rates, fear spurs the idea of decremented funding in future years (DTIC, 2019). This problem highlights DOD spending to Congress during the budget review process before the National Defense Authorization Act (NDAA) and Appropriation Acts are signed and supplied each year. Budget line item requests need to be based on sound estimates and forecasting to ensure obligations made during a given appropriation year can be fully executed in support of warfighter requirements. However, the burden is on Congress to pass the NDAA and Appropriation Acts on time and allow operational and maintenance efforts the entire year to obligate.

Trade-offs within the DOD budget chain could be more streamlined to enable a modernized version of the planning, programming, budgeting, and execution (PPBE) process. This thesis reviews big “A” acquisition, the PPBE process, “colors” of money, appropriations windows, and comptroller-dictated obligation “gates” for spending. This research focuses on OMN funding. Additionally, this research includes a presumptive root cause analysis, a comparative analysis of year-over-year obligation rates, and the percentage of returned funds. In conclusion, known, unknown, and assumptions for the returned funds were identified along with recommended corrective actions to improve the efficiency and effectiveness of budget execution.

A. THE RESEARCH QUESTION

This thesis identifies the root causes and examines the scale of OMN funding that is returned each year. The big “A” acquisition process is described, along with an outline of the PPBE process and types of DOD funding. The appropriation window is indicative of the funding profile. This research seeks to identify the magnitude of returned money to the treasury each year and magnitude of the budgetary implications with delayed appropriation approvals and continuous resolutions.

B. SCOPE, LIMITATIONS, AND ASSUMPTIONS

An initial root cause analysis was developed to access the knowns, unknowns, and assumptions for the thesis topic. Additionally, a funding review was conducted on the

average percentage (relative to the total percentage) of FY funding returned. The compilation of the data was pulled from the under secretary of defense (comptroller). The focus of the research is limited to the Navy with reference to the Service level and DOD funding levels. Additionally, the research is limited to O&M funding; however, the presumption is that other funding types experience similar impacts.

C. RESEARCH METHODOLOGY

This research used a root cause analysis construct to establish the foundation of this thesis. The analysis considered recommendations from the FY16 Section 809 Panel (Defense Technical Information Center [DTIC], 2016) to determine the root cause for returned funds. The Research Chapter provides the preliminary knowns, unknowns and assumptions that guided the research and analysis of the topic. Additionally, the research leveraged technical reports from the Acquisition Research Program's (ARP's) 2021 Acquisition Research Symposium. Budget figures for FY2015 through FY2019 were pulled from the under secretary of defense (comptroller) budget exhibits and execution tables (Comptroller, n.d.). A thorough review of the Department of the Navy's (DON's) financial resources was conducted and yielded several source references identified throughout the thesis.

D. ORGANIZATION OF THE STUDY

Chapter I provides the general description and direction of the research topic. This transitions into background information to provide an overview of the legislation with historic trends of OMN funding in Chapter II. Following the background, in Chapter III we describe the data used to conduct the research. In Chapter IV, we explain the results in terms of the trends to formulate an overall analysis. The conclusion, Chapter V, provides the positives and negatives of returning OMN funding at the conclusion of each FY. Lastly, Chapter VI, identifies recommendations to provide clarity into the studies hypothesis for returned funds as a blanket for all services, DOD spending around pandemics or other unforeseen global events, and a quantification against political power and CRs.

II. BACKGROUND

The Constitution, as expressed in Articles I and II, provides legislative support and limitations on congressional actions. Article I, Section 8, “Powers of Congress,” gives Congress the power to impose and collect taxes. Taxes provide a means to pay off debts and “provide for the common good” (U.S. Const. art. I, § 8). It also provides for the defense and general welfare of U.S. citizens. Congress is responsible for maintaining the Navy and making “rules for the government and regulation of the land and naval forces” (U.S. Const. art. I, § 8).

In Article I, Section 9, “Limits of Congress,” it states that “no money shall be drawn from the treasury but in consequence of appropriation made by law” (U.S. Const. art. I, § 9). This article is the reason the government has shutdowns when Congress does not sign or pass appropriation bills, because it is within operations of law. With CRs, there is no formal appropriation bill; however, there is a permissible limited authority to spend at a reduced rate from previous years. If non-appropriated money is spent, then it is a violation of the federal law under the anti-deficiency act.

In Article II, Section 2, executive power is granted to the president: “The President shall be commander in Chief of the Army and Navy of the United States” (U.S. Const. art. II, § 2). The president’s budget submission influences policy and kicks off the budget process.

The annual passage of the NDAA provides a steering mechanism for Congress to enforce its leadership and control over the DOD. Each year, the NDAA directs or requires certain actions in support of the current congressional agenda or specific focus areas. An example of this is the language in the FY2022 NDAA directing a review of the PPBE process within the DOD, of language earmarking specific portions of the appropriation passed to the services for specific items manufactured in key congressional districts.

A service authorization can range from a line item for a specific program or specifically limiting or prohibiting funding applied to programs through line item/program authorization limitations. An example, the FY2022 NDAA, mandated the U.S. Air Force

to update and maintain the A-10 aircraft, followed by the respective funding in the appropriations bill.

Another example includes Congress directing the establishment of the Section 809 Panel in the FY 16 NDAA. This direction mandated the formation, funding, and reporting of findings to Congress on a review of the DOD acquisition process. This example shows Congress's willingness to impose oversight on the process and the interest in improving DOD acquisition spending efficiency, effectiveness, and transparency. The Section 809 Panel reports highlight many areas where quantifiable results can be achieved with the modernization of the acquisition and budgetary planning systems. We discuss this further in chapters IV and V. Historically, the DOD has followed a trend of returning billions of dollars every year to the U.S. treasury (Bartels, 2021). The proliferation of expired funds results from funding type, congressional budget delays, and CRs. The DOD budget chain has trade-offs that could be more streamlined to enable a modernized PPBE process. As we discuss in Chapter IV, most of the recommended changes provided by the acquisition community and the Section 809 Panel need to be cultural, structural, and systemic. Focusing on program procurement costs is shortsighted compared to the total life-cycle cost of a program. The fact that most funding cancelations impact O&M funding indicates ineffective execution and allocation of funds. Once a program has reached full-rate production and full operational capacity, it moves from procurement to sustainment (the stage where most programs incur costs).

To better understand how DOD money flows, we discuss big "A" acquisition, the PPBE process, the color of money, the period of appropriation, and who is involved in the process.

A. BIG "A" ACQUISITION

In big "A" acquisition, there is an equal presence and interaction with the PPBE, the Joint Capabilities Integration and Development System (JCIDS), and the DOD acquisition management process—where a piece of the big "A," the Defense Acquisition System (DAS), is also known as little "a" acquisition. The overlapping relationships within big "A" acquisition are illustrated in Figure 1. Little "a" or defense acquisition management

process is now referred to as the Adaptive Acquisition Framework (AAF) (AcqNotes, (2020a, 2020b).

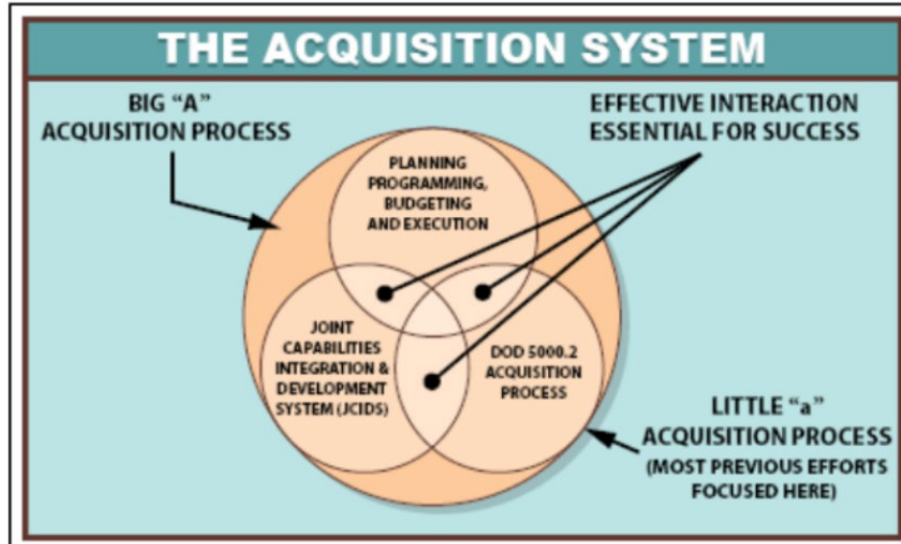


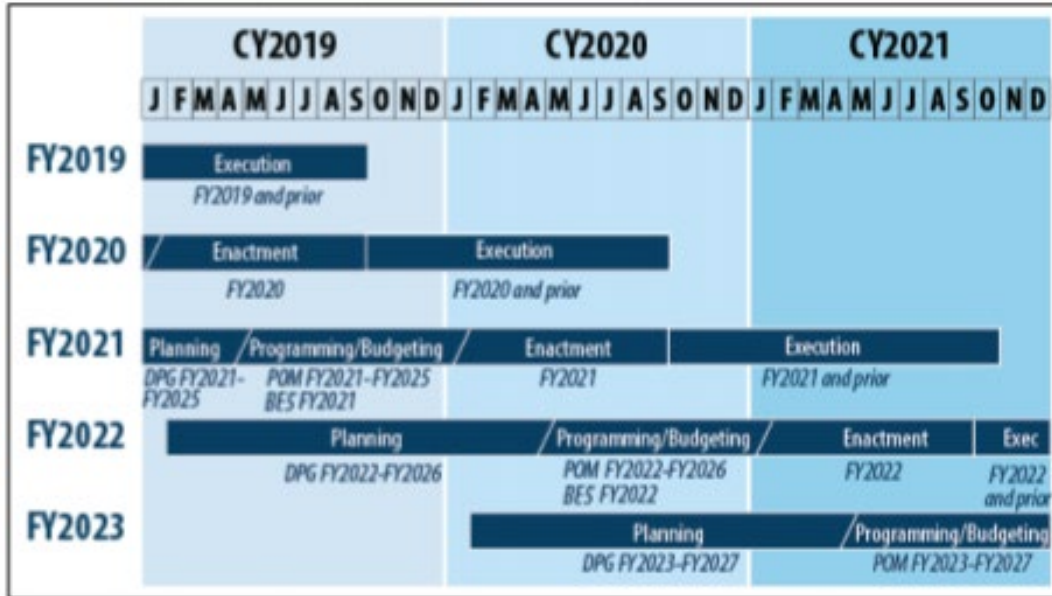
Figure 1. The Acquisition System: Big “A” Acquisition Process. Source: Lofgren (2019, p.1).

Big “A” acquisition is comprised of three systems: The PPBE allocates resources and budgets; the JCIDS process identifies requirements; and the DAS develops and/or purchases the item or capability (Lofgren, 2019). The three systems are dependent on one another. DAS is an event-driven process, starting and stopping based on each identified requirement in the JCIDS process. The JCIDS process is needs based, meaning the process begins when a Service identifies an unfilled requirement and establishes a need for that capability or item. The PPBE process, however, is calendar-driven. This process starts years in advance of the anticipated product delivery. The PPBE scheduling affects each of the other systems (JCIDS and DAS) in that a requirement identified in one year, developed in the next, and purchased the following year must already have funding programmed. Programming funding too early in the acquisition process creates a rigid system where it is challenging to adjust programmed allocations to support current acquisition costs.

B. PLANNING, PROGRAMMING, BUDGET, AND EXECUTION PROCESS

The PPBE aspect of the DOD's resource allocation process starts two years out from execution and is evaluated yearly. The delivery of project funds is on a five-year trajectory, meaning the funding is requested five years in advance of the start date. The PPBE serves as "the framework for the DOD civilian and military leaders to decide which programs and force structure requirements to fund based on strategic objectives and warfighting priorities" (McGarry, 2020). Ideally, the framework should produce "the DOD's portion of the president's annual budget requested" (McGarry, 2020), which Congress receives. The request provides recommended updates to the five-year acquisition road map, known as the Future Years Defense Program (FYDP).

The PPBE is broken down into planning, programming, and budgeting phases which produce the Defense Planning Guidance (DPG), the Program Objective Memorandum (POM), and the Budget Estimate Submission (BES) respectively. As illustrated in Figure 2, during Calendar Year (CY) 2019, planning cover a four-year span and is initiated two years in advance. Each PPBE phase supports the other until program execution. The DPG is produced in the planning phase, and provides details related to the force development priorities. In the programming phase, a POM is generated, which is "a funding plan for each military service and defense agency covering a 5-year period that adjusts programs in the FYDP" (McGarry, 2020, p.1). The last phase is the budgeting phase, in which the BES is developed. This phase "covers the first year of the POM and converts programs into budget terms for submission to Congress" (McGarry, 2020, p.2). The future years (CY2020 and CY2021 from Figure 2) provide approval from Congress for the enactment and execution of the program under the designated budget.



CY is calendar year; FY is fiscal year. Execution, as shown, is based on appropriations available for one year.

Figure 2. DOD Resource Allocation Process (Notional): Fiscal Year Cycle by Calendar Year and Month. Source: McGarry (2020).

1. Planning

The administration’s policy goal leads to the planning phase. The planning phase is led by the under secretary of defense for policy. The chairperson of the Joint Chiefs of Staff (CJCS) provides oversight into the policy studies and policy goals. The chairperson also considers “potential threats, force structure, readiness posture, and other factors. The DPG developed with input from the CJCS, military services, and combatant commanders typically contain guidance on investments and divestments for the services and help inform their POM process” (McGarry, 2020).

2. Programming

The Cost Assessment and Program Evaluation (CAPE) office leads the programming phase. Their role analyzes current programs and capabilities to ensure proper influences on future forces. If the fleet requires new capability to increase readiness, then the programming phase requires a POM submission. The POM process defines proposed resource requirements (forces, workforce, and funding) over the FYDP.

3. Budgeting

The budgeting phase is led by the under secretary of defense (comptroller)/chief financial officer and is where each branch of military service develops a “BES for the first year of the FYDP” (McGarry, 2020). It is the comptroller’s responsibility to review the budget submissions for execution feasibility over the funding period.

4. Execution

In the execution phase, program results are evaluated, and programs are ranked with a priority score to align with the defense strategic goals. The budget review evaluates how the program funding aligns to the actual execution or performance in comparison to the planned program (McGarry, 2020). The treasury is involved in the execution phase because of their transactions with cash. They also track the actual flow of dollars into and out of the government. One of their functions includes “the production of currency, protecting the integrity of the country’s financial systems, and assisting law enforcement in illicit movements of the nation’s financial resources” (McGarry, 2020, p. 2). When an appropriation is enacted, the treasurer issues a warrant certifying that it has opened a line of accounting for transactions that cite that appropriation. When the DOD presents the treasury with a “voucher” for payment, the treasury accounts for that outlay accordingly (Candrea, 2017).

C. COLORS OF MONEY

The term “color of money” is used in the DOD to refer to an appropriation category for a DOD financial account (AcqNotes, n.d.-a). Appropriation is defined as “an authorization by an act of Congress that permits Federal agencies to incur obligations and make payments from the Treasury, and they represent limitations of amounts of money which agencies may obligate during a specified time period” (AcqNotes, n.d.-a). Appropriate categories define the time period, which are identified in the line of accounting (LOA) contracts. The category determines the life cycle, which defines the length of obligation availability and the expiration year and drives the timeline for funds management (see Figure 3). In the DOD, there are several types of funding lines used to

classify the life cycle. The type of funding are research and development (R&D), O&M, Procurement, Shipbuilding and Conversion Navy (SCN), MILCON, and MILPERS. Each funding type is defined as a distinct color of money due to the obligation period and the specific manner in how the money can be obligated and expended. Figure 3 illustrates the duration for which each appropriation can be made (AcqNotes, 2021). O&M and MILPERS appropriations are only authorized to have a new obligation period of one year (the year of appropriation). RDT&E funding is a multi-year authority allowing for new obligations for two years. Procurement funding is multi-year funding authorized for new obligations for a period of three years (except in the case of shipbuilding, where the new obligation period is five years). Finally, MILCON funding provides an authorization window of five years for new obligations. After the obligation period, the funds can be expended during the expired stage, though only on adjustments, expenditures, and outlays. Each type of funding has a five-year expiration period. After the expired period, the remaining funds get canceled and are unavailable for obligations, adjustments, expenditures, or outlays.

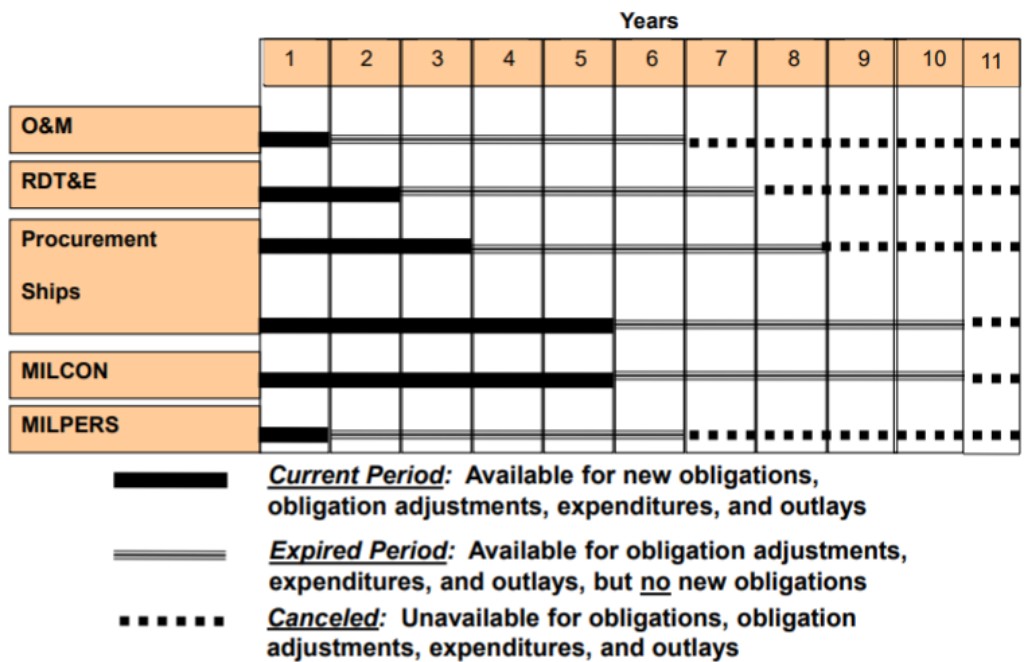


Figure 3. Appropriation Life Cycle: Appropriation by Category. Source: Stewart (2015).

D. APPROPRIATIONS OF LIFE CYCLE

Funds have a life cycle of one to five years and are classified as either current, expired, or cancelled. The appropriation life cycle is per law 31 U.S. Code § 1551, (Definitions, n.d.), which states that appropriations are available for limited periods. In the event an agency incurs a legal obligation outside the appropriation’s period of availability, it may lead to an anti-deficiency (31 U.S. Code § 1341(a)) violation (Stewart, 2015). New obligations cannot be made with expired funds and no new contracts may be awarded. The Appropriations Act defines the availability time period for new obligations. Per DOD 7000.14-R, once funds are expired, they retain their “fiscal year identity” for five years. Once funds are deemed expired, only adjustments can be made to existing obligations. When expired funds become “closed,” they are no longer available. This occurs five years after the end of its availability period as defined by the applicable appropriations act (AcqNotes, 2021).

New or current appropriations are permitted during the FY as specified by the appropriations act. In fact, “In the absence of specific legal authority, DOD Components are not authorized to incur obligations using operation and maintenance appropriations for goods and services to be provided in future years” (Department of Defense [DOD], 2009). Table 1 breaks down the common DOD funding types with their respective obligation periods and the delivery schedule for the “colored” funds. Table 1 is a breakdown of the “active/current period” from Figure 3.

Table 1. Funding Types, Obligation Periods, and Appropriation Schedules.
Adapted from Stewart (2015).

Appropriation Category	Obligation Period (unexpired)	Obligation Adjust. And Disburse. (expired)	Funding Policy
O&M	1 Year	2-6 Years	Annual
Military Personnel (MILPERS)	1 Year	2-6 Years	Annual
Research, Development, Test, and Evaluation (RDT&E)	2 Years	3-7 Years	Incremental
Procurement	3 Years	6-8 Years	Paid in Full
Military Construction (MILCON)	5 Years	6-10 Years	Paid in Full

An annual funding policy requires the delivery of funding each fiscal year. Appropriations under O&M can typically finance labor associated with daily operations and routine repairs, replacements of parts or structural components. Incremental funding provides partial funding of a contract or an exercised option, with additional funds anticipated later. Funding for procurement and MILCON require total payments at the time of purchase. “Paid in Full” occurs under a rule requiring funds for the total estimated cost of a military usable end item in the fiscal year within the year of procurement. (Department of Defense [DOD], 2009, p.25).

E. PARTIES INVOLVED IN THE AUTHORIZATION AND APPROPRIATION PROCESS

The federal funding process occurs yearly when the president submits the annual budget request to Congress. This typically occurs on the first Monday in February. Within Congress, the key committee stakeholders are: House Budget Committee, Senate Budget Committee, House Armed Services Committee (HASC), Senate Armed Service Committees (SASC), House Appropriations Committee (HAC), and Senate Appropriations Committees (SAC). Congress is then tasked with producing a budget resolution, an NDAA, and 12 appropriation bills for the federal FY, which start of October 1. This time period, between the annual budget submission to the budget resolution is typically six months in length. The Office of Management and Budget (OMB) prepares all the documentation, new

policies, programs, or any changes. After the president’s budget is proposed, “Congress responds by creating a concurrent congressional budget resolution, which is supposed to be filed by April 15. In most circumstances, opposing parties pass their resolutions in lieu of agreeing and therefore pass a 302(a) allocation, or the house discretionary spending limit, without advancing the budget” (American Council on Education, n.d.; Association of American Medical Colleges, 2021). According to Article I of the Constitution, Congress “holds the purse” because they can override the presidential veto with a two-thirds majority vote (U.S. Const. art. I, § 7), and the DOD relies on Congress to pass the budget without funding gaps to programs (Candrea, 2017).

Budgetary authority and outlays are stated in the Constitution: “No money shall leave the Treasury but in consequence of appropriation made by law” (U.S. Const. art. I, § 9). The budgeting and appropriations process is shown in Figure 4.

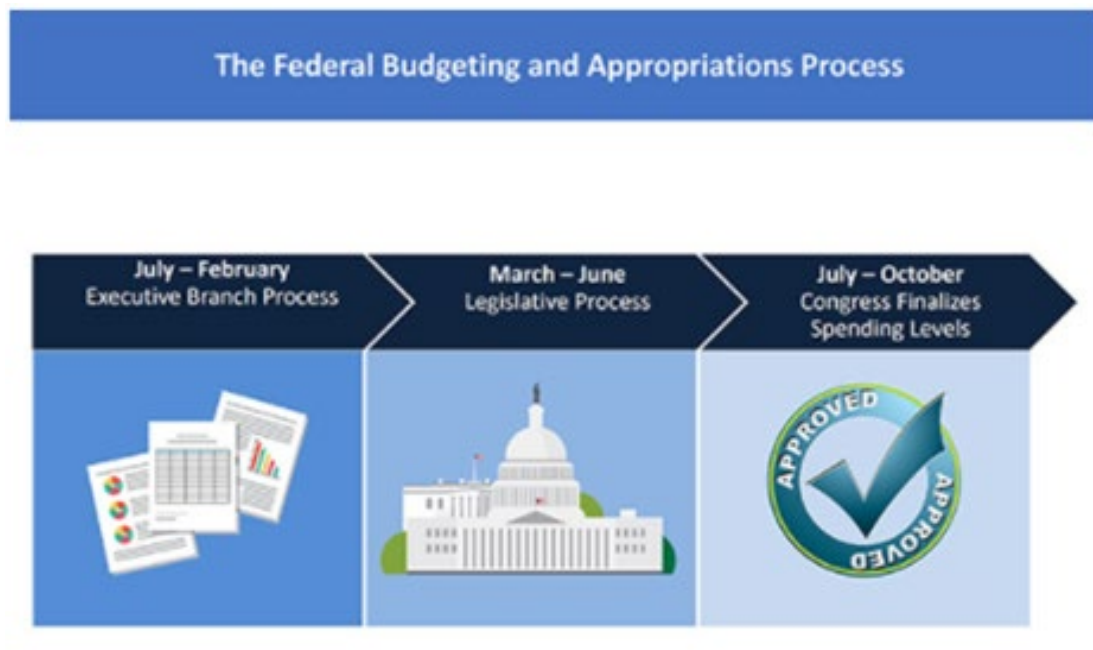


Figure 4. An Illustration of the Budget Process and the Institutions Involved.
Source: National Science Foundation (n.d.).

An appropriation act is a statute—a law drafted by Congress and signed by the president—that provides budget authority (BA). The Appropriate Act provides BA for

things like O&M, procurement, and military pay (Candrea, 2017). During the 40 years between 1981 and 2020, the Appropriation Act was only signed into law within the constitutionally mandated time frame six times. When the Appropriations Bills are not signed on time, a CR is needed to continue obligations or spend defense funding. Late Defense Appropriation Bills occurred 25 times out of the same period (Torreon & Plagakis, 2021). This problem is exacerbated without the Defense Appropriation Bill becoming public law. Under a CR the funding authorization becomes available albeit limited as compared to execution authority from the prior FY. Delaying full spending authority supported by public law creates challenges in execution of funds through incremental spending authority. Continuing operations under a CR is like boxing with one hand tied because under a CR, no new start contracts are authorized, and funding authority is limited to the previous FY appropriation levels. Without an approved Appropriations Bill or CR, the government shuts down, which happened in 2018.

F. AUTHORIZATION AND APPROPRIATION PROCESS

The annual NDAA permits programs to exist in the first place. The NDAA is required to have BA, provided by Congress (through appropriation acts discussed later), to incur obligations and make payments within an acquisition program.

Congress writes the NDAA based on the president's budget request. The House and Senate work on the bill. The House Armed Service Committee (HASC) and the Senate Armed Service Committee (SASC) make changes as the bill goes through committee markup. After going through markup, the bill is voted on by the authorizers. The authorizers provide top line funding limits. Once the House and Senate bills are approved in each respective chamber, they move to be reconciled to create the final version of the NDAA for floor vote. After both the House and Senate pass the NDAA, it is sent to the president for the president's signature. When the president signs the bill, the NDAA transitions from a congressional bill to public law. The NDAA becoming public law is the action that approves the requested funding; however, the appropriation bill makes the funding available to DOD for expenditure.

As mentioned above, the DOD cannot expend funds until the appropriations bill is passed. The House Appropriations Committee (HAC) and Senate Appropriations Committee (SAC) author the bill. The appropriations bill follows a similar path to signature and public law as the NDAA. The HAC and SAC each author an appropriations bill. Once that bill is reviewed and amended by the respective committee, it is sent to the floor for a vote. After passing, the HAC and SAC bills are reconciled to ensure that each chamber presents the same bill. The House and Senate hold a vote on the appropriations bill. After passing the House and Senate, the bill is sent to the President. Signature by the President transitions the bill into public law and provides spending authority to the agencies covered within the bill.

Passage of the annual appropriations bill is the only way to avoid a CR. Congress uses a CR to continue government operations in the absence of an appropriation bill and to prevent a government shutdown of all non-essential services. A CR may be used to fund the whole government or partial sections of government depending on what appropriation bills have been passed. The appropriations bill is required to provide full spending and acquisition authority for government agencies.

The Defense Contract Management Agency (DCMA) has the responsibility of administrating payment and providing contract oversight for assigned programs and efforts within the DOD in accordance with DOD Directive 5105.64 (DOD, 2013) and the DCMA mission statement (AcqNotes, 2018). If any excess funds exist, they need to be de-obligated and returned to the DOD buying activities. For accurate financial accounting, it is good practice to obtain a zero balance prior to canceling funds. If funds need to be de-obligated, the Federal Acquisition Regulation is referenced (FAR 4.804-5(a), 2021; FAR 42.302(a)70, 2021).

The background sets the stage for the legislative system involved with the current budgetary process. It also provided insight into the PPBE process within the acquisition system and the types of funding within their execution domain. A general understanding of this material helps identify execution challenges, process improvement opportunities, and shortfalls in practice. Chapter III provides the research methodology and data addressing the research questions in this project.

III. RESEARCH (METHODOLOGY AND DATA)

This research addresses the challenges of the DOD returning expired funds to the treasury each year. To answer the research question, “what is the scale of OMN funding returned annually,” data were extracted from the OSD (Office of the Secretary of Defense) comptroller budget execution exhibits. initial assumptions were made to support this thesis, such as late OM&N appropriation as being the culprit for compressed spending schedules and the NDAA approval date correlated to returned funds. With the assumptions, a list of known and unknowns were documented to begin addressing the initial problem statement “Billions of dollars are being returned to the treasury each year due to misappropriations,” which was later revised (Figure 5).

Assumptions, Knowns, Unknowns						
Revised Problem Statement	Billions of dollars are being returned to the treasury each year due to misappropriation					
	Assumptions		Knowns		Unknowns	
	What assumptions are we making?	How will we test or validate this assumption?	What do we already know related to this challenge?	Who/what is our validation resource?	What do we not yet know but need to know related to this challenge?	Who/What are our validation resources?
	OM&N Funds are being appropriated late & causing compressed spending	NDAAs approval date in a particular FY compared to returned funds	NDAAs approval varies year to year.	History of Congressional release dates for NDAA	Time delay for release of Appropriations to fund availability at DOD.	Congressional website with House & Senate Publish Public Law
Funds are being obligated on items that cannot allow expenditure or liquidation within appropriation window.	Referencing P-1 and R-1 budget documents to the EOY deobligation reports.	Multiple BLI deobligations at FY closeout triggering funds to be returned to treasury.	OSD Comptroller website document library.	Top level BLI deobligation rates at end of appropriation windows.	OSD Comptroller website document library.	
Revised Problem Statement	The DOD is too complex to have rigid fiscal year spending. Budgetary frameworks should be updated regularly to properly meet Defense requirements.					

Figure 5. Assumptions, Knowns, and Unknowns Pre-work with the Revised Problem Statement

Further analysis researched the potential causes of the problem statement and identified the assumptions, knowns, and unknowns (Figure 5) that contributed to the funding concerns. An assumption placed an onus on late OM&N appropriations as cause for a compressed spending schedule. Another assumption on returned funds includes the type of allowable funds within the appropriation window. After identifying the first row in Figure 5, key references were noted to confirm the hypotheses. Resources to reference the findings included P-1 and R-1 budget documents and OSD comptroller document library.

The OSD execution reports are from the fourth quarter of each FY and encompass all O&M reprogramming conducted within the appropriation periods reviewed (2015–2019). Table 2 displays the O&M allocation from each respective NDAA for defense-wide (Pentagon 4th estate departments/agencies), DON (including Navy, Navy Reserve, Marine Corps, and Marine Corps Reserve), and an isolated view of the OMN. The DON is led by the Secretary of the Navy, a civilian, and provides a government organizational structure to The Navy, which accounts for uniform personnel. Figure 6 illustrates the DOD organizational structure and flow-down from each department.

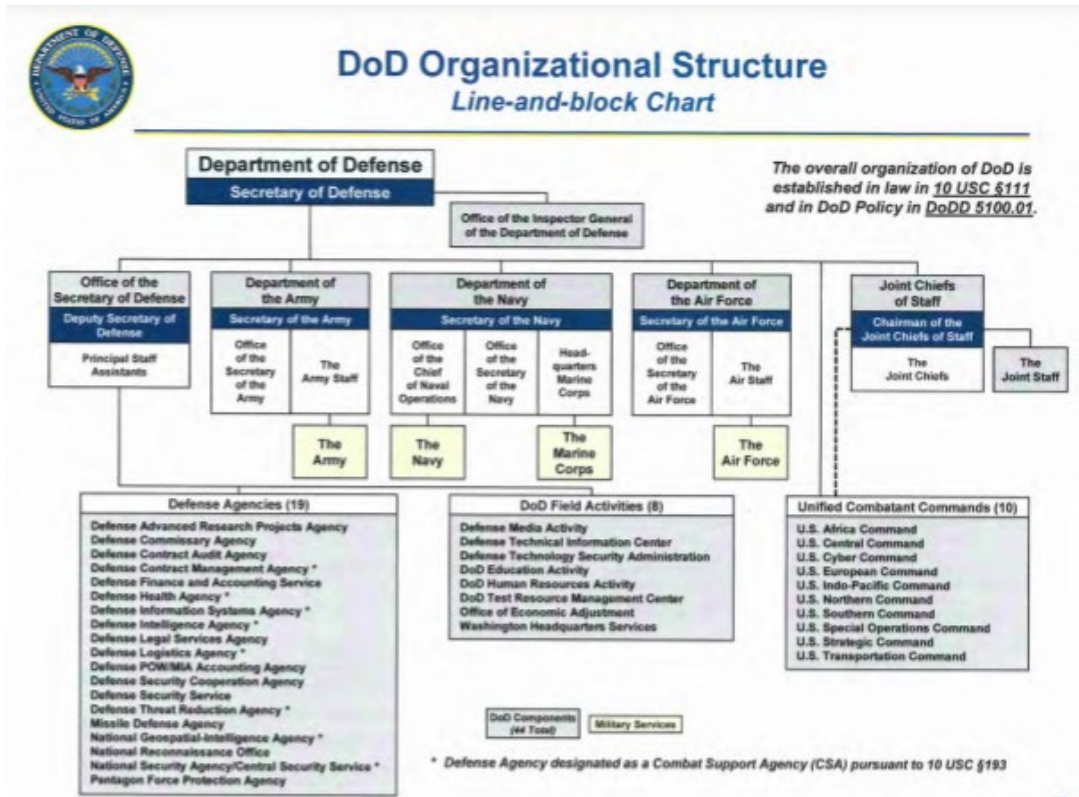


Figure 6. Organization and Management of the Department of Defense.
Source: Directorate for Organizational Policy and Decision Support (2019, p. 10).

Using the organization structure from Figure 6, data was retrieved from the comptroller to compile approved Appropriation dates and obligation data. Table 2 includes the yearly dates when the Defense Appropriation Bills became public law. The public law date is essential as it shows the government’s time frame under CR (or in a government shutdown). Combined with the overall annual execution rates, this provides a valuable look at the impact CRs have on effective and efficient spending when there is a delay in signing the Appropriation Act. Additionally, as the time depth increases within each FY and the passing of the Appropriation Bill, it illustrates the rigidity of funding passed each year. Regardless of the passage date—October 1, the end of the second quarter, or into the third quarter—the DOD only has the FY of appropriation to spend the allocated O&M funding.

Table 2. 2015–2019 Budget Execution: DOD Comptroller O&M Budget. Source: Under Secretary of Defense (Comptroller, n.d.).

FY	Service	President's Budget Request	Enacted Appropriation	Net	Obligations	Un-Obligated	% Un-Ob
15	DON	\$53,646,084,000	\$52,606,265,000	\$54,048,055,077	\$53,877,513,000	\$170,542,077	0.32%
15	USN	\$44,916,725,000	\$43,805,865,000	\$45,208,479,077	\$45,068,219,000	\$140,260,077	0.31%
15	DOD (Pentagon)	\$37,369,657,000	\$38,312,430,000	\$38,091,188,342	\$36,926,538,856	\$1,164,649,486	3.06%
16	DON	\$55,827,552,000	\$54,256,295,000	\$55,402,927,840	\$55,285,055,000	\$117,872,840	0.21%
16	USN	\$47,332,344,000	\$45,952,699,000	\$47,004,887,640	\$46,910,723,000	\$94,164,640	0.20%
16	DOD (Pentagon)	\$38,246,476,000	\$38,722,951,010	\$39,359,191,111	\$37,942,561,935	\$1,416,629,176	3.60%
17	DON	\$57,297,698,000	\$56,915,221,200	\$56,933,818,373	\$56,837,810,000	\$96,008,373	0.17%
17	USN	\$48,229,156,000	\$47,995,374,900	\$47,992,424,526	\$47,921,732,000	\$70,692,526	0.15%
17	DOD (Pentagon)	\$39,993,726,000	\$40,605,141,000	\$40,718,517,514	\$38,721,520,832	\$1,996,996,682	4.90%
18	DON	\$61,817,807,000	\$62,158,528,000	\$62,746,869,000	\$62,499,800,497	\$247,068,503	0.39%
18	USN	\$52,331,992,000	\$52,748,873,000	\$53,221,788,000	\$53,001,504,996	\$220,283,004	0.41%
18	DOD (Pentagon)	\$42,405,446,000	\$42,900,381,200	\$41,534,487,612	\$40,733,802,000	\$800,685,612	1.93%
19	DON	\$63,042,756,000	\$62,552,539,000	\$64,027,932,542	\$63,948,640,000	\$79,292,542	0.12%
19	USN	\$53,760,788,000	\$53,378,840,000	\$53,952,160,542	\$53,887,045,000	\$65,115,542	0.12%
19	DOD (Pentagon)	\$44,902,533,000	\$44,220,884,000	\$43,562,940,800	\$42,733,575,205	\$829,365,595	1.90%

PresBud is short for the presidential budget. *Enacted* depicts the appropriated funding amount, *obligated* indicates the number of funds in the books against the enacted, and *un-obligated* signifies the amount remaining or remaining in the books against the enacted and thus returned to the treasury.

Table 2 illustrates a consistent spending pattern between DON and the Navy from year to year. The unobligated percentages are within a few hundredth percent of each other. The unobligated percentages are more prominent within the DOD. As shown in Figure 7, the Navy and DON obligation rates are relatively consistent at the “micro” level. However, the relatively low unobligated quantity becomes significant when reviewing from the “macro” level.

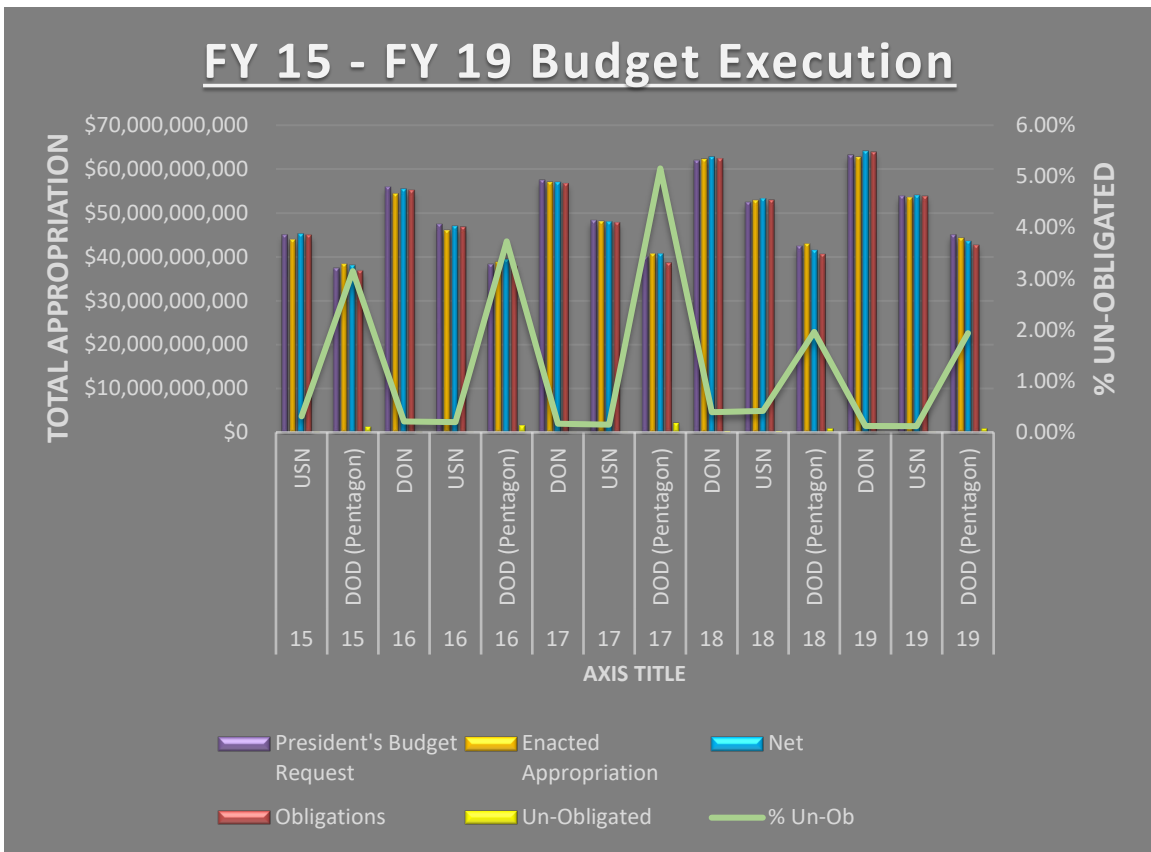


Figure 7. FY2015–FY2019 Budget Execution

The significance only grows when reviewing all military departments and the DOD. It would be easy to dismiss the problem of unobligated/returned funds when reviewed individually. However, when stepping back to the “macro” view and looking at the whole picture of the DOD, the problem is apparent. The DON and Navy have a significant amount of unobligated funds at the end of each FY, which is returned to the treasury; however, the

percentage of returned appropriated funding is small at the service level compared to DOD at large.

Each year, the PPBE process plans for requirements 2 to 5 years in advance and does not afford the flexibility to keep pace with emerging requirements or development of innovative technology. The amount of funding returned to the treasury each year, in O&M funding from the reviewed funding lines, averages in excess of \$1 billion annually (Bartels, 2021). Extrapolating the returned O&M funding (Figure 7), to the entirety of the appropriated DOD budget (Figure 8) illustrates a problem in the budget process.

Another nuance to bring to the reader's attention from Table 2 and Figure 7 is that while the Navy and DON obligation rates tend to remain consistent, the DOD (Pentagon) un-obligated percentages fluctuate. The operational difference between the DOD topline, noted as DOD Pentagon in Table 2, and the Services is partly because, at the end of each FY, un-obligated funds are "rolled up" to the topline for reprogramming. It also illustrates that while the Services and subordinates within each military department generally meet the obligation windows despite a near-constant operation in CRs, the returned funds still add up to a significant amount of funding returned to the treasury each year.

Figure 8 illustrates the obligation surges at the beginning of the FY and the completion of each quarter. Narrowing in on FY2017, the spending surges also correspond with the release of additional CR funds. Provided with this information and the spending trend illustrated in Figure 8, the Section 809 Panel published Recommendation 49 in Volume 3 of its report. The recommendation (in response to late Appropriation Bills, CRs, and budget periodicity) was to "provide greater flexibility to the time periods within which contract obligations are permitted to occur" (DTIC, 2019, p. 195). As stated by the panel in their background statement, increasing flexibility in the DOD's acquisition BA across FYs (Fiscal Year) "is expected to improve efficiency and effectiveness of contract spending" (p. 197). A low-risk implementation of this allows up to 5% of O&M funding in the FY following initial appropriation (DTIC, 2019). Additionally, in 2012, a memo from the under secretary of defense (comptroller) and the under secretary of defense for acquisition, technology, and logistics stated, "The threat that funding will be taken away or that future budgets can be reduced unless funds are obligated on schedule is a strong and

perverse motivator” (DTIC, 2019, p. 197). The memo stated that adding this risk to the Services was “creating incentives to enter into quick but poor business deals or to expend funds primarily to avoid reductions in future years” (Hale & Kendall, 2012, p. 1).

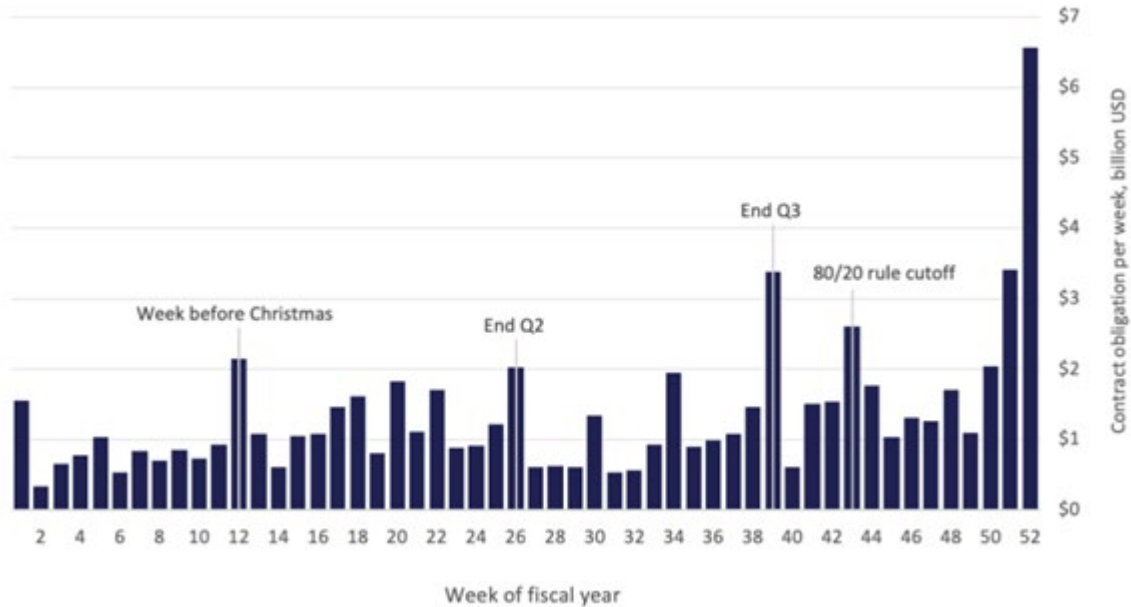


Figure 8. Weekly Obligations on Contracts under O&M Appropriations Account, FY2017. Source: DTIC (2019, p. 196, footnote 51).

This chapter provides an overview of the Navy, Department of the Navy, and Pentagon O&M budget execution from FY 2015–2019. The figures illustrate a trend in regularly returning O&M funding to the treasury at the conclusion of each FY. The information provided illustrates the inflexible nature of the budget process. The act of planning and programming funds years out from execution can result in rigid budgetary requirements without the flexibility to rapidly adjust and meet requirements at execution. Additionally, this chapter shows the impact of CRs on spending with apparent increases in spending at the end of each quarter and the quantity of funding returned each year. Different fiscal policies would otherwise be executed against established O&M requirements. These trends lead to the review conducted in Chapter IV. The analysis reviews the problems illustrated and strives to provide evidence-based solution recommendations to increase the efficiency and effectiveness of O&M budget execution.

IV. ANALYSIS

Chapter 4 addresses the funding analysis researched in this project. This thesis evaluated timespans for Appropriation Acts passed dates, continuing resolutions patterns, obligated and unobligated funds for the DOD and the DON. As an initial assumption, it was hypothesized that the Air Force and Army would have similar funding patterns to the Navy. Therefore, the Navy was the only service evaluated for this study. The analysis included a review of FY2015-2019 passed Defense Appropriation Bills and the percentage of unobligated funds at the end of the FY. The analysis supported the causes identified in the root cause Analysis (Figure 9).

Original Problem Statement	Billions of dollars are being returned to the treasury each year due to misappropriation					
	Cause A	Cause B	Cause C	Cause D	Cause E	Cause F
	Short Expiration Date	Continuing Resolutions	Policies Across the Services	Lessons learned not being shared or communicated effectively	Contract Type	Processes don't catch everything
Why 1	operation and maintance appropriations are available for obligation for 1 year	Pentagon has less time to obligate in new fiscal year, sometimes <5months	OMB office of Mgmt and Budget policies	We are so decentralized until we find a root cause	Contracts have policies on fees	treasury in canceled funds over the past 6 years (heritage.org/defense/commentary/pentagons-80-billi
Why 2	most types of OM&N items can be acheived in 1 year: EX training, repairs, admin	From 2013-2018, the DoD lost avg 4.5months of every fiscal year (heritage.org)	Policies to de-obligate	We need to learn how each service operates successful and share knowledge	fees may inadvertantly get obligated due to the type of contract	on average, 2.6% of the budget is cancelled
Why 3	If \$\$ is not spent within 5 years, it's cancelled and must be returned	obligation rates for CR are reduced to not more than 80% of the prior year authorization	Article I of the Constituion	Audit results shared within Finacial community, review of outputs not stressed below top level leaders or outside comptroller/contracting/supply sections	https://www.researchgate.net/publication/237566719_Critical_contractual_issues_of_outsourced_operation_and_maintenance_service_for_commercial_buildings	obligation windows and contract cutoff dates do not always allow for full execution of allocated funds
Why 4	use it or lose it pressure	pressure to spend all of the Incremental CR funding as received on currently available items	funds are spread out with differing expirations dates and rules			
Why 5		No new contracts or procurements are authorized during a CR	no "roll over" ability to continue spending with late NDAA authorization			
Root Cause(s)	DOD Financial Management Regulation, Vol. 3, Ch17DAA Public Law	Federal Appropriation Laws OMB Bulletins	Comptroller.defense.gov: O&M Overview	Limited documentation and/or sharing lessons learned	Lacking a standard form for O&M contracts	Yearly spending window is dependent on an approved NDAA
Selected Root Cause(s)	Federal and Public Laws limit spending flexibility under CRs and delayed Appropriations					
Revised Problem Statement	The DOD is too complex to have rigid fiscal year spending. Budgetary frameworks should be updated regularly to properly meet Defense requirements.					

Figure 9. Root Cause Analysis Pre-work with the Revised Problem Statement

Figure 9 illustrates the pre-work analysis of this thesis. The preliminary root cause analysis established the problem statement, “Billions of dollars are being returned to the treasury each year due to misappropriation.” The next step identified the potential causes (columns): short expiration date, CRs, policies across the services, limited sharing or

communication, contract types, and process loopholes. The last step documented several reasons ‘why’ (rows) the causes led to returned funds. The initial assumption placed the onus on misappropriations. Based on the research, the problem statement was revised to “Federal and Public Laws limit spending flexibility under CRs and delayed Appropriations.” Additionally, the problem statement was also revised to “The DOD is too complex to have rigid fiscal year spending. Budgetary frameworks should be updated regularly to properly meet Defense requirements.” The data and analysis placed an emphasis on CRs as a cause to returned funds.

CRs are quite common:

Unfortunately, continuing resolutions have been a common occurrence at the Department of Defense. Between FY 2010 and FY 2018, every fiscal year started with a continuing resolution, the shortest lasting 76 days in FY 2015. On the long side, in FY 2017, the Department of Defense spent 217 days under a continuing resolution—or close to 60 percent of the year.

This left less than 40 percent of the year to execute large chunks of plan for that fiscal year—or risk losing the resources appropriated for that period. The current fiscal year, FY 2021, started on October 1, 2020, with a continuing resolution that lasted until December 11, 2020 (Bartels, 2021, pg.6).

CRs are linked to the approved appropriation. When the appropriation is not approved on time, a CR bridges the gap and allows defense spending to continue. Therefore, this thesis identified the Appropriation Bill’s approval dates, which varied during 2015 to 2019 from two days early to over 120 days late. The average approval date was found to be 48 days late (equivalent to one month, two weeks, and three days late) with a standard deviation of 55.2 days. In Figure 8, Week 52, reported an obligation amount in excess of 6 billion dollars of contracts. This amount is double in comparison to the next highest obligation weekly amount at the end of the 3rd quarter. If we further analyze the differences between the averaged unobligated funds from the DON and USN against the DOD topline, more discrepancies become evident (see Table 3).

Table 3. Appropriation Discrepancies between Agencies

Fiscal Year	CR Length (days)	Gov Shutdown Length (days)	Navy Avg Un-Obl	DOD Topline Un-Obl	Delta (% difference)
2015	77	0	0.32%	3.15%	9.24%
2016	83	0	0.21%	3.73%	16.93%
2017	217	0	0.16%	3.16%	30.46%
2018	176*	35	0.41%	1.97%	4.42%
2019	0	0	0.12%	1.94%	15.71%
*CR length includes total funded days under a CR (141) and the duration of the government shutdown					

The data shows a correlation between the length of the CR and unobligated funds at the conclusion of each FY. DOD has grown accustomed to operating in a CR and as shown in Table 3 generally able to obligate allocated O&M funding when the full Appropriation is passed by the second quarter of the FY. The data from FY2017 indicates the longer the CR, the more likely funds are to be returned at the conclusion of the FY. FY2018 is an outlier for multiple reasons. First, there was a government shutdown in the middle of the CRs used to fund DOD that year. The shutdown was due to political disagreements on funding of the border wall on the U.S. southern border. Additionally, once the Appropriations Act was signed, a declaration of National Emergency was used to realign funding from existing budget priorities to fund the border wall. This realignment contributes to the low un-obligation rate in FY2018 despite the shutdown and length of the CR. While the percentages of unobligated funds for the Navy seem small at 0.1 - 0.4%, that small percentage still equates to hundreds of millions of dollars returned at the conclusion of each FY.

From FY2015 to FY2019, the delta in unobligated funding remaining at the end of the FY was 4.42% to 30.46% larger for DOD topline spending compared to the DON and USN combined. Over the 5 years, the average difference was 15.35%. What is important to note is that unlike DON and the USN, the rolled-up funding from the Services goes back to the DOD comptroller. As noted in the reports from the 809 panel and Hale and Kendall

(2012, the Services are penalized if funding is not spent during the fiscal year. As a result, future years have reduced funding for those specific programs.

Further insight was provided by Panel 1 from the 2021 ARP (Acquisition Research Program) in analyzing the Section 809 Panel recommendations and findings. The discussion in Panel 1 from the 2021 ARP Acquisition Research Symposium approached the topic of what the current PPBE process was incentivizing. The current model prioritizes cost over other factors (even though program acquisition costs regularly run over schedule and budget). Additionally, the Section 809 Panel noted in Volume 3, Section 2 that along with a shift from stove-piped program management acquisition programs to portfolio management, funding should program in a baseline allocation for sustainment requirements (DTIC, 2019). With most program costs deriving from sustainment requirements, a baseline funding allocation for sustainment requirements would allow for more effective budget execution and allocation once the program moves from procurement to sustainment.

A shift from program management to portfolio management will lead to an increase in budget flexibility and improved execution capability. While the previously mentioned changes would be beneficial, the existing budgetary uncertainty and frequent use of CRs will continue to negatively impact the ability of the DOD and the DON to fully execute their allocated funding effectively within the statutory window of execution. Adjusting the appropriation period to a fixed time frame following enactment and not being bound to the specified FY would address much of that uncertainty. Likewise, in the discussion from Panel 1 of the 2021 ARP Acquisition Research Symposium, it was also recommended to tie the PPBE process with the congressional calendar versus the FY to minimize the chances of continued use of CRs to fund the essential functions of government.

As stated by the Section 809 Panel, Recommendation 49 advocates for “increased flexibility in the time periods in which contract obligations are permitted to occur” (DTIC, 2019, p. 195). It is well known within the DOD that each FY appropriation comes with target obligation gates that need to be reached throughout the FY. The current obligation structure helps ensure obligations are made throughout the year and prevents saving funds until the end of each appropriation period. The Section 809 Panel also discovered a cultural

belief that unobligated funds will be reallocated to other requirements or reduced in future years. While this assumption is not always valid, history dictates the rule versus the exception more often.

The flexibility called for in Recommendation 49 would benefit the DOD in efficiency and effectiveness of execution while providing the ability to carry over a portion of each year's appropriation to the following year. Not only will this capability smooth the end-of-year execution rates, but it will also provide some funding security in the current environment of seemingly endless use of CRs to fund DOD operations. Funding security provides the government representatives more bargaining power when negotiating contracts, not only for acquisitions but also for regular O&M expenditures. This stability will increase effective, efficient, and fiscally responsible budget execution at the end of each FY while providing the ability to effectively negotiate purchase pricing and reduce excessive spending through loss of bargaining power at the conclusion of each FY.

As noted in previous chapters and the root cause analysis, the DOD is growing accustomed to operating under a CR due to the frequency in which Congress does not provide an approved NDAA and Appropriation Act for signature by the president in time to initiate a new FY. The limitations of a CR impact daily operations and negatively impact long-term planning and budgeting for programs. This budgetary uncertainty damages the DOD's ability to negotiate competitive pricing on contracts for goods and services. Another impact, and potentially an impact of greater risk, is that the other world players (allies and adversaries alike) are aware of this problem. They can use it to their strategic advantage during FY turnover. The inability to provide reliable, consistent funding for national defense also impacts the strategic planning efforts that play a significant role in developing the National Defense Strategy (NDS) and the National Security Strategy (NSS). Both the NDS and NSS inform the DOD and its subordinate services and components of the priorities they must plan and prioritize for future years.

The root cause analysis "knowns" were further validated by the review and analysis provided by the Section 809 Panel and countless other scholars and analysts, through numerous proposed solutions and recommendations throughout the years. A stable budgetary environment has only existed in approximately 10% of the previous 40-year

budget periods. The uncertainty, execution, and strategic challenges this creates must be addressed to improve the efficiency and effectiveness of the DOD budget and acquisition process.

V. CONCLUSIONS

Chapter V revisits the revised problem statement to this thesis, “The DOD is too complex to have rigid fiscal year spending. Budgetary frameworks should be updated regularly to properly meet Defense requirements.”

The DOD is uniquely complex because many processes and people oversee the budget process. A disparity also exists within the DOD and who must return funds that are un-obligated. The pros are that there are many checks and balances, but conversely, the decision is heavily conditioned on externalities. The different parties involved in the PPBE process can have conflicting ideas and goals, leading to lengthy agreements or the lack thereof, which equate to delays in appropriations. Thus, the multiple CRs and delayed passages of the Defense Appropriation Bill contribute to the increasingly dysfunctional budgetary system. This dysfunction results in budgetary uncertainty, inefficient execution models, and (from some perspectives) paying the highest price to the lowest bidder.

Unobligated funding is indicative of the rigid spending within the current PPBE process, delayed congressional budget approval, and lengthy CRs. Losing this funding due to expiration of authority while valid requirements from the authorized FY exist is inefficient and an ineffective way to use funds. The unobligated funds for the Navy in FY2019 alone could resource all recruit training for the Marine Corps for 3.5 years. There have been many conversations about updating the PPBE process to improve the execution of funds; however, incremental changes will not lead to the necessary impacts on the system.

It is time for a new budgetary framework to help the United States survive a dysfunctional financial system. The United States needs to streamline in a way where the days of not having a passed budget are in the past. Additionally, CRs are very costly from a management and political science perspective. CRs appear to encourage inefficient patterns of operation for execution, with obligation spikes in the final week of each quarter with a significant spike in the last week of each FY. Hiring processes, contracting delays, and administrative tasks require repetitive action for each CR contract. CRs also increase

the likelihood of reprogramming, making the DOD ineffective and leading to failures in reaching new missions. The uncertainty of the DOD budgetary environment is the main challenge with incremental funding during a CR. The budget itself leverages political power, control, and influence from the political side. As mentioned in Chapter V, the picture painted by the statutory limitations are a strategic risk to the DOD and national security. Imagine the impact on competition and innovation if Apple knew that Microsoft or Samsung did not have reliable funding in at least the first quarter of each year. Knowing they had no competition; they could choose to slow down the development of new products and technologies or capitalize on the lack of competition to lure more consumers away from the competition. The budgetary uncertainty generated by the current process provides U.S. adversaries with just that opportunity. The recommended changes listed above and throughout the Section 809 Panel recommendation documents need to be implemented to eliminate that strategic risk and provide the DOD and the United States with an excellent financial way forward each FY.

The current PPBE process is rigid and supports funding allocation at the time of its implementation. However, the global dynamics and markets have changed since the established PPBE process. In the current operating environment, the DODs ability to program and execute funds needs to become more agile and flexible in execution. Adding flexibility to the process is expected to increase the effectiveness and efficiency in acquisition without the loss of required and desired oversight. To regain a competitive edge in an era of near-peer competition, the DOD must implement a more agile budget process. Agility will permit the priorities and requirements of the warfighter to efficiently adjust the acquisition focus as the priorities change while improving the government's ability to be a customer with which the leading edge of technology is interested in working.

VI. RECOMMENDATIONS

Chapter VI addresses recommendations to further evaluate the revised research problem statement. Per the initial thesis hypothesis, assumptions were made that the Air Force and Army would have similar funding patterns to the Navy. An initial case study could confirm the study's hypothesis.

March 2020 through 2022 experienced a pandemic and global implications. Future research could analyze the impacts of the 2020 COVID pandemic on military spending. The pandemic (2020-2022) stopped all travel and likely caused a return of unobligated funds to the treasury. An additional study could compare pre-pandemic data, pandemic times, and post pandemic. Remote working might have changed the climate and culture within the DOD spending framework. All commands and warfare centers relied on remote work and reduced the need for travel. It will be interesting to quantify how the defense budget shifted in 2022 and future years. In 2022, there will be additional challenges with defense funding. However, supply chain issues add another layer of complexity that further complicates the rigid appropriation law. Capturing pandemic effects will be challenging but can influence the federal appropriation law to improve enactments for future years.

The pandemic has changed the supply chain, where shipping blockages have increased costs not captured in program spend plans. Additionally, sustainment purchases for repair or replacement parts may cross into the next FY due to realized shipping delays. Further investigation should analyze the percentage of canceled orders due to being outside the appropriation window and not achieving obligation before the funds expire.

Another suggestion for future exploration is to research the political power platform our current system provides to elected officials and the need to balance oversight and long-term strategic implications of political gridlock over the defense budget. The idea here hypothesizes that funding struggles within Congress equate to continuing resolutions. It may be possible to discern if political shifts create an on-time budget approval or vice versa.

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LIST OF REFERENCES

- 31 U.S. Code § 1551 - *Definitions; applicability of subchapter*.
<https://www.law.cornell.edu/uscode/text/31/1551>
- AcqNotes. (n.d.-a). *Authorization/appropriations*. Retrieved October 12, 2021, from
<https://acqnotes.com/acqnote/careerfields/authorization-appropriations>
- AcqNotes. (n.d.-b). *DOD Instruction 7000.14-R*. Retrieved October 12, 2021, from
<https://acqnotes.com/acqnote/careerfields/DOD-instruction-7000>
- AcqNotes. (2018, June 26). *Defense Contract Management Agency (DCMA)*.
<https://acqnotes.com/acqnote/careerfields/defense-contract-management-agency>
- AcqNotes. (2020, January 23). *Department of Defense (DOD) Directive 5000.02*.
<https://acqnotes.com/acqnote/acquisitions/dodi-5000>
- AcqNotes. (2020, September 09). *Department of Defense (DOD) Directive 5000.01*.
<https://acqnotes.com/acqnote/acquisitions/dodd-5000>
- AcqNotes. (2021, August 26). *Color of money*. <https://acqnotes.com/acqnote/acquisitions/color-of-money>
- American Council on Education. (n.d.). *A brief guide to the federal budget and appropriations process*. <https://www.acenet.edu/Policy-Advocacy/Pages/Budget-Appropriations/Brief-Guide-to-Budget-Appropriations.aspx>
- Association of American Medical Colleges. (2021, June 17). *House “deems” FY22 topline, Senate timing uncertain*. <https://www.aamc.org/advocacy-policy/washington-highlights/house-deems-fy22-topline-senate-timing-uncertain>
- Bartels, F. (2021, June 23). *Changing current “use it or lose it” policy would result in more effective use of defense dollars*. The Heritage Foundation.
<https://www.heritage.org/defense/report/changing-current-use-it-or-lose-it-policy-would-result-more-effective-use-defense>
- Brien, S., Letterle, K., & Kantner, P. (2020). *Measuring the effects of federal budget dysfunction: Impacts of continuing resolutions on public procurement*. ResearchGate. https://www.researchgate.net/publication/344446432_Measuring_the_Effects_of_Federal_Budget_Dysfunction_Impacts_of_Continuing_Resolutions_on_Public_Procurement
- Candrea, P. (2017). *National defense budgeting and financial management*. Information Age Publishing.

- Defense Acquisition University. (n.d.). *DAU Acquipedia: Planning, programming, budgeting & execution process (PPBE)*. Retrieved January 2, 2022, from <https://www.dau.edu/acquipedia/pages/ArticleContent.aspx?itemid=154>
- Defense Technical Information Center. (2019, January). *Section 809 Panel, vol 3*. <https://discover.dtic.mil/section-809-panel/>
- Definitions; Applicability of Subchapter, 31 U.S.C. § 1551 (n.d.). Retrieved October 12, 2021, from <https://www.law.cornell.edu/uscode/text/31/1551>
- Department of Defense. (2009, September). *Financial management regulation (DOD 7000.14-R)*. https://comptroller.defense.gov/Portals/45/documents/fmr/archive/03arch/03_08_Sep09.pdf
- Department of Defense. (2013, January 10). *Defense Contract Management Agency (DCMA) (DOD Directive 5105.64)*. <https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodd/510564p.pdf>
- Department of Defense. (2017, June). *Financial management regulation (DOD 7000.14-R)*. https://comptroller.defense.gov/Portals/45/documents/fmr/current/2a/03a_02.pdf
- Department of Defense. (2017, August 29). *The planning, programming, budgeting, and execution (PPBE) process (DOD Directive 7045.14)*. https://irp.fas.org/doddir/dod/d7045_14.pdf
- Directorate for Organizational Policy and Decision Support. (2019, March). *Operation and management of the Department of Defense*. Department of Defense. <https://irp.fas.org/agency/dod/org-man.pdf>
- Eanes, J. (2019, March 4). *Organization and management of the Department of Defense v3.2*. Federation of American Scientists. <https://irp.fas.org/agency/dod/org-man.pdf>
- FAR 4.804-5(a), Procedures for Closing Out Contract Files (2021). <https://www.acquisition.gov/far/4.804-5>
- FAR 42.302(a)70, Contract Administration Functions (2021). <https://www.acquisition.gov/far/42.302>
- Hale, R. F., & Kendall, F. (2012, September 10). *Department of Defense management of unobligated funds; obligation rate tenets*. Office of the Secretary of Defense. https://www.acq.osd.mil/fo/docs/OSD%20Memo_DOD%20Mgt%20of%20Unobligated%20Funds_Obligation%20Rate%20Tenets_10Sep12.pdf

- Herrera, G. J. (2020). *The fundamentals of military readiness* (CRS Report No. R46559). Congressional Research Service. <https://crsreports.congress.gov/product/details?prodcode=R46559>
- Krause, H. (2018). *Budget issues: Continuing resolutions and other budget uncertainties present management challenges* (GAO-18-368T). Government Accountability Office. <https://www.gao.gov/assets/gao-18-368t.pdf>
- Lofgren, E. (2019, April 16). *What do we mean by big “A” and little “a” in acquisition?* Acquisition Talk. <https://acquisitiontalk.com/2019/04/what-do-we-mean-by-big-a-and-little-a-in-acquisition/>
- McCusker, E. (2019, November). *Operation and maintenance budget execution fourth quarter report for Fiscal Year 2019*. Department of Defense. https://comptroller.defense.gov/Portals/45/Documents/OM_Reports/FY2019/FY_2019_4th_quarter_execution.pdf
- McGarry, B. W. (2020). *Defense primer: Planning, programming, budgeting, and execution (PPBE) process* (CRS Report No. IF10429). Congressional Research Service. <https://crsreports.congress.gov/product/pdf/IF/IF10429/9>
- National Science Foundation. (n.d.). *Federal budgeting and appropriations process (accessible)*. Retrieved October 12, 2021, from https://www.nsf.gov/about/congress/federal_budgeting_accessible.jsp
- Stewart, D. (2015, May 20). *Color of money funding policies and fiscal law*. Defense Acquisition University. https://ndiatvc.org/images/downloads/DAU_Training/dau_color_of_money.pdf
- Torreón, B. S., & Plagakis, S. (2021). *Defense authorization and appropriations bills: FY1961–FY2021* (CRS Report No. 98–756). Congressional Research Service. <https://crsreports.congress.gov/product/details?prodcode=98-756>
- Under Secretary of Defense (Comptroller). (2019). *Budget execution: Operation and Maintenance (O&M) budget execution reports, FY2019 4th quarter report*. https://comptroller.defense.gov/Portals/45/Documents/OM_Reports/FY2019/FY_2019_4th_quarter_execution.pdf
- Under Secretary of Defense (Comptroller). (2018). *Budget execution: Operation and Maintenance (O&M) budget execution reports, FY2018 4th quarter report*. https://comptroller.defense.gov/Portals/45/Documents/OM_Reports/FY2018/FY_2018_4th_quarter_execution.pdf
- Under Secretary of Defense (Comptroller). (2017). *Budget execution: Operation and Maintenance (O&M) budget execution reports, FY2017 4th quarter report*. https://comptroller.defense.gov/Portals/45/Documents/OM_Reports/FY2017/FY_2017_4th_quarter_execution.pdf

Under Secretary of Defense (Comptroller). (2016). *Budget execution: Operation and Maintenance (O&M) budget execution reports, FY2016 4th quarter report*.
https://comptroller.defense.gov/Portals/45/Documents/OM_Reports/FY2016/FY_2016_4th_quarter_execution.pdf

Under Secretary of Defense (Comptroller). (2015). *Budget execution: Operation and Maintenance (O&M) budget execution reports FY2015 4th quarter report*.
https://comptroller.defense.gov/Portals/45/Documents/OM_Reports/FY2015/FY_2015_4th_quarter_execution.pdf

United States Senate. (n.d.). *Budget*. Retrieved October 12, 2021, from
https://www.senate.gov/reference/reference_index_subjects/Budget_vrd.htm

U.S. Const. art. I, § 2.

U.S. Const. art. I, § 7.

U.S. Const. art. I, § 8.

U.S. Const. art. I, § 9.

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