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An Analysis to Lengthen Operation and Maintenance Budget to 2-Year and Allow a Carryover of Expired Funds to the End of the First Quarter of the Subsequent FY

June 2022

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Prepared for the Naval Postgraduate School, Monterey, CA 93943.

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ABSTRACT

In this thesis, I propose the extension of the operation and maintenance (O&M) appropriation or period of availability from one year to two years, along with allowing a carryover of the expired funds to cover new starts and program increases during a continuing resolution. I present both the advantages and disadvantages that such policy change would bring and argue that the advantages far outweigh the concerns raised by Congress and those who oppose the two-year proposal. Extending O&M funding availability to two years would alleviate the spike of end-of-year obligations and lower the amount of expired unobligated funds, leading to fiscal and program stability. I also discuss the opponents' main argument against such a policy shift, i.e., Congress's perceived loss of control. This policy proposal, if implemented, would bring much-needed budgetary flexibility and procurement stability throughout the fleet and to the DoD in general.

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ABOUT THE AUTHORS

Lieutenant Commander Diop is a native of Senegal. He was enlisted as Logistic Specialist and stationed onboard VFA-137 where he deployed onboard USS ABRAHAM LINCOLN, providing critical logistic support in support of Operations Iraqi Freedom and Enduring Freedom over Afghanistan, which led to his selection as Sailor of the Year. He graduated with a Bachelor of Science Degree in Business Administration from Columbia College and was commissioned in April 2010 through the Officer Candidate School. He was subsequently assigned to USS NIMITZ (CVN-68) as the Repairable Management Branch Officer from December 2010 to July 2012. LCDR Diop served as the Supply Officer onboard USS Carter Hall (LSD 50) from November 2016 to May 2019, where he deployed to the 5th Fleet area of operations, in support of maritime security operations where his team earned the Logistic Readiness Excellence Award for 2017.

Ashore, LCDR Diop served as Business Financial Manager Intern at NAVSEA, where he worked with the Comptroller to improve the Navy's development of the financial balance sheet for ships and submarines. He is currently serving as N4 at the Afloat Training Group Western Pacific. After graduating from the Naval Postgraduate School, he will be reporting to NAVSEA HQ Washington DC.

LCDR Diop is married to his wife of 12 years, Aida Diop. Together, they have three children.

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Finally, I want to thank my parents and relatives for their support and prayers that accompanied me throughout the journey. To my wife and children, thank you for being understanding and supportive as I worked to complete this project. I love you and am thankful for your patience and sacrifice throughout this journey.

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LIST OF ACRONYMS AND ABBREVIATIONS

BES	Budget Estimate Submission
CICA	Competition in Contracting Act
CR	Continuing Resolution
CRS	Congressional Research Service
DoD	Department of Defense
FAR	Federal Acquisition Regulation
JCIDS	Joint Capability Integration and Development System
JPG	Joint Programming Guidance
MILCON	Military Construction
NSS	National Security Strategy
O&M	Operation and Maintenance
O&MN	Operation and Maintenance, Navy
OMB	Office of Management and Budget
OPN	Other Procurement, Navy
OSD	Office of the Secretary of Defense
PDM	Program Decision Memorandum
POM	Program Objective Memorandum
PPBE	Planning, Programming, Budgeting, and Execution
PPBS	Planning, Programming, and Budgeting System
RDT&E	Research, Development, Testing, and Evaluation
RMD	Resource Management Decision
SCN	Shipbuilding and Conversion, Navy

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I. INTRODUCTION

Operation and Maintenance (O&M) appropriation has grown exponentially over the past few decades, making it one of the fastest growing and most significant appropriations in its rank. Yet, its window of obligation is the shortest. Except for a few years in the history of the current budget process, Congress has been unable to pass a budget on time. Continuing resolution (CR) legislation has been the "go-to" strategy to fund the government in the first quarter and, at times, deep into the FY or throughout the full FY. So, a narrow window of 1 year to obligate O&M funds is reduced to 8 or 9 months on average, creating tremendous pressure on agencies to obligate the whole budget by the end of the FY. On the surface, federal agencies seemed to exhaust almost the entirety of the O&M budget on time to avoid the budget ax of Congress, only to de-obligate the excess funds shortly after that, resulting in more expired unobligated O&M funds returning to the treasury (Candreva, 2017). Under the Continuing Resolution Act, new starts, stopping requirements, and budget increases must wait for Congress to enact the regular appropriations or pass anomalies creating exceptions for those programs.

CR legislation is a stopgap funding strategy that temporarily funds the government at the previous FY limit to avert a shutdown while giving lawmakers an extension to get a consensus on the budget proposal. According to McNellis et al. (2020), Congress funded the government with either one or a series of CR in the last 11 of 19 years to ensure that the government keeps its doors opened. However, during a CR, any new start/stop or program budget increase or decrease is against the law unless congress grants an exception to the policy via anomalies. By granting anomalies to specific programs, congress allows the funding of specific new programs or production increases while maintaining flexibility in its legislative duty without the pressure to enact regular appropriations (Williams & Roscoe, 2018).

When Congress passes regular appropriations, the time starts ticking for federal agencies to expedite the spending of any additional 1-year money before the budget expires. This challenges programs with a funding increase to spend the extra amount allotted efficiently by the deadline of September 30. As for the new-start programs, the funding must be obligated fully within the shortened periodicity. This reduced timeline exerts tremendous pressure on federal agencies to exhaust the entirety of their O&M budget by the end of the FY or risk getting their funding reduced in the following FY. The fear of budget cuts creates a shopping frenzy in the last quarter, where federal agencies rush to spend down their budget authority irrespective of whether the business agreements are favorable or not to the government. Andrzejewski and Smith (2020) reported, "Agencies worry that spending less than their budget permits might prompt Congress to appropriate less money in the next FY. To avoid this, federal agencies embark on an annual spending spree to avoid the impression they can operate on less" (p.1). Despite the rush to fully obligate by the end of the FY, billions of O&M unobligated dollars return to the treasury, representing a considerable loss of buying power, funding that could have been carried over to the next FY to fund new starts and program budget increases.

A significant restriction on the use of appropriations derives from the structure of the budget request (Candreva, 2017, p. 304). If the DoD submits a budget requesting a particular dollar amount and justifies it, and Congress appropriates that exact amount for that specific purpose, it behooves the program manager to do exactly what the budget described (Candreva, 2017, p. 304). Therefore, it is paramount to understand the U.S. budget process and the background information of this research topic. Due to the length of the budget process, I introduce the Planning, Programming, Budgeting, and Execution (PPBE) process, articulate the definition and implication of CRs, and go over past literature that illustrates the damages caused by this temporary stopgap funding. This research demonstrates the correlation between the spike in O&M end-of-year spending and the periodicity of the availability of funds due to the CR. The scope of this study is to analyze O&M budget execution from the period of 2017 to 2021 to determine whether a permanent extension and a carryover will lessen the adverse impact CR legislation has on the military. Chapter II introduces a background from the PPBE process, federal budget, fiscal laws, and its roles on end-of-year spending and CR. Chapter III examines the data analysis and the methodology used to acquire the data while using a comprehensive data set on budget execution, emphasizing the expired O&M budget. Chapter IV discusses the benefits and drawbacks of extending O&M budget periodicity and makes recommendations to legislators.

I utilize GAO findings, inspector general reports, the DoD comptroller's green book, and past review studies on this topic. In addition, I analyze quarterly obligation data from 2017 to 2021 of O&M and procurement appropriations to concentrate on obligations throughout the FY, but notably in the fourth quarter, while analyzing billions of unobligated budget authority that is returned every year to the treasury. Finally, I conclude with some thoughts and recommendations.

This study demonstrates that extending O&M appropriation to 2 years and allowing unobligated expired funds to carry over through the first quarter of the new FY will alleviate the number of new programs that cannot start due to the CR. Through this research, I examine the length of the CR and determine the exact number of months the DoD has, on average, to execute its O&M budget before it expires. I also analyze 5 years of the DoD's O&M budget execution data to determine the amount of budget authority that expired during that time frame that could have been used to fund new starts or program increases if a carryover was implemented. This study addresses the following main question:

- Is the Navy better off with 2-year O&M budget authority plus a carryover of expired funds to the subsequent FY?

To address and find the response to this question, I delve into these secondary questions to extrapolate informed recommendations:

- What are the benefits and drawbacks that such a policy shift would bring?
- Will such policy obstruct Congress's responsibility for budgetary oversight?

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II. BACKGROUND

The effect of the CR policy and the shortened availability period for O&M appropriation has harmed budget execution and military readiness, from training to the timely award of contracts for ship and aircraft maintenance. The damage is costly to the military in terms of training and contracting costs the government more money and is detrimental to the armed forces' readiness. Then, Secretary of Defense James Mattis said, "No enemy in the field has done more to harm the readiness of the U.S. military. This situation is worsened by us operating, nine of the last ten years, under continuing resolutions, wasting copious amounts of precious taxpayer dollars" (Mattis, 2018). Moreover, CR increased risks to our force when friends and allies are counting on our presence in contested areas, such as the Indo-Pacific, to counter a belligerent China that has become bolder against our partners and interests. Although CR affects all DoD appropriations, O&M funding is most affected due to its single-year budget periodicity.

O&M funds military readiness, and its budget has been on a steady increase in the past 4 decades while its period of availability for a new obligation has remained the same. To understand the significance of expanding O&M from a 1-year budget to a 2-year budget, it is crucial to understand the features of O&M appropriation, its period of availability, the fiscal regulations, the federal funding, and the appropriation process. This chapter briefly summarizes the complex budget process by presenting an overview of the PPBE system to understand better how requirements are generated and funded. It is equally important to know how the CR and its restrictive nature compound military readiness woes. The final section of this chapter covers past literature, where I discuss arguments for and against expanding O&M periodicity and explain the reasons behind the urgency to conduct this research.

A. PLANNING, PROGRAMMING, BUDGETING, AND EXECUTION

The PPBE system is a recurrent process unique to DoD where its leaders debate solutions for new issues while revisiting past decisions for relevancy check given current challenges.

McGarry and Peters (2020) stated that the PPBE came into existence in 2003 as an offshoot and a revised version of a much earlier process: the Planning, Programming, and Budgeting System (PPBS), under then-Secretary of Defense Robert S. McNamara in 1961. Unlike the PPBE, which consists of four phases, the PPBS had three sequential steps and did not have an execution portion. "PPBS was intended to be a thorough analysis and planning system that incorporated multiple plans and programs" (Candreva, 2017, p. 201). It provided the foundation on which decision-makers relied to develop solutions for future challenges while reviewing past solutions for compatibility with the current environment (U.S. Army Logistics Management College, 2003).

The PPBE, like its precursor, entails a system of forward-looking accounting and efficient allocation of funds, designed to establish priority among many possible and competing programs to achieve the specific objectives of national defense (Candreva, 2017). In other words, the PPBE is designed with the foresight to anticipate changes in the global geopolitical environment and the evolution of the threats resulting from it, to equip the armed forces with the best equipment money and people to neutralize the threats.

The Department of Defense's purchase process is divided into three steps, as shown in Figure 1. The acquisition process, the PPBE, and the Joint Capabilities Integration and Development System (JCIDS) procedure are all processes the pentagon must follow. All DoD programs are managed and executed through the acquisition process. The JCIDS methodology determines the DoD's mission-critical capabilities. Its goal is to determine the military's needs and design the requirements that the acquisition process will utilize to meet those objectives. The PPBE process finances any DoD acquisition program and focuses on resource allocation and financial management for current and future DoD programs. These integrated steps make up the DoD acquisition procedures, as each process is critical to the successful execution of the other methods. The secretary of defense formulates priority goals for the department during the PPBE process, which includes four unique and overlapping stages: planning, programming, budgeting, and execution. The process focuses on allocating resources, managing finances for current and future initiatives established by the secretary of defense, and setting DoD priorities and goals. According to DoD Directive 7045.14 (Department of Defense [DoD], 2013), there are five main objectives of the PPBE process:

1. Supports the objective to provide the DoD with the most effective mix of forces, equipment, manpower, and support attainable within fiscal constraints.
2. Facilitates the alignment of resources to prioritized capabilities based on an overarching strategy and requires balancing necessary warfighting capabilities with risk, affordability, and effectiveness.
3. Provides mechanisms for making and implementing fiscally sound decisions in support of the National Security Strategy (NSS) and National Defense Strategy (NDS).
4. Facilitates execution reviews of past decisions and actions. The reviews assess actual execution performance based on goals and strategic objectives. Recommendations from these reviews are linked to decisions on future resource allocations.
5. Accepts, as inputs, products of the acquisition and requirements processes. (DoD 7045.14, 2013)

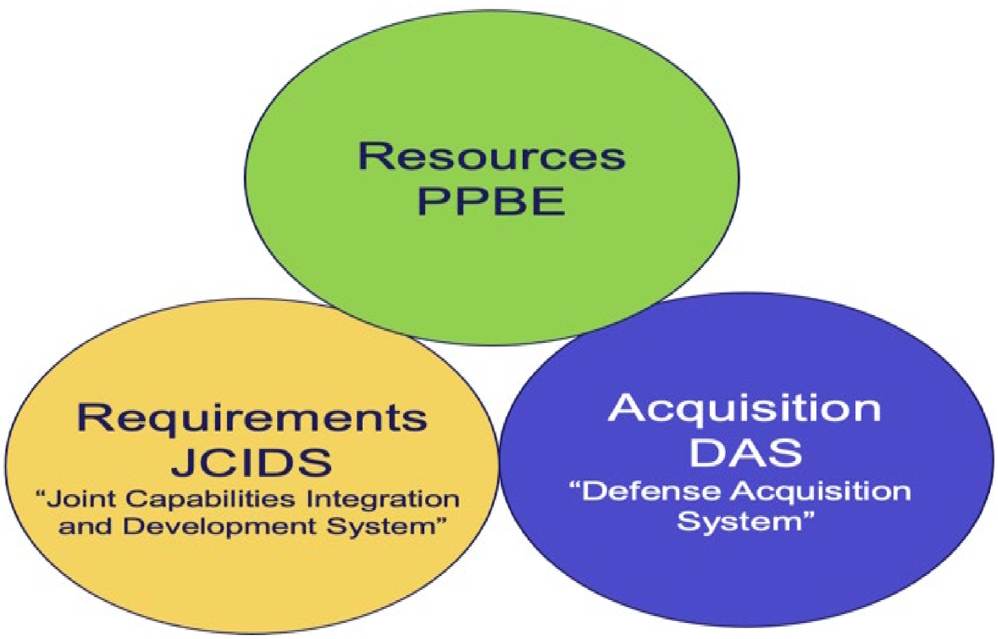


Figure 1. DoD Acquisition Process, Procurement Overview. Source: Spencer (PowerPoint slides, 2021).

1. The Planning Phase

The planning phase is the first step in the PPBE process, as depicted in Figure 2. Its goal is to create a framework within which the Pentagon may construct a vision for achieving U.S. national goals. Examining the current Pentagon strategy and finding gaps in technology, weapon systems, and other means is one approach to achieving this goal and devising a plan to fill those gaps to keep America and its allies secure. In addition, the planning phase defines and prepares a new military strategy that entails guaranteeing sufficient resources to complete the mission while also providing the secretary of defense with alternatives for evaluating the DoD's role in formulating policies critical to America's national security which entails examining alternative strategies to understand changing situations and the long-term effects of current solutions to determine the pentagon's need for the next 5 years and beyond.

The end result of the planning phase is the secretary of the defense's Joint Programming Guidance (JPG). "The JPG provides top-down strategic guidance to the military, noted in the overarching defense strategy from the executive branch, which drives the military force structure and fiscal decisions made in the programming phase" (McCaffery & Jones, 2004). On a nutshell, the president in the executive branch authors the NSS with inputs from the National Security Council and other pertinent agencies. The NSS is viewed as the overarching strategy that is superior to and guides the strategic planning that occurs inside the DoD (Candreva, 2017, p. 210). Based on the president's guidance, the secretary of defense issues the Quadrennial Defense Review (QDR) and the NDS, which lays the groundwork for the pentagon's strategic objectives to formulate a new defense strategy and direct the future force development to satisfy the NSS. The Joint Chiefs of Staff (JCS) authors the National Military Strategy (NMS) with the guidance found in the current NSS. McCaffery & Jones (2004) described the NMS as a gauge for JCS, delineating the needed capabilities and the best acquisition strategies required to attain the NSS's objectives. The key output of the planning phase is the Defense Planning Guidance and Chief Naval Officer guidance at the DoD and Navy levels, respectively, creating the next Program Objective Memorandum (POM), which is the outcome of the programming phase.

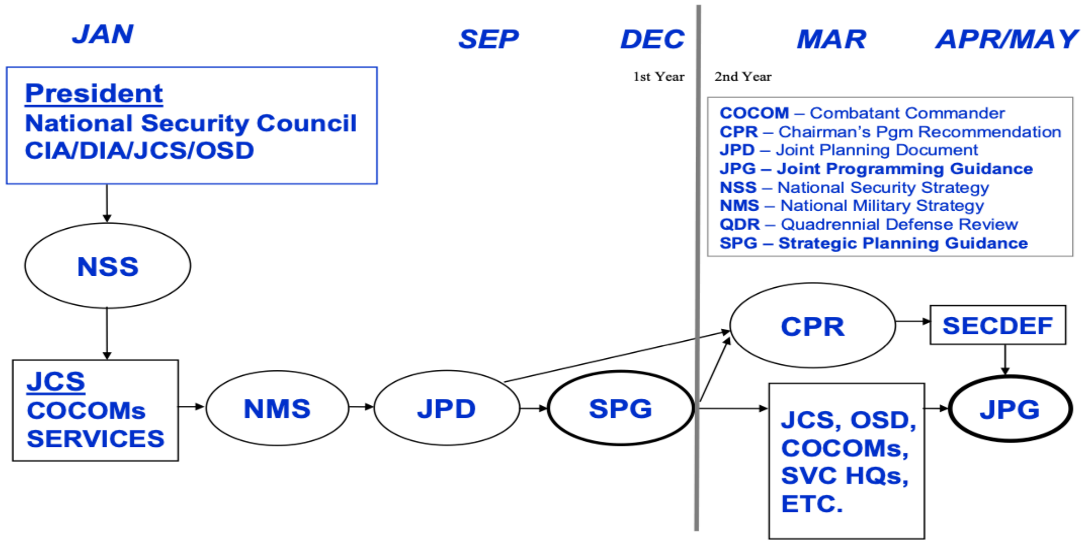


Figure 2. Planning Phase. Source: Candreva (2017).

2. The Programming Phase

Programming is the secondary phase of the PPBE, where the strategic documents and guidance from the planning stage become the framework for which programs are executed, matching the limited resources to specific priorities. The output of the programming phase is the POM, which provides a thorough description of the proposed plan with a time phase allocation projected 6 years into the future (Fast, 2010). The program decisions made in the POM process are documented in the Program Decision Memorandum (PDM), which, when issued, signals the end of the programming phase. Once it is published, this document serves as a basis for the secretary of defense to allocate resources matching capabilities with objectives among DoD's competing agendas (Holcombe & Johnston, 2008).

The Office of the Secretary of Defense (OSD) and Joint Staff senior leadership conduct a thorough review of each POM to incorporate the DoD agencies, POM, into a comprehensible defense program picture, providing each service program with a breakdown of projected costs over 6 years (Fast, 2010). These POMs signal the effective start of the programming phase and are reviewed in detail by the OSD for acceptance, rejection, or revision.

3. The Budgeting Phase

The budgeting phase serves as a plateau to discuss and defend the agencies' proposal to Congress and OSD providing the resources necessary to meet defense objectives while maintaining a healthy checkbook balance. Candreva, 2017 defined the budgeting phase as the time when the programming decisions are justified to support the enactment phase of the budgeting process (Candreva, 2017, p. 225). The budgeting phase kicks off upon issuing the Office of Management and Budget (OMB) Circular A-11 to federal agencies and ends upon submitting the estimated budget proposals. Each agency within DoD submits its budget proposal together with its POM. As shown in Figure 3, the budgeting and the program phases coincide. This budget estimate submission (BES) is a budget forecast for DoD agencies to document their budgetary requirements in the pentagon's budget during the PPBE. After receiving inputs from the services, their respective chiefs submit the guidelines for their budget requests (Holcombe & Johnston, 2008).

Once the operational and budgetary dimensions of each POM have been validated by the White House, DoD Comptroller and OMB, the entire DoD budget is converted into a Resource Management Decision (RMD), which is submitted to the deputy secretary of defense for validation. The RMD is inspected jointly by OMB and OSD at the end of this process. If necessary, changes are made. The president then submits a budget proposal to Congress, traditionally in the first week of February, a few days after the State of the Union address.

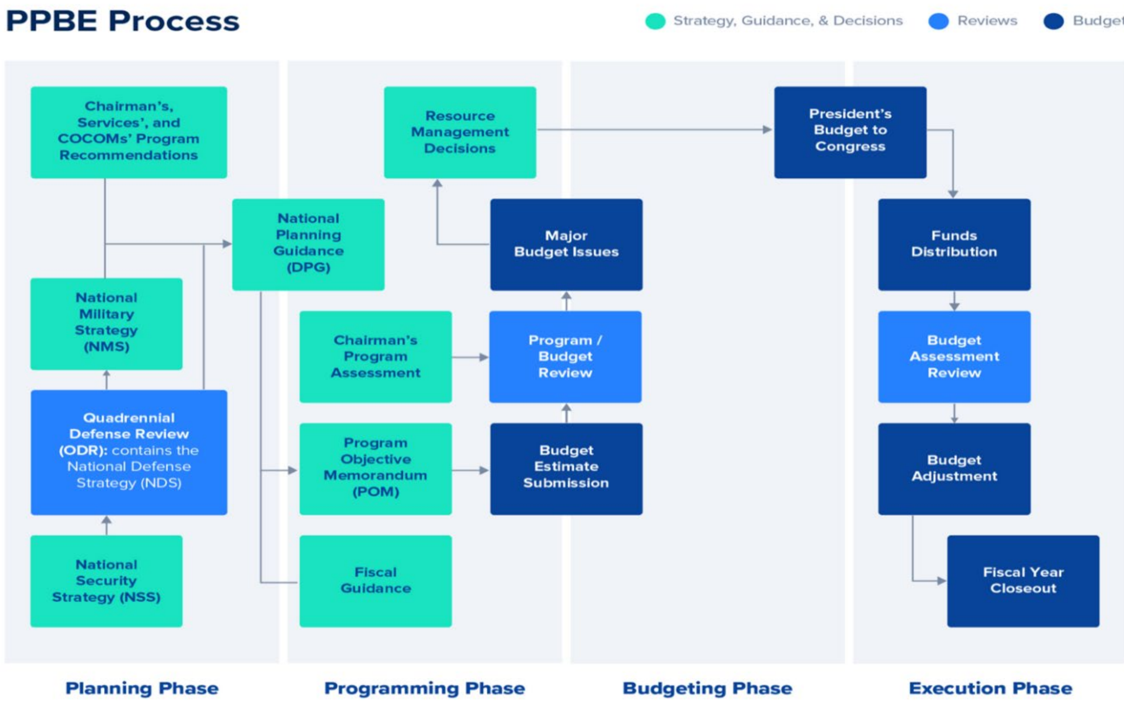


Figure 3. PPBE Process. Source: Larkins (2021).

4. The Execution Phase

The execution phase ensures resources are judiciously expended, and reports on costs and performance are readily available to determine if the value is delivered to stakeholders. “The goal of execution is to implement the programs and policies described in the budget as approved or modified in the authorization and appropriation process to deliver the desired military capabilities and feed information into subsequent rounds of the PPBE process” (Candreva, 2017, p. 231). Additionally, this phase of the PPBE ensures resources are spent judiciously and reports on costs and performance to determine if the value is delivered to stakeholders. The Agency Strategic Review is another mechanism to assess implementation progress, understand accomplishments and challenges/risks, and continuously look for improvement. Using implementation information to inform the other phases of the system is fundamental to the PPBE. During this phase, annual analysis and reporting of financial expenditures and performance measurement results are key deliverables. This phase also includes reports on the agency’s priority goals, designed to provide short-term results aligned with leadership priorities.

The execution phase is the last step of the PPBE process, where plans are implemented, i.e., all planning and programming become a reality with the actual application of the programs. However, before a program is executed, many prerequisites must occur. For instance, the president must sign the authorization and appropriation bills once passed by the legislative branch; then, OMB must apportion the appropriation. Finally, the Treasury provides a warrant, making the funds available for obligations and expenditures. The federal budget process is discussed in more detail in the next section.

B. OVERVIEW OF FEDERAL BUDGET PROCESS

The budget is the government's revenue and expenditure plan for a FY. It estimates the amount of revenue the government expects to raise and describes how that revenue will be allocated to various programs and services.

Article I, Section 9, of the U.S. Constitution grants Congress the power of the purse. The Constitution states, "No public money shall be drawn from the Treasury but in consequence of appropriations made by law." This is a very formal way of saying that Congress must approve all federal spending. As it is in the Constitution, that is how our system is set up that all discretionary spending needs to be discussed each year in this way, and that is what has started the process from our founding fathers of annual appropriations. The exact amount of funding directed for the military is decided by Congress each year in the budget and appropriations process. These processes dictate how discretionary spending will be carried out for the FY and do not affect mandatory spending, so the bulk of federal government funding is not affected.

The annual budgetary battles that I am familiar with have mainly concerned discretionary spending, whose budgetary appropriations amount is set by Congress annually. This type of expenditure represents only a minority of the total; the rest is made up of mandatory spending, a category considered in a substantially different way by the legislature. Their exact amount is not fixed annually in a budget appropriation law. The majority of these mandatory expenditures are for interest payments on debt, Social Security, Medicare, and other entitlements determined by law. The federal agencies in charge of these programs have the authorization and the legal obligation to pay the appropriate benefits to all citizens who meet the criteria for entitlement set by law.

Congress cannot allocate an annual sum for these programs because the total amount fluctuates according to the number of eligible people who apply for them. Unlike the discretionary spending, legislative inaction does not result in the spending being called into question. The only direct influence of the legislature on the budget lies in so-called discretionary spending, which is set annually by law.

Everything officially kicks off with the president's budget request, which by law is supposed to be released before the first Monday in February. However, this proposal is often delayed and is collaboratively put together between federal agencies and the White House. It represents the president's wish list, a fiscal outline for federal agencies in the coming FY. The White House, via the OMB, hands out spending directives and negotiates with agencies before approving their final budget. Since the president's budget is just a proposal and not a law, Congress can incorporate its priorities into the final spending legislation or omit specific proposals from the president's budget. Once the president's budget request is released, the House and Senate begin to work on their budgets, referred to as budget resolutions. The resolution does not have the same force of law but represents each chamber's plan for collecting and spending taxpayer dollars. Once the House and Senate pass their resolutions, they may decide to go to a conference or hold a meeting to agree on the federal funding level for the following year. However, if they choose not to attend a conference or reach an agreement, the House and Senate will continue the process separately. It is important to note that the final legislation will still need to pass both chambers in the same form. Once the resolutions are finalized and the funding number is set, the appropriation committee begins its work.

The budget resolution sets the overall limit on discretionary spending for the year. Once there is a spending limit in place, legislators in Congress start work on appropriations bills that provide actual funding, impacting how much Congress can spend in any given year. Because of the scope and intricacy of the federal budget, the Appropriations Committee is divided into 12 subcommittees in the House and Senate. These subcommittees focus on specific functions, such as defense, transportation, and so forth. The appropriations committees in each chamber divide this overall total and allocate it to each subcommittee, which reviews agencies' budget requests under its jurisdiction. It then holds public hearings where agencies' officials are called to testify after a subcommittee has approved an appropriations bill, giving way for all members of the House to vote on the bill. Traditionally, the appropriations process is conducted first in the House and then in the Senate. However, there are times when both chambers work simultaneously, as they rarely agree on the content of a given bill. As a result, resolving the differences between the House and Senate often falls to a conference committee composed of members from both chambers. Once the differences between the two chambers are resolved and the uniform appropriation bill is passed, it goes to the president's desk for a signature.

When this process works as it should, it results in 12 spending laws being passed and signed on September 30 for the next FY beginning October 1. When the process does not work on schedule, a CR, a short-term spending law allowing for funding to continue at slightly less than current levels for a specific time, is a commonly employed mechanism. When Congress cannot agree on a CR, any agency funded by the regular appropriations bill is closed until a CR or appropriation is approved. I speak more in-depth about CRs in a later subsection. It is essential to state that the yearly appropriations process applies only to discretionary spending. In the CRS report, Austin (2017) explained that discretionary spending is responsible for one-third of total federal expenditures while mandatory spending accounts for two-thirds of federal spending. Payments for programs under the latter, such as Social Security, Medicaid, and Medicare, are automatic and benefit individuals who have met specific criteria set forth by laws, making them eligible for entitlement benefits. On the other hand, the discretionary spending limit is reviewed, debated, and determined each year through the enactment of appropriations.

C. FISCAL LAWS

Under Article I, Section 9 of the U.S. Constitution, "No public money shall be withdrawn from the Treasury, but in consequence of appropriation by law." Congress holds the purse strings and is the only branch of government that can authorize the spending of public money. So when Congress authorizes and appropriates the procurement of an aircraft, those funds cannot be reprogrammed and transferred without prior approval from Congress. Color of money is the appropriation arm of Congress, where it divides the discretionary budget into different types of funding to identify the purpose and when it is supposed to be spent. It is essentially Congress's procedure for managing the spending of the different types of funds. Under United States Code Title 31, many fiscal laws and rules govern how and when public funds must be used. The following three subsections will briefly define the Misappropriation Act or purpose, the Bonafide Need Rules or time, and the Anti-Deficiency Act or amount.

1. Misappropriation Act or Purpose

The Misappropriation Act, also known as the purpose law, is one of the fundamental laws dealing with appropriated funds, as highlighted in 31 U.S.C. § 1301: "Appropriations shall be applied only to the objects for which the appropriations were made except as otherwise provided by law." Congress enacted this law in 1809 to exert control over taxpayers' dollars and ensure funds were used for purposes appropriated only. In simpler terms, the purpose statute states that federal funds may only be dispensed for purposes authorized by Congress. The Constitution prohibits the disbursement of funds from the treasury except as provided by an appropriation resulting from Congress's actions deciding the purposes for which the funding may be used.

2. Bona Fide Need Rules or Time

Chapter 31 U.S.C. § 1502 stated that "appropriated funds may be used only for the needs or services that arise in the year of the appropriation's obligation period of availability." Therefore, appropriations can only be obligated to a legitimate need. In other words, the F.Y. appropriation can only be obligated in an actual or bona fide need identified during or before the F.Y. in which the appropriation was made.

3. Antideficiency and Impoundment Act

Under 31 U.S.C. §§ 1341, 1517, it is against fiscal regulation to approve or make any authorization for an obligation greater than the funds available in the appropriation language. In simpler terms, one cannot spend more than what's on their checking account. In addition, this article prohibits the obligation of funds in advance of budget and imposes regulations to ensure obligations are kept within appropriated or subdivided amounts. This statute prevents federal agencies from spending their entire appropriation in the first few months of the year. In addition, the law prohibits federal employees from entering into contracts that exceed the budget voted for the year. Finally, no one can commit or spend more than the Treasury Account Fund Symbol (TAFS) amount or the apportioned amount under the law. Any violation will subject that person to administrative disciplinary measures, including but not limited to a written reprimand, suspension, or removal from duty. Just like it is illegal to overspend, it is also against fiscal law to withhold from spending funds that are congressionally appropriated.

Through their elected officials, Americans have direct input into their tax dollars. The Impoundment Act of 1974 puts a mechanism in place that will not allow the president and elected/appointed officials to withhold funds or refuse to temporarily or permanently obligate congressionally approved funding. Resource allocation and funding decisions are some of the most crucial obligations for Congress. So, the Impoundment Act reasserts Congress's authority and stops executive overreach.

D. BUDGET PERIODICITY

An appropriation is a law of Congress that provides an agency with budget authority, allowing the agency to obligate the government and make payments from the U.S. Treasury for specified purposes (U.S. House of Representatives, n.d.). Five different appropriation accounts fund the DoD:

- O&M
- Military Personnel (MILPERS)
- Research, Development, Testing, and Evaluation (RDT&E)
- Procurement
- Military Construction (MILCON)

Each of these appropriations has a different lifespan for new obligations that range from 1 to 5 years, as depicted in Figure 5. Except for O&M and MILPERS, which have 1 year of availability, all the other accounts have a more extended period to obligate the funds. The primary aim of this research is to focus on O&M appropriation and finding solutions to the challenges that federal agencies face when executing the funds in a shortened obligation period.

1. 1-Year Funding

The main objective of budget periodicity is to use funds within a given FY or a specific period of several FYs. The funding shelf-life establishes a procedure that ensures the cancellation of expired budget authority and prevents the accumulation of these funds that could be used later without the proper approval of Congress.

The 1-year fund is established for a single year, making it available for obligations only in the year they were enacted. As previously mentioned, the timeline for the government's FY is from October 1 to September 30, where the budget authority is available to satisfy the bona fide need of the FY. If an agency fails to exhaust its budget authority by September 30 fully, the funds will expire and become unavailable for new obligations. Once the budget authority lapses, it enters the expired phase for an additional 5 years, where only adjustments up or down to previous obligations can be made. Six years after the enactment of the appropriation, the budget authority enters the cancellation phase, where any leftover budget authorities are forever lost to the Treasury.

2. Multiyear Funding

Multiyear appropriations are subject to the same rules and regulations governing the usage of 1-year budget authority in that they are available for specific timeframe but more extended, i.e., 2-year, 3-year or 5-year (Candreva, 2017). MILCON and Ship Conversion Navy appropriations are generally 5-year budget. Whereas procurement and research development appropriations are 3- and 2-year budgets respectively. One advantage of the multiyear funding is the flexibility to forward unobligated balances to the next fiscal year as long as it is not the final year of the budget availability.

3. Non-Annual Appropriation

A non-annual appropriation is available for commitment without FY limitation. As long as there is leftover budget and the project is ongoing, the funds are available for use. According to the GAO report of 2018, "remain available until expended" is the standard terminology used to govern the use of this type of appropriation. Unless repealed by statute or rescinded under 31 U.S.C. §1555, the non-appropriation funds would remain available for what they were intended for until they are fully depleted.

E. OPERATION AND MAINTENANCE

Before recommending extending the period of availability of the O&M budget, it is essential to understand the appropriation, its characteristics, and budget activities. O&M is an expense appropriation that directly supports necessary warfighting equipment such as ship and aircraft maintenance, air operations training, and maintenance of military facilities. In addition, this funding supports the purchase of essential supplies, equipment under $250,000, fuel, training and development of service members, and civilian personnel's pay and benefits. According to the defense financial management regulation, O&M is divided into four budget activities within an appropriation identifying the reasons, programs, or types of activities financed by the fund.

As depicted in Figure 4. each budget activity branches out into group activities and sub-activities that contain program element codes. According to a GAO report (1997), the program element codes are not part of the budget submission to Congress. However, they provide more detail on how the services plan to spend the allocated funds.

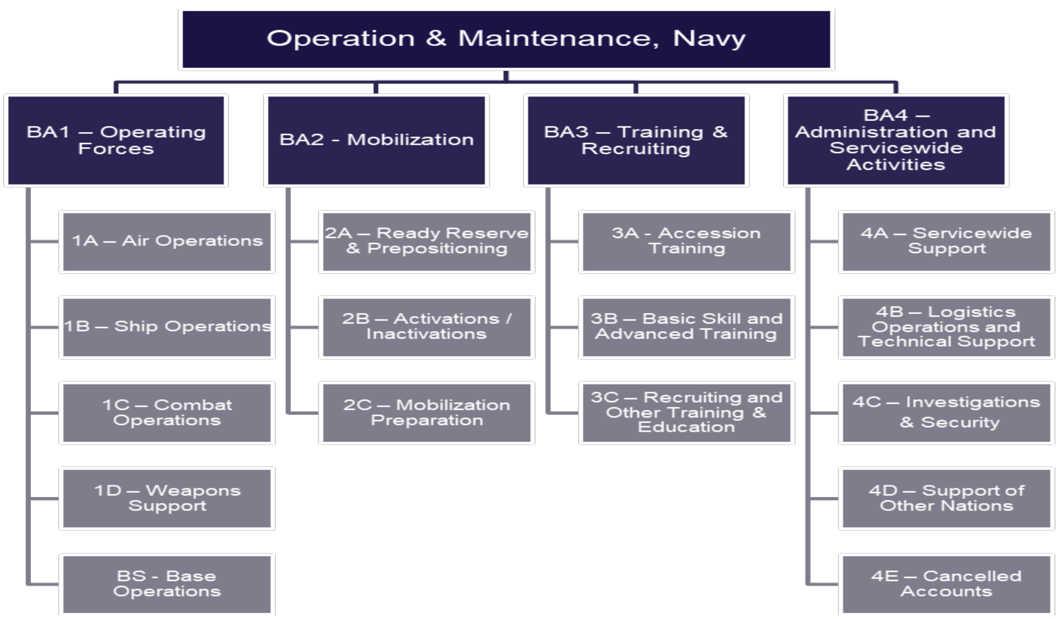


Figure 4. Operation and Maintenance, Navy Budget Activities and Activities Groups. Source: Candreva (2017).

As depicted in Figures 5 and 6, the largest share of the DoD budget continues to be the O&M budget, as it has seen the most spectacular increase over the last 20 years. This appropriation covers both major health expenses for military personnel, the cost of operations and associated security cooperation, and the improvement of forces' operational readiness through training and equipment maintenance. Of course, a significant cause of this increase is the war on terrorism, the major counterinsurgency engagements in Iraq and Afghanistan for the past 2 decades, and the need to maintain the force readiness to address any challenges from the rising of China and the resurgence of Russia.

In 2019 and 2020 requests, the main item of expenditure remains the O&M budget, for the reasons explained in the first part. The Army's top priority was to strengthen unit readiness for current and future operations, with an emphasis on "decisive action" training. Readiness is also a significant concern for the Air Force, whose objectives are primarily to maintain the condition of aging aircraft and train pilots for operations against a near-peer competitor. At the same time, the Navy intends to build on previous efforts to support the O&M of the fleet, including personnel training.

O&M budget will continue to be the most significant appropriation in terms of size for the foreseeable future (see Figures 5 and 6). As the budget continues to grow and CR remains the source of funding for the first quarter, a policy shift to grant budgetary flexibility by allowing the extension of the O&M period of availability to 2 years becomes necessary. At the end of every FY, the DoD surrenders billions of dollars in expired O&M funding despite the concerted effort of agencies to obligate well over 99% of their budget authority. This figure is inflated and failed to indicate that a few months or years after the FY, there is an uptick of de-obligation where agencies reverse a portion of previously obligated funds, sending more expired budget authority to the treasury. Candreva 2020 revealed that DoD appears to have thoroughly executed its O&M budget with an impressive rate of 99.6% at the end of the FY.

This remarkable obligation rate almost always drops by 2% on average to 97% as agencies continue to de-obligate excessive funds after expiration. In the same report, Candreva stated that "appropriations that expired in 2010 and closed in 2015 dropped from 99.3% to 97.3% and that those that expired in 2011 dropped from 99.2% to 97.2 obligation rate in 2016" when the funds were canceled. There is a consistent obligation rate of 2% difference from when the funds expired to when they entered the canceled phase with more than $4 billion of canceled O&M appropriation, representing a colossal amount that will never leave the treasury. Billions remain unliquidated despite the quarterly obligation burn rate and the 80/20 rule mandating federal agencies to obligate all budget authority by year's end. The budget size of O&M is too significant to be constricted for obligation in a single year.

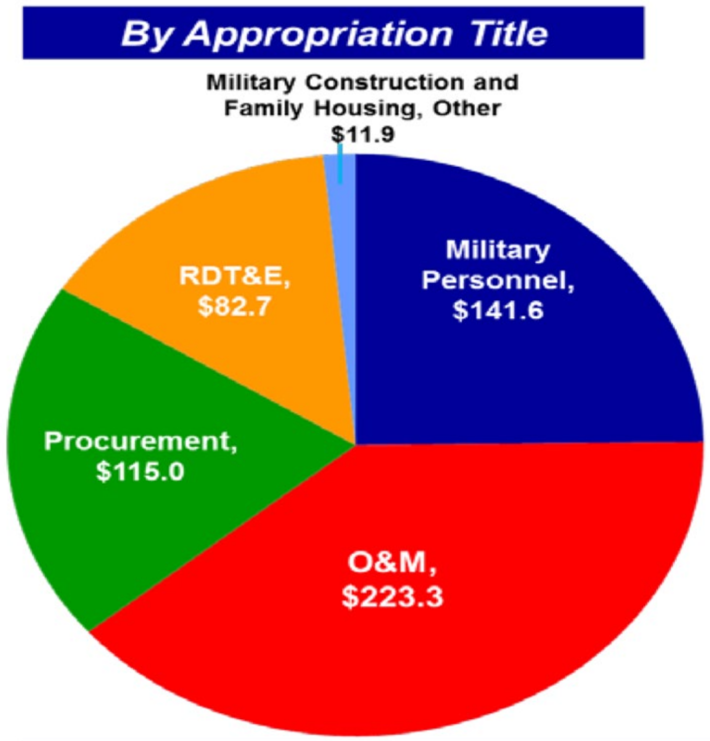


Figure 5. Defense Spending by Appropriation. Source: Office Under Secretary of Defense (Comptroller, 2018).

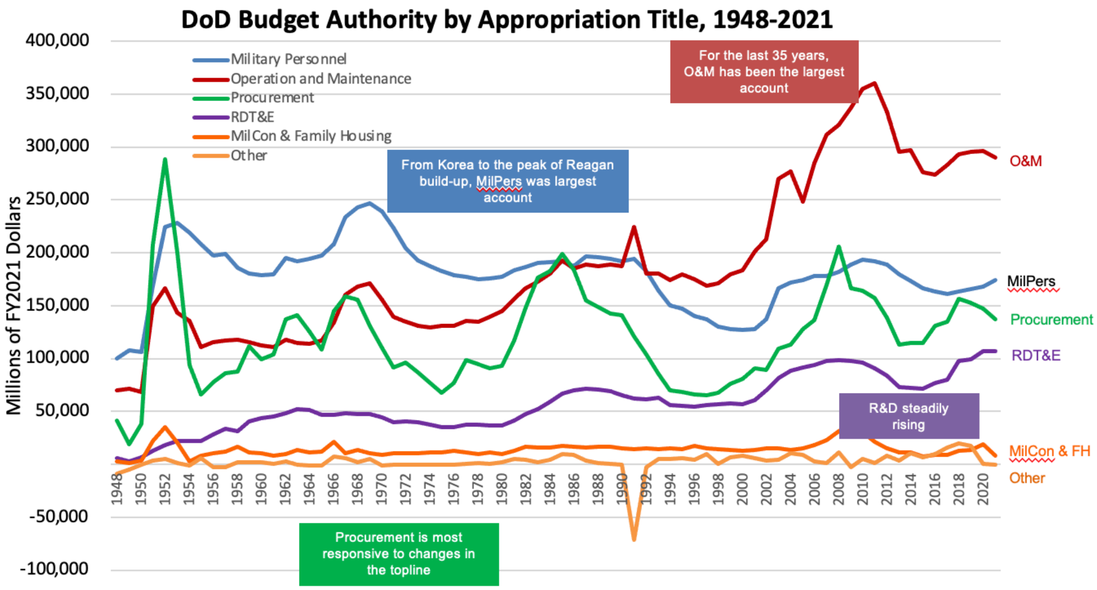


Figure 6. National Defense Budget, 1948–2021. Source: Brien (PowerPoint slides, 2021).

F. OTHER APPROPRIATIONS

RDT&E is 2-year funds, meaning federal agencies have 2 years to get the funding on contract and are obligated from the date of appropriation. RDT&E is intended for research, development, pilots, and prototypes. It is the innovation side of the government trying to get the next generation of technology brought in to move to the operation and sustainment phase of the life cycle. Finally, procurement appropriation is used for major ticket items with a longer lead time to procure. Therefore, there is more time to execute multi-year funding since the timeline to obligate them is 3 to 5 years. For example, Shipbuilding and Conversion, Navy (SCN), and MILCON appropriations have a 5-year obligation period. It takes a more extended time before a fully functioning ship can be developed or a building erected. Figure 7 illustrates the life cycle of federal budgets from the availability to the cancellation phase, where unobligated and unliquidated funds permanently return to the treasury. Unlike O&M, procurement appropriations are used to fully fund capital assets such as ships, aircraft, and major information technology (IT) systems that cost at least $250,000. The procurement effort cannot be incrementally funded since the total cost of a useful end item must be accounted for in that budget (Candreva, 2017).

The dark blue squares in Figure 7 show the number of years an appropriation is available for obligation. During this stage, the funds are current and available from 1 to 5 years for the program office or base commander to obligate on new contracts. The light blue squares represent the expiration stage where the funds are no longer available for new purchases. Still, it is available for 5 years to adjust obligations made before the funds expire. Finally, 5 years after the funds expire, the money goes to the treasury and is no longer available for new commitments or adjustments. For this reason, obligation rates are one of the critical measures used in the department to track execution requirements laid out for programs by the fiscal quarter. Therefore, they will have a percentage to meet for obligation funds for each of those quarters.

The imposed schedule constraints make this problem particularly acute for O&M funds whose appropriation funds the training and exercises, depot maintenance, base operations support, civilian salaries, and day-to-day operations. Congress's calendar seriously impacts accounts with current funds for a FY, as delays in appropriating funds reduce the number of days of available resources. For instance, operating under CRs limits the execution of planned activities because the stopgap solution creates financial uncertainty, resulting in a risk-averse procurement office often avoiding entering into long-term agreements in these situations. The following section includes a discussion of some of the challenges, such as the rush to spend at the end of the FY, which directly results from the bona fide need rules on federal accounts.

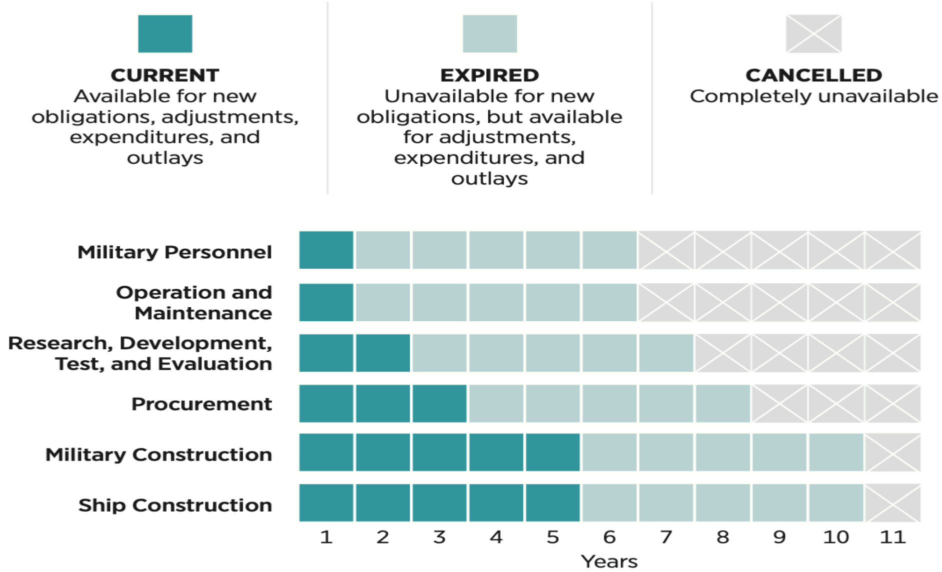


Figure 7. Lifespan of Defense Appropriations. Source: Schwartz (2017).

G. SPIKE IN END OF YEAR SPENDING

A 2017 CRS report defined "use it or lose it" as when "agencies rush to use funds at the end of the FY ... often an attempt to spend funds that would otherwise expire and no longer be available for new obligations after the FY ends." There are extensive studies conducted about the spike in spending of taxpayers' dollars during the last month of the FY. According to experts, many elements such as management reserve funds, DoD reprogramming requests, and CRs contribute to the spike in spending in the last quarter of every FY. For instance, a 2017 CRS report revealed that the DoD made a late request in June to reprogram $1.2 billion (Schwartz, 2017). This request took more than a couple of months to get approved, pushing the obligation of these funds to late September. However, according to the same report, the budget pundits believe that these reasons do not fully explain the extent of the end-of-year spending.

After the FY closes on September 30, any remaining unobligated budget authority is expired and is no longer accessible for new procurements but is available 5 FYs for adjustments to previously made obligations. This time constraint gave way to the "use or lose" mantra. Liebman and Mahoney (2017), in their analysis of contract records from the Federal Procurement Data System, discovered that, between 2004 and 2009, contract awards in the last week of the FY were five times the average rate for the rest of the year, representing a sharp increase in federal spending at year's end (Figure 8).

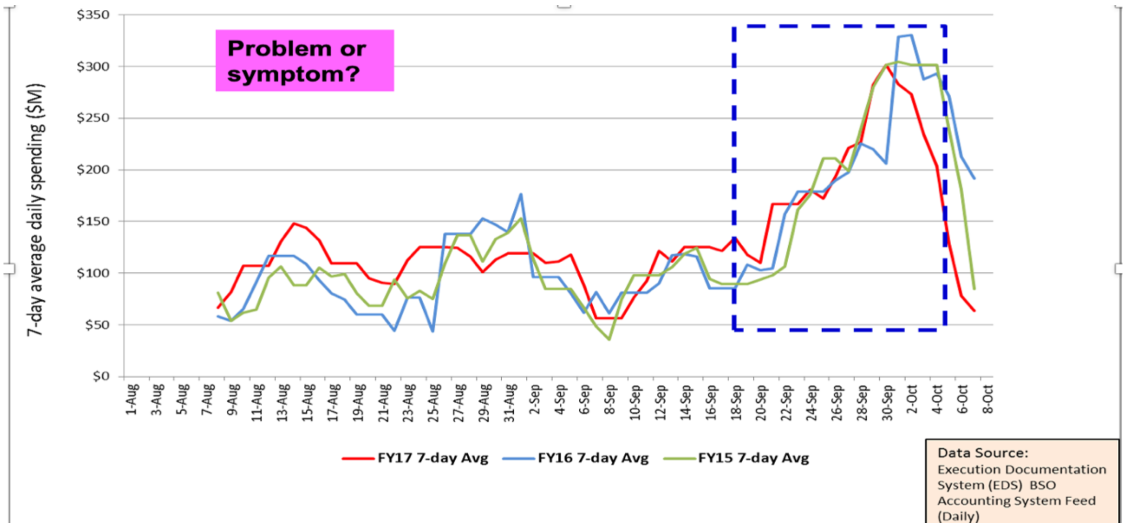


Figure 8. EOY Spending Behavior. Source: Brien (PowerPoint slides, November 2021).

Furthermore, in FY2016, weekly obligations across appropriation averaged $5.7 billion, compared to $19.8 billion in the last week of September (Schwartz, 2017). Liebman and Mahoney (2017) stated that five times more spending occurs in the last week of the FY than in an average week. The perceived notion of budget cuts causes the uptick in spending that any money left on the table after the deadline of September 30 will receive less funding in the following year. As suggested in their report, Lieberman & Mahoney (2017) concluded that DoD tends to exhaust almost the entirety of their budget, even on low-value items, to shield themselves from a future budget cut. Spoehr, 2020 revealed that federal agencies, in general, would spend on average 31% of their annual budget in the last quarter of the FY, and the majority of these funds are spent in September alone as they race against the FY clock.

The deadline set to spend taxpayers' dollars aims to provide oversight and monitor an agency's performance vis-à-vis the timely execution of its appropriation to satisfy programs' objectives. The budget shelf-life or periodicity serves as a barometer to determine whether a program is on track to spend its budget by year-end. Over executing or under executing are indicators used to determine whether a program is trending to success. Over executing, is not necessarily a success story as it could be an early sign of cost overrun that pushed agencies to obligate more than initially planned. On the other hand, under execution may also be an early sign of a program's issues, indicating perhaps an unsolved impasse. The ideal execution rate is when spending is consistent and on schedule across the fiscal year, which means everything, is going as planned and on track to meet contractual terms successfully.

According to many learned observers, there is a correlation between funds availability and contract obligation/spending trends within a fiscal year. In their 2014 working paper "Curbing the Surge in Year-End Federal Government Spending," Fichtner and Greene reported that considerable anecdotal evidence suggests that the policy governing budget periodicity contributes to the perceived wasteful spending during the last weeks of the fiscal year. The data presented in this paper further illustrates a linkage between the duration of funds and the overwhelming increase in spending by deploying contracting and pricing methods that may not necessarily serve the government's best interest in the months and weeks leading to the close of the fiscal year. This rush at the end of year spending leads to low morale amongst the staff, leading to poorly written and not well thought out contracts, often putting the government at a disadvantage. It is documented that morale among federal workers takes a hit around September as most are expected to work even through weekends, scrambling to award contracts and obligate funds. Such a disadvantage comes in numerous shapes and forms. For instance, due to the lack of time to go through the solicitation process, some agencies will forgo that process and may opt to use existing contractors or sole source methods justifying the move as necessary due to a lack of qualified vendors. Or they may opt to obligate as much as possible with risky pricing methods such as the repetitive use of the cost-plus type of contract, a pricing tool known to favor the contractors more. The increase at the end of year obligation is made worse by the influx of funding coming from higher echelon commands which have saved a percentage of their funds for a contingency use should there be a need at the end of the FY, as reported by Candreva (2017):

> If one assumes four layers in the chain of command and each layer holds back 3%, that means the lowest layer only received 88.5% of the funding, and the remaining 11.5% will come cascading down late in the year. In some cases, that last unit—an installation, squadron, or program office may see 10%–15% of its annual budget authority appear in the last few weeks of the year. (p. 315)

Despite all these efforts and the quarterly obligation burn rate requirement of 25% and the 80/20 rule, which requires that 80% of the budget be spent by July 31, the problem of under-obligation and canceled O&M appropriation persists, as shown in Figure 9.

The DoD reports an average of 99% obligation rate for O&M appropriation each year. This may seem to be a successful execution story on the surface. But a few months into the subsequent FY, it is well documented that the O&M obligation rate tends to decrease as downward adjustments are made to previous obligations, resulting in more expired unobligated O&M funds. Despite the last-minute push to expend all the budget, billions of dollars return to the treasury every year, as depicted in Figure 9. These funds could have been carried over to fund new projects that would not be otherwise funded under the CR, which allows funding to continue at constant rates while Congress passes the actual appropriations bills. The following section will speak to the CR and restrictive policies that often hinder acquisition efforts and frustrate federal agents.

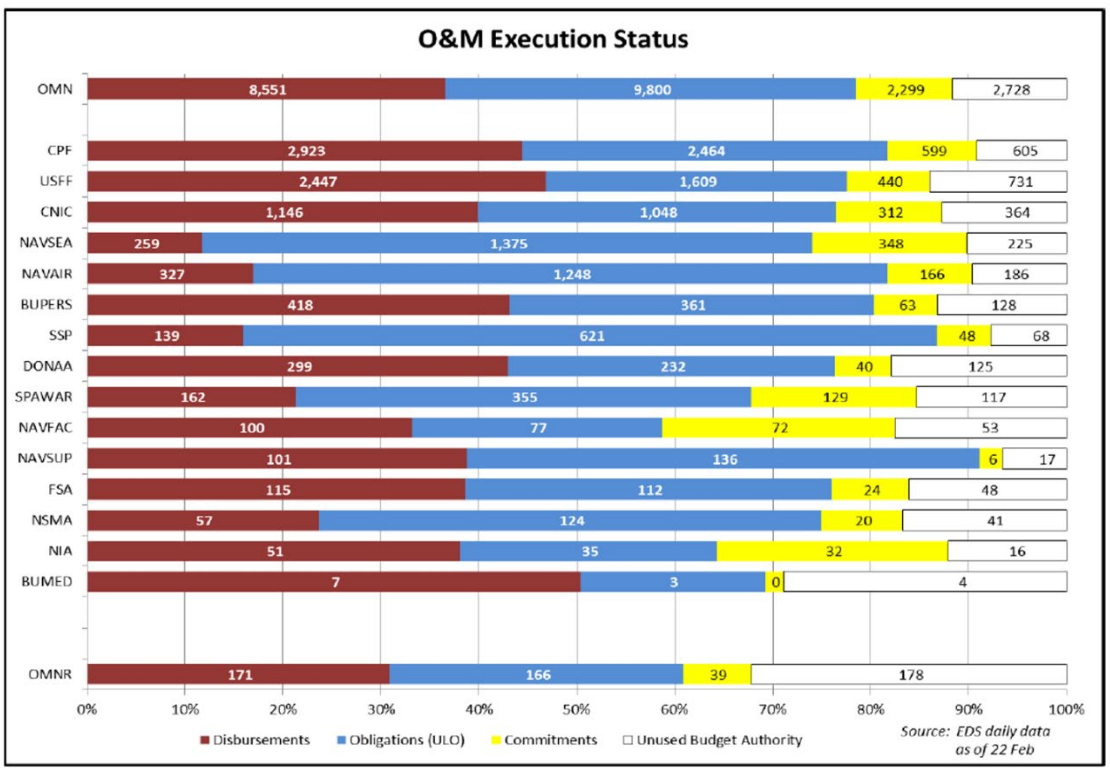


Figure 9. O&MN Budget Execution. Source: Brien (PowerPoint slides, November 2021).

H. CONTINUING RESOLUTION

The U.S. Constitution directs the Senate and House of Representatives to approve the federal budget before the president's signature. Congress must pass 12 appropriations, or funding bills, to keep the government operating every FY. If Congress cannot agree and pass all 12 spending bills, they often pass a CR, which is stopgap funding that funds agencies and programs at the previous year's fiscal level. This expedient has become the norm in recent years. The widespread use of the CR raises several problems for agencies, lacking the visibility needed to organize their operations properly. They also interfere with the oversight that Congress is supposed to exercise over the execution of budgetary laws. Where budget appropriations laws detail precisely how taxpayer dollars are to be spent, the stopgap funding extends a level of spending without specifying what that spending can be used for by the agencies involved other than placing restrictions on new starts or stops and production increases that were not funded during the previous year.

A CR is a joint resolution passed by both the house and the senate, then signed by the president on September 30, providing continuing appropriations for a portion of a FY or a full FY. It is Congress's way of putting a Band-Aid on the appropriation process until they can find a way to get a consensus on all 12 bills. A CR aims to provide congress with more time to finalize their decisions on the level of funding for that year while ensuring that the government continues operating at the previous year's rate, thus avoiding a government shutdown. Although there have not been many government shutdowns due to congress's ability and willingness to deploy the CR option, it is not an effective way to keep the government running. Moreover, operating under the CR is a drain on national resources due to the restrictive nature of this policy. As narrated by Young & Gilmore (2019), "operating under a CR is distinct in fundamental ways from operating under a regular appropriation and is widely thought to have negative consequences for resource management." The advantage of passing a CR is that it allows the government to continue its operations. However, the disadvantages far outweigh the benefits because under this stop-gap funding, spending will not surpass the previous year's rates, nor new programs start or stop without proper authorization of lawmakers. For example, suppose an existing program is retired earlier than scheduled. In that case, funding for that program is available, although there is no need for the funds (Young &

Gilmore, 2019). On the other hand, if a program needs to start but was not previously funded, that program will have to wait until congress enacts the new appropriations or be exempt by Congress. Without knowing the full amount of funding that would be available, plans would be revised with each new CR. Staff time is wasted on repetitive administrative tasks, such as allocating funds in small increments (Candreva, 2017, p. 339). According to Gould (2019), the Pentagon recognized 75 weapons programs that experienced some interruptions in 2018 due to restrictions placed on new programs in terms of new starts or production increases. This prohibition can lead to frustrations over new start projects and planned activities for the new FY (Herrmann, 2017). Extensive qualitative research has been conducted on the adverse effect of CR, but none proved the theory that readiness suffers due to the stopgap funding. Without a quantitative study on the impacts of CR on military readiness, the United States cannot truly understand how it affects the services and the extent of the damages it may cause. One point that all pundits agree on is that it administratively inconveniences federal agencies, as they cannot end or start new missions or alter existing programs. Without contingency plans, this approach may harm readiness. The enactment of late appropriations has been the norm for a good portion of the last half century. According to the CRS, from 1977, when the FY moved to October 1, Congress only managed to pass regular appropriation acts in just four instances, FY1977, FY1989, FY1995, and FY1997, depicted in Table 1.

Table 1. Enactment of Regular Appropriations Bills and Use of Continuing Resolutions: 1977–2020. Source: Nellis et al. (2020).

Fiscal Year	Number of Regular Appropriations Bills[a]	Regular Appropriations Bills Enacted on or Before October 1	CRs Enacted[b]
1977	13	13	2[c]
1978	13	9	3
1979	13	5	1
1980	13	3	2
1981	13	1	3
1982	13	1	4
1983	13	1	2
1984	13	4	2
1985	13	4	5
1986	13	0	5
1987	13	0	6
1988	13	0	5
1989	13	13	0
1990	13	1	3
1991	13	0	5
1992	13	3	4
1993	13	1	1
1994	13	2	3
1995	13	13	0

Fiscal Year	Number of Regular Appropriations Bills[a]	Regular Appropriations Bills Enacted on or Before October 1	CRs Enacted[b]
1996	13	0	13
1997	13	13	0
1998	13	1	6
1999	13	1	6
2000	13	4	7
2001	13	2	21
2002	13	0	8
2003	13	0	8
2004	13	3	5
2005	13	1	3
2006	11	2	3
2007	11	1	4
2008	12	0	4
2009	12	3	2
2010	12	1	2
2011	12	0	8
2012	12	0	5
2013	12	0	2
2014	12	0	4
2015	12	0	5
2016	12	0	3
2017	12	1	3
2018	12	0	5
2019	12	5	3
2020	12	0	2

One hundred nineteen CRs enacted between FY1998 and FY2020, averaging 5 per year. In addition, during this period, congress provided stop-gap funding for five months per FY on average, ranging from 21 to a full year, as depicted in Figure 10.

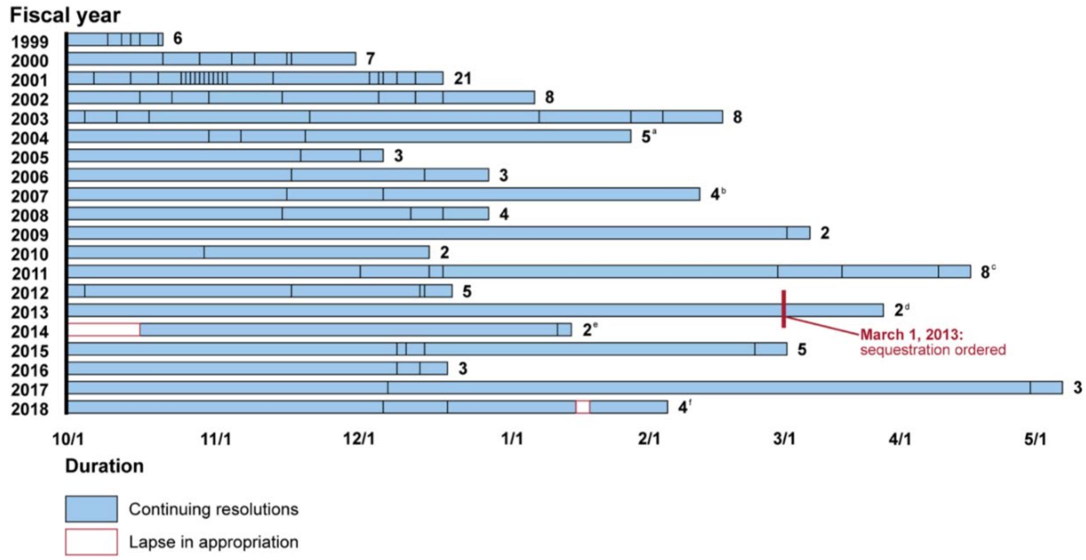


Figure 10. Duration and Number of Continuing Resolutions (FY1999–January 2018). Source: Government Accountability Office (GAO, 2018).

The government is used to operating under the Continuing Resolution Act. And one of the adaptive methods that agencies use to alleviate the fallout from CRs is to postpone awarding any contract in the first quarter or break the contract into a smaller performance period to accommodate the CR. Instead of getting the full budget authority under the regular appropriation bill, the government receives funding in smaller increments under a CR. Due to the restrictive nature of the stop-gap funding policy, the Navy planned the maintenance cancellation of 14 ships and a battle group not deploying in 2019 (Eckstein, 2019). James Geurts, then-Assistant Secretary of the Navy for Research, Development, and Acquisition, described the negative impact of CR when he stated,

> When the fleet looks at all the things, they've got to be able to do with the first increment of money they have, we say, well I don't really want to move a ship availability to the right, but that's my only option because I can't get enough money to pay for all of that availability, and I can't just start a week's worth of it. And so, they start making hard choices. (Eckstein, 2019)

Back in 2019, the Navy had to cancel the maintenance availabilities of USS Bainbridge and USS Gonzalez due to a shortage of funds created by the CR. After months of preparation and back and forth between the Navy and industry about the ships' availabilities contract, they ended up getting postponed, as described by Geurts in Eckstein's article:

> What's frustrating me about ship maintenance is, hey, we want to get our planning set, we want to award the contract early; [*Bainbridge*] was one of them we had all set, we backed the planning up, had 120 days ready in advance, the team was ready to go, we had the materials all ready to go, and then suddenly, oh, we can't do it now because we're in a CR. The real challenge: we don't know how long the next CR is when the contract is going to get awarded (Eckstein, 2019).

These are just two examples of many avoidable issues facing the military every year due to the CR, and O&M's 1-year budget authority compounds the problem.

Congress could have granted exceptions to the ship's maintenance programs through the use of anomalies if the Navy had asked. Anomalies ensure that congress still has control over federal funding while granting exceptions to federal agencies to start new programs in the absence of regular appropriation (Williams & Roscoe, 2018). That way, new programs and other unfunded requirements from previous FY, vital to specific operations can start as planned. These exceptions safeguard specific activities from the potentially damaging consequences of a CR while providing Congress and the administration additional time to agree on full-year funds and avert a shutdown. The request for exception is at the government's disposal, which, when granted, will provide immunity to a given program from the restrictive nature of a CR. An excellent example of when the anomaly works as advertised was during the FY2017 DoD budget proposal when the exceptions for the Black Hawk programs, the Columbia-class ballistic missile system, and the Air Force's tanker were granted (Gould, 2019). Although it is a viable option, anomalies are sporadically used or rarely approved because of a perceived notion that granting too many would alleviate the power to negotiate a more permanent appropriation (Brass, 2011), which may lessen congress's grip on its fiscal oversight responsibilities.

Because of this, the legislators are reluctant to approve exceptions under CR for specific new programs or production increases on a level higher than the previous FY's production rate. Additionally, it takes Congress roughly 4 months to adjudicate a request for an exception.

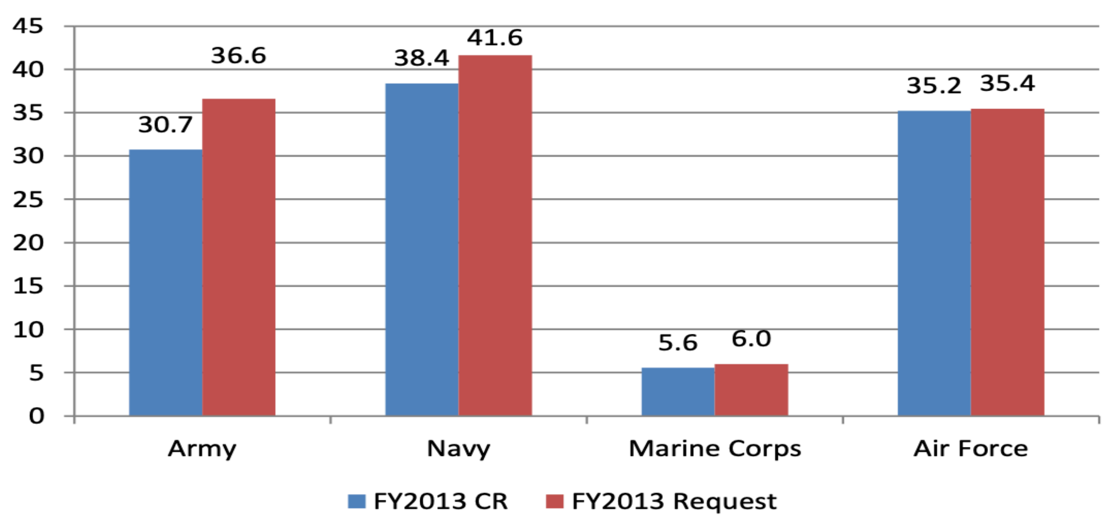
Although CR affects all DoD appropriations, O&M funding is most affected due to its single-year budget periodicity. O&M is crowding out other appropriations, representing over 40% of total discretionary spending. Given that O&M has the largest defense budget share, the argument has been made to grant it a multiyear budget status, allowing the armed forces budget stability for 2 years. Its budget authority is good for 12 months when the budget is passed by September 30, which is the exception. The CR is the new normal and a way to fund the government for at least through the first quarter of the FY. While there was once a 12-month period of availability for O&M, the timeline has been shortened to 9 months on average, which exerts tremendous pressure on agencies to obligate the whole budget by the end of the FY. The appropriation that is mostly affected by CRs is the O&M budget.

With multi-year appropriations, federal agencies can use the unobligated balances of the previous year into the new start without causing an administrative quagmire. In addition, funds under multi-year appropriation are available for obligation in subsequent FYs without a need for additional action from Congress. This budget flexibility grants sufficient time for federal agencies to judiciously obligate funding without the added pressure exerted by the September 30 deadline. In his report on the impact of CRs on federal contracting, Kasdin (2021) affirmed that due to its shorter window of obligation, the 1-year funding is more susceptible to be significantly impacted negatively by CRs than multi-year funding. He went further, stating that the federal agencies that use mandatory funding or the discretionary ones with rollover authority participate less in the spending frenzy and are less impacted by the restrictions inherent in the CR.

The rising expenditures of CRs stymie organizations' budgeting processes and make planning for the next fiscal year difficult. As a result, whenever Congress authorizes a CR, agencies must alter their plans to fit within the previous year's funding level. Past literature on the effect of the CR failed to reveal objective evidence of the increased costs caused by the delay in contract award due to CRs. But countless qualitative and anecdotal testimonies have been reported about the adverse impact that stopgap funding has on the military. Unfortunately, stopgap funding is the new normal, and one way to truly understand its impact is through government contracting. Due to these restrictions that sometimes last a year, some agencies "whose funding expires at the end of the FY face an increased urgency to finalize the awarding of contracts and thereby obligate their funding" (Kasdin, 2021).

According to a 2018 GAO report, some agencies' officials delayed awarding contracts, gapping much-needed services for the agencies because of the CR. The problem is more acute the more prolonged the CR drags on because of its impact on federal workers to complete the packages and award the contract on time when not much time is left when Congress finally passes the budget. Although quantitative analysis is needed to measure the impact of CRs truly, the qualitative data indicate that the CR has a significant effect on people doing the work and hinders the efforts of federal agencies to capitalize on savings, the report found.

As shown in Figure 11, CRs often provide federal agencies with much less budget than the funds needed to meet the requirements identified in their budget request. For example, based on Figure 11, the Navy ended up $3 billion short of what they had requested in the budget, while the Army was shortchanged by $6 billion.



Note. Numbers are in billions of dollars.

Figure 11. FY2013 CR and FY2013 Funding Levels for Active-Duty O&M Accounts. Source: Cordesman & Shelala, (2013).

In the next chapter, I go over data methodology and analyses using quantitative information from USAspending.gov to extract O&M obligation patterns and the DoD comptroller's financial reports to analyze O&M budget execution for the Navy from

FY2017 to FY2021. This will determine how much budget authority is lost every year due to our budget periodicity laws. I also discuss how much of this canceled budget authority could have funded new starts and program increases that got delayed due to the yearly CR. For the latter, I will rely on qualitative data due to a lack of quantitative data about the adverse impact of the CR.

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III. DATA METHODOLOGY AND ANALYSIS

The primary objective of this chapter is to provide substantiated data sufficient to address our primary and secondary questions, which are to find out the answers to the following:

- Is the Navy—and the Pentagon in general—better off with a 2-year O&M budget authority that allows a carryover of unobligated and expired funds through the first quarter of the following FY?
- What are the benefits and drawbacks of such a policy shift?
- Will such policy obstruct the ability of Congress to carry out its responsibility for budgetary oversight?

I developed the approach for the supporting data in three phases. The first phase was data collection, in which I determined how to generate the data and its source. In the second phase, I analyzed the data by filtering it down to decipher it so it could be understood and then applied the outcome of the data analysis to respond to the primary and secondary questions.

I explore USAspending.gov to collect O&MN contract obligations and analyze spending patterns from 2017 to 2021. First, I downloaded files from USASpending.gov that contained complete information on all O&M-funded Contracts signed by the Department of the Navy, including the Marine Corps. Secondly, I calculated the total contract expenditures for items and services for each fiscal year by adding all obligated amounts by budgetary year. Then, I classified the data by award and pricing type, whether competitive or not competitive, firm-fixed or cost-plus type contract. Next, I calculated monthly obliged contract expenditures as a percentage of annual budgetary year obligated contract expenditures by award type for each month of each fiscal year of the studied period. Furthermore, I go over the budget execution data from the Pentagon's comptroller office to determine how much budget authority was unobligated and then expired during the last 5 FYs.

A. SOURCE OF DATA

To correctly address the questions in this thesis, I first utilized the O&MN obligation reports from USAspending.gov, a tool that provides an interactive way to explore federal spending. The data feeding the Spending Explorer website is mandated through the Digital Accountability and Transparency (DATA) Act of 2014. The law requires all federal government agencies to report their financial data and the award data that agencies were already reporting under the Federal Funding Accountability and Transparency Act (FFATA) of 2006. This tool allows laypeople to understand better how the legislative branch divides up the funds among agencies and what the latter spent the money on to fulfill their mission. However, since the law came into existence in 2014, the spending report on this website is not comprehensive due to agencies having different reporting timelines. The DoD, for instance, does not follow the timeline that other agencies are required to follow due to an exemption on the DATA Act, giving them the leeway to report later. But since the focus will be from FY2017 to FY2021, enough data exist to satisfy this investigation.

Along with the federal spending website, I utilized budget execution data from the Under Secretary of Defense (Comptroller)'s website to analyze budget execution materials and performance measures from FY2017 to FY2021 to key in on unobligated O&M funding. Finally, due to the lack of quantitative data, I relied on qualitative and well-documented data about the limitations and adverse impact CRs have on the fleet and the Pentagon to further demonstrate the need to extend O&M budget availability to offset the damaging ramifications of the CR.

B. METHODOLOGY

As mentioned in the previous section, USAspending.gov is an official website of the government that serves as a repository for all federal spending, exploring the elements of the federal budget such as federal loans, grants, and contract data. The focus is on contract and obligation data only. The Spending Explorer website's data is mandated through the DATA Act. The law requires all federal government agencies to report their financial data and the award data that agencies were already reporting under the FFATA. The Spending Explorer tool was used to gather O&MN and OPN budget execution data and the contracts data for FY2017 to FY2021. The emphasis was on contracts awarded noncompetitively and the type of contract pricing (i.e., firm-fixed-price or cost-plus–type contracts), which can indicate efficient or inefficient spending of taxpayers' dollars. The data consisted of O&MN- and OPN-funded contracts for products and services for the last 5 FYs (2017–2021). The report is filtered to cover all contracts and Indefinite Delivery Vehicles (IDV), the funding/awarding agency as the Navy, and the treasury account 1804/1810 or O&MN OPN. Furthermore, the report factored in the extent competed for the category of not available for competition, not competed under the simplified acquisition threshold (SAP), and noncompetitive delivery order.

1. O&MN Appropriation Data Analysis

The first phase was data collection on O&MN-funded contracts from FY2017 to FY2021 to determine the expired balances and the rate of recurrence use of contracts awarded noncompetitively. In the second phase, I generated the type of contract pricing data to determine the frequency use of cost-plus–type contracts throughout the FYs to analyze the trends as the year progresses.

To collect the data, I downloaded the detailed contract files for the Navy from FY2017 through FY2021 through the aforementioned website. Then, I sorted this information by filtering by account obligation aligned to the budget function that is further broken down to object class with the amount obligated. One can explore by budget function if the aim is to determine how many taxpayer dollars were spent each year, or by the agency if the focus is on specific agencies' work, or by object class if the objective is to frame spending in terms of goods and services. The data are sorted through the agency and object class for the Navy from FY2017 to FY2021. I analyzed O&MN obligation data from FY2017 to FY2021 covering products and services and excluding grants, direct payments, loans, and other categories from the award type section. From this output, I further filtered the data to exclude everything but noncompetitively awarded contracts, such as

- Not available for competition
- Not competed
- Noncompetitive delivery orders
- Not competed under SAP

Figures 12 and 13 display the total amount spent on products and services contracts from FY2017 to FY2021, followed by Tables 2 and 3 showing the total amount obligated noncompetitively for the same timeline. In FY2017, $27.6 billion of O&MN was spent on products and service contracts. Of that amount, $17.5 billion was awarded noncompetitively, representing 26% of total transactions and 63% of total spending. In FY2018, $19.4 billion of $35.8 billion was obligated noncompetitively, indicating that 22% of the total transactions consumed 54% of the contract's funds for that year's products and services. FY2019 shows that $19.6 billion of $39.8 billion was awarded noncompetitively, representing 27% of the total transaction and 49% of the total spending.

In 2020, 28% of total transactions were awarded noncompetitively, representing nearly 42%, or $15.7 billion. Finally, in FY2021, 30% of the transactions were awarded noncompetitively, representing 46% of the total obligations, or $14 billion. When broken down monthly, one can notice that contracts awarded noncompetitively are more pronounced in September of all the FYs except in FY2021, where a slight decline in sole-source contracts is seen.

From FY2017 to FY2021, the Navy awarded 28% of all contracts for products and services noncompetitively for $86.4 billion, representing 50% of the entire spending of $171.6 billion.

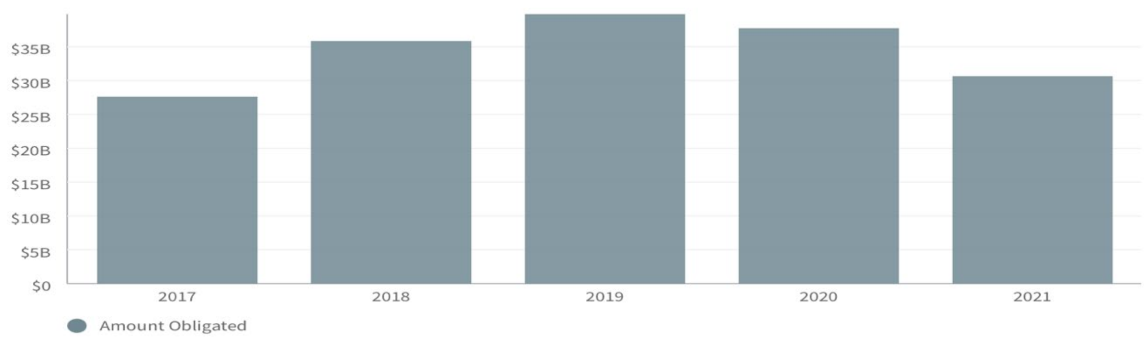

Figure 12. Total O&MN-Funded Contracts on Products and Services from FY2017 to FY2021. Source: Adapted from Federal Spending Explorer (n.d.).

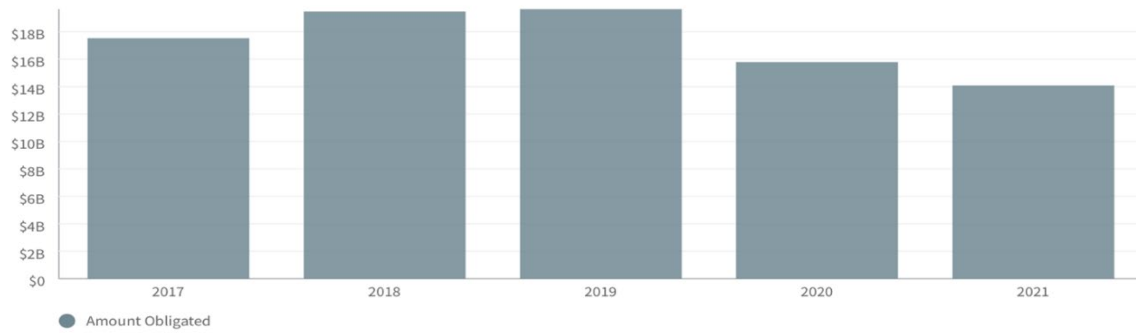

Figure 13. O&MN-Funded Contracts for Products and Services Awarded Noncompetitively from FY2017 to FY2021. Source: Federal Spending Explorer (n.d.).

Table 2. O&MN-Funded Contract for Products and Services Awarded Noncompetitively From FY2017 to FY 2021

FISCAL YEAR	NOT COMPETED	ALL CONTRACT	% NOT COMPETED
2017	$17,527,189,735.95	$27,644,923,412.00	0.634011152
2018	$19,483,269,243.51	$35,847,115,825.00	0.543510093
2019	$19,639,546,852.38	$39,814,896,301.00	0.49327133
2020	$15,784,158,959.24	$37,772,585,509.00	0.417873406
2021	$14,061,111,183.05	$30,566,714,203.00	0.460013827
TOTAL	$86,495,275,974.13	$171,646,235,250.00	0.503915952

Table 3. Percentage of Noncompetitive O&MN-Funded Contracts From FY2017 to FY2021

FY	# NOT COMPETED	TOTAL TRANSACTIONS	% NOT COMPETED
2017	492	1862	0.2642
2018	1062	4696	0.2261
2019	5697	20836	0.2734
2020	5988	20082	0.2981
2021	4239	13699	0.3094
TOTAL	17478	61175	0.2857

Figure 14 displays the O&MN-funded contracts awarded noncompetitively throughout FY2017. As indicated, 35% of all O&MN sole-source contracts in 2017 were awarded in September, quadrupling the average monthly rate. In the meantime, as the end of FY2017 came to a close, the number of cost-plus–type contracts increased twofold from the third to the fourth quarter of 2017, as depicted in Figure 15.

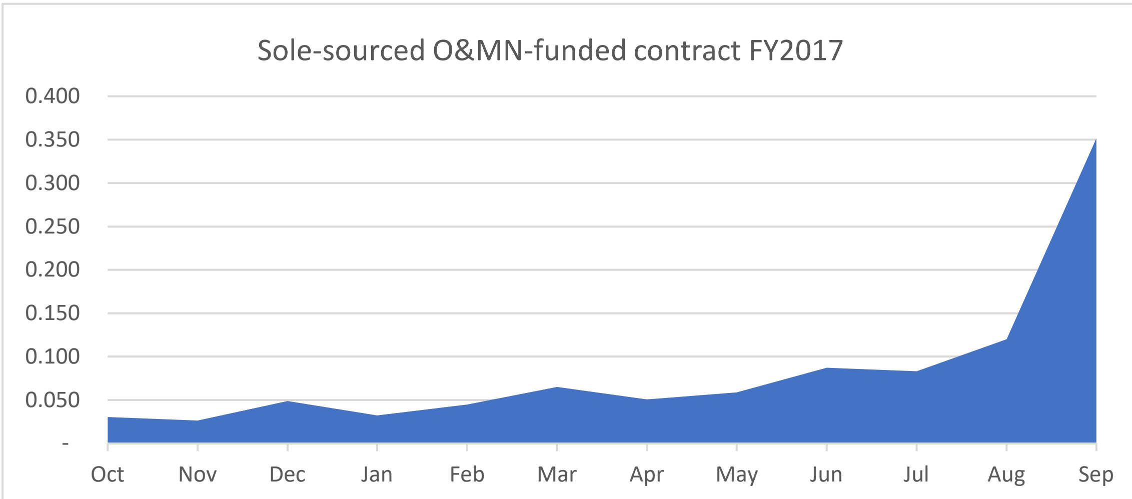

Figure 14. Sole-Sourced O&MN-Funded Contract, FY2017

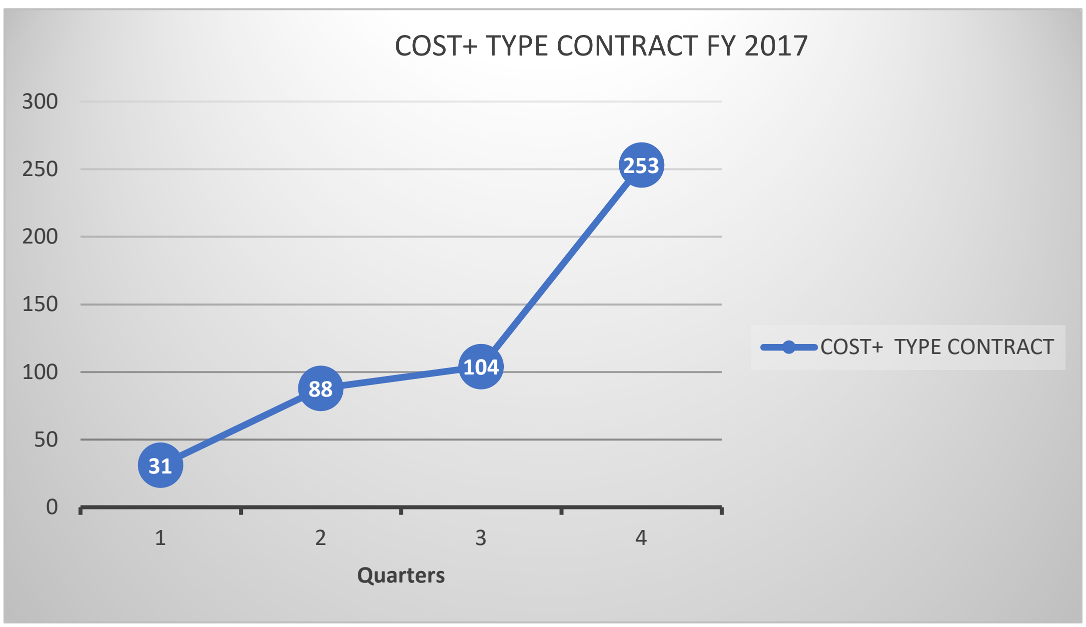

Figure 15. Cost-Plus–Type Contract, FY2017

Figure 16 displays the O&MN-funded contracts awarded noncompetitively throughout FY2018. As indicated, 36% of all O&MN sole-source contracts in 2018 were awarded in September, quadrupling the average monthly rate. In the meantime, as the end of FY2018 came to a close, the number of cost-plus–type contracts increased almost twofold from the third to the fourth quarter of 2018, as depicted in Figure 17.

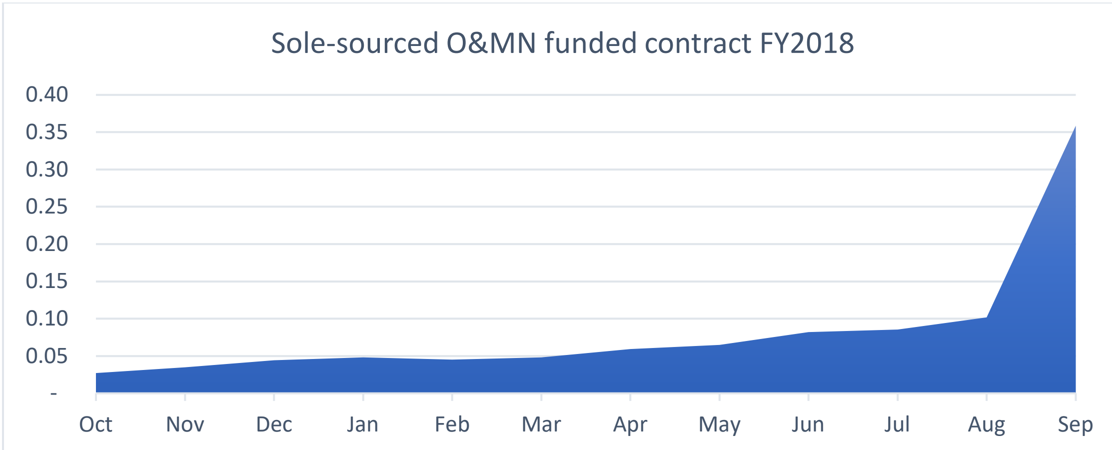

Figure 16. Sole-Sourced O&MN-Funded Contract, FY2018

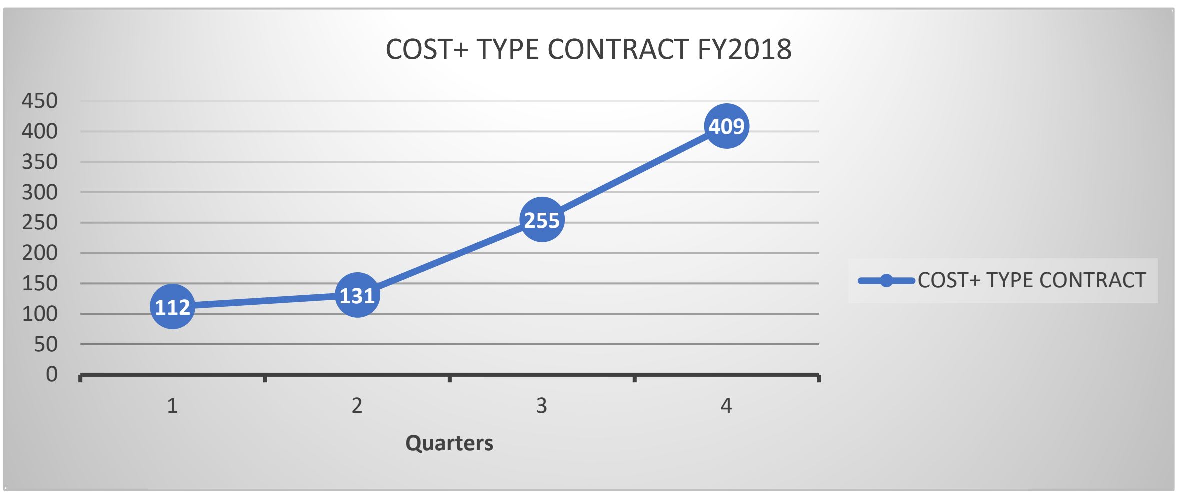

Figure 17. Cost-Plus–Type Contract, FY2018

Figure 18 displays the O&MN-funded contracts awarded noncompetitively throughout FY2019. As indicated, 22% of all O&MN sole-source contracts in 2019 were awarded in September, which more than doubled the average monthly rate. In the meantime, as FY2019 came to a close, the cost-plus–type contract increased nearly twofold from the third to the fourth quarter of 2019, as depicted in Figure 19.

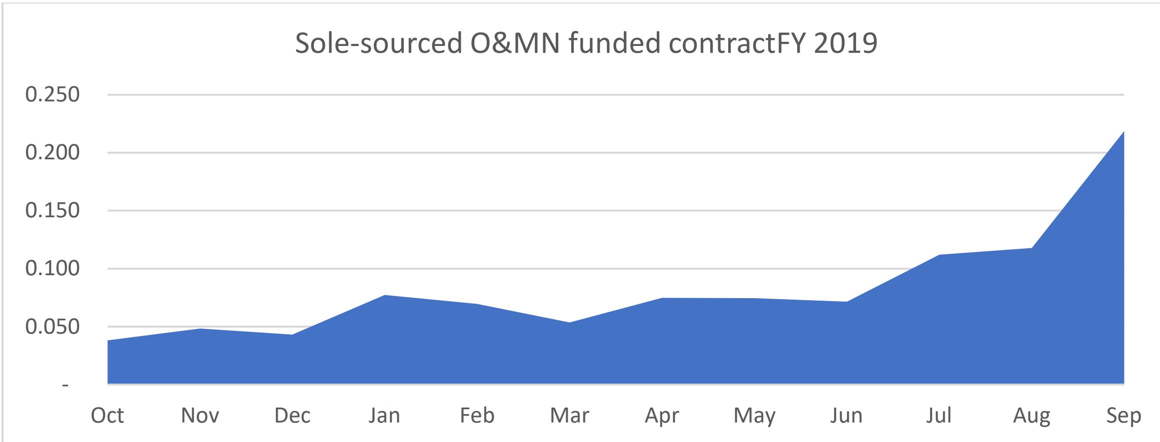

Figure 18. Sole-Sourced O&MN-Funded Contract, FY2019

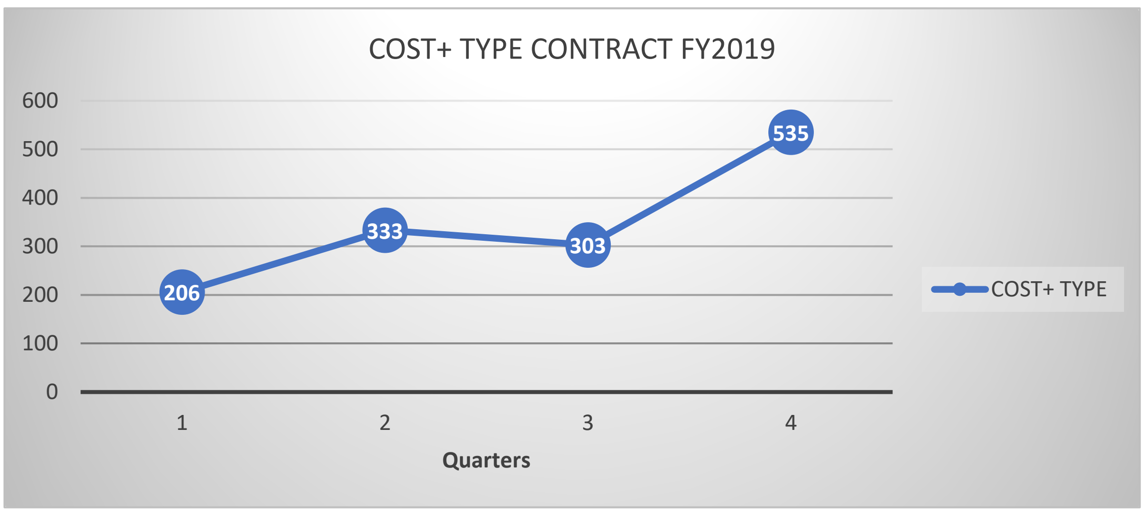

Figure 19. Cost-Plus–Type Contract, FY2019

Figure 20 displays the O&MN-funded contracts awarded noncompetitively throughout FY2020. As indicated, 23% of all O&MN sole-source contracts in 2020 were awarded in September, which more than doubled the average monthly rate. In the meantime, as FY2020 came to a close, the cost-plus–type contract increased more than twofold from the third to the fourth quarter of 2020, as depicted in Figure 21.

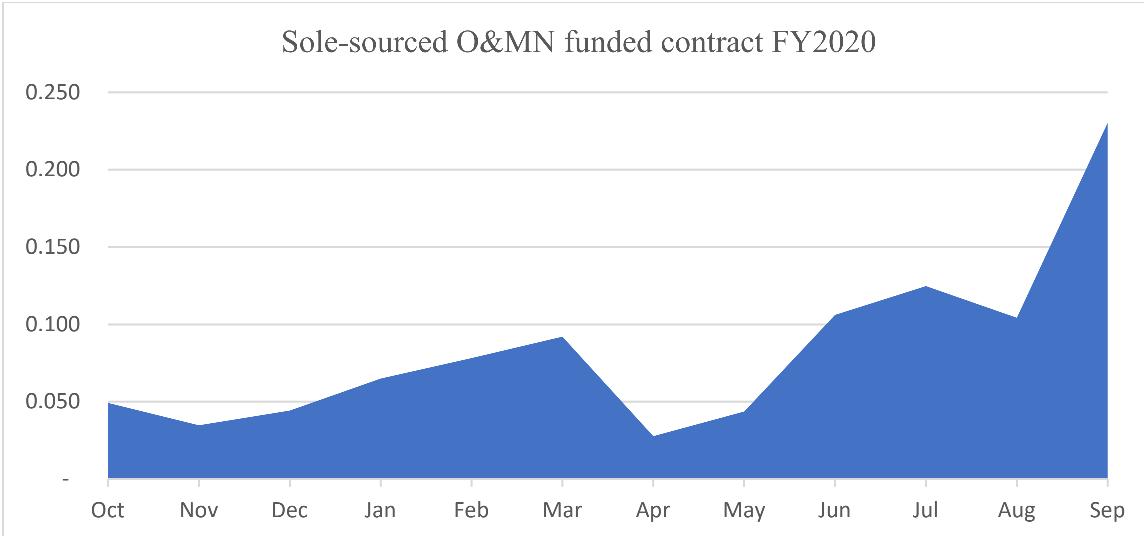

Figure 20. Sole-Sourced O&MN-Funded Contract, FY2020

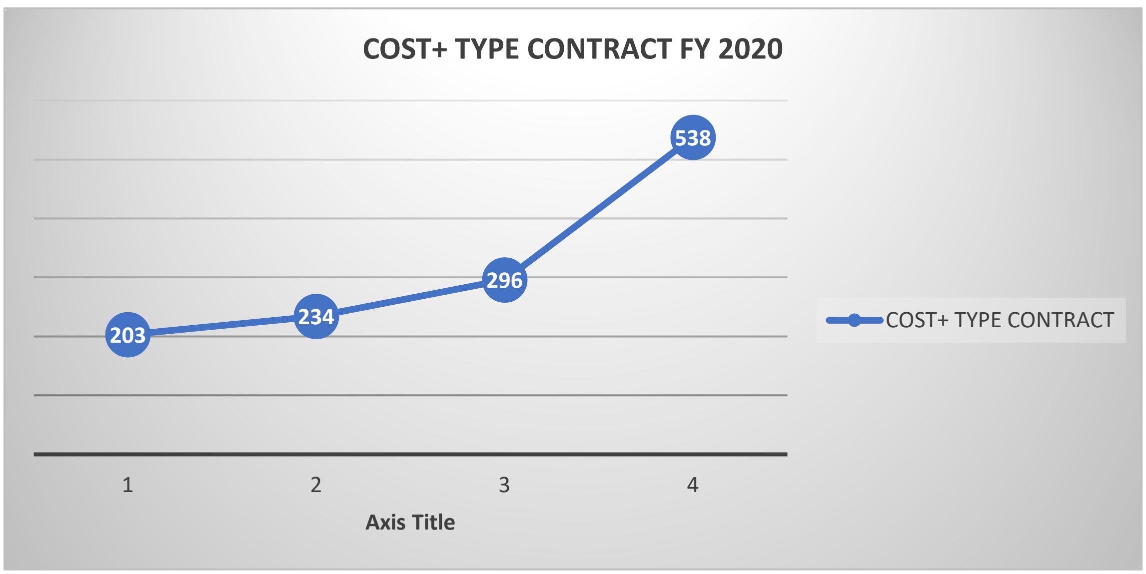

Figure 21. Cost-Plus–Type Contract, FY2020

Figure 22 displays the O&MN-funded contracts awarded noncompetitively throughout FY2021, where it shows a significant drop in the usage of sole-source contracts in September 2021. Likewise, the number of cost-plus–type contracts decreased tenfold from the third to the fourth quarter of 2021, as depicted in Figure 23.

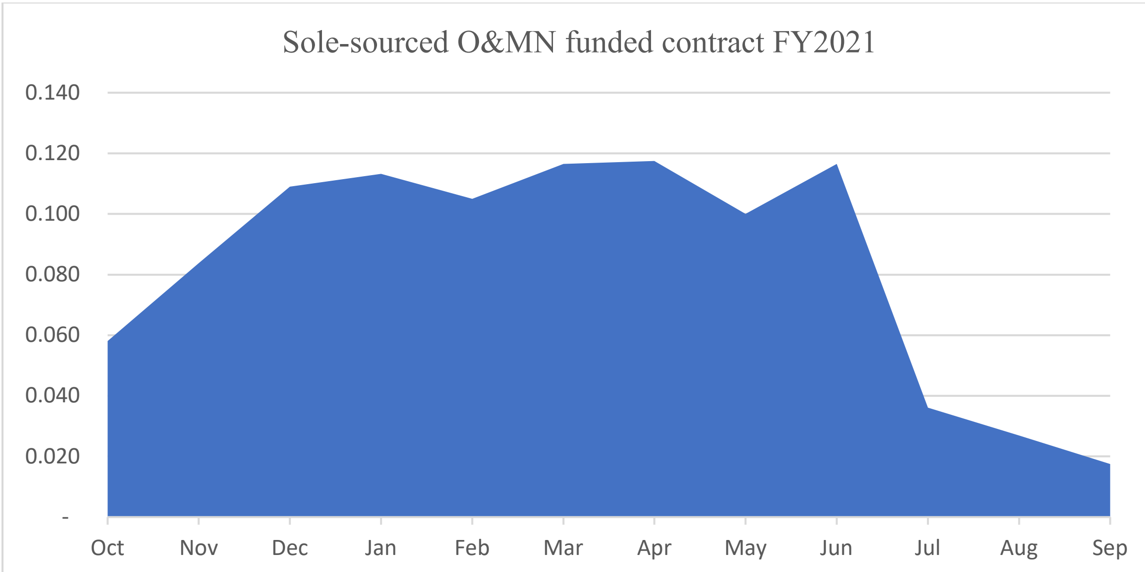

Figure 22. Sole-Sourced O&MN-Funded Contract, FY2021

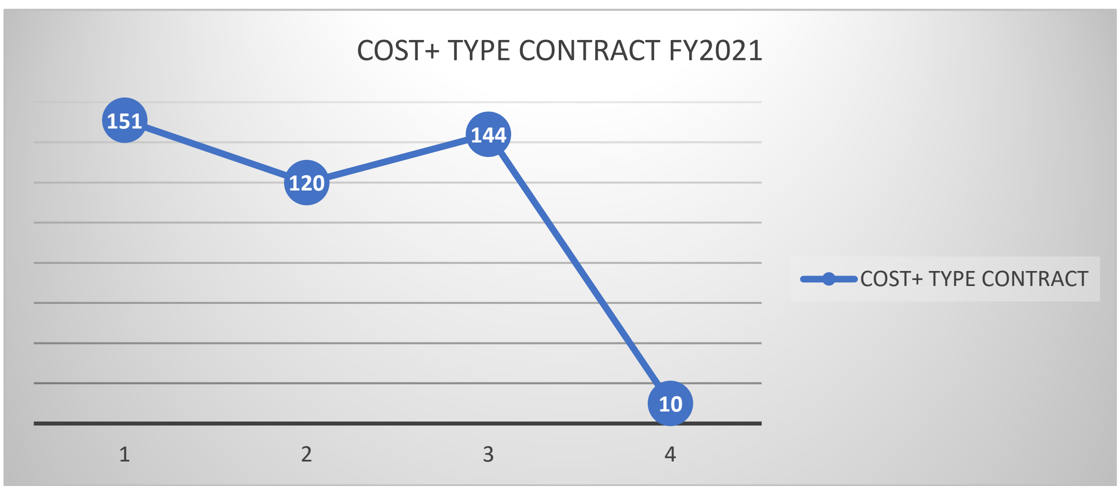

Figure 23. Cost-Plus–Type Contract, FY2021

2. OPN Appropriation Data Analysis

OPN appropriation is used for investments to finance the acquisition, equipment upgrades, or product development not already paid for by other budgets. Unlike O&MN, the spare parts and equipment's unit system price must be over $250,000. What differentiates OPN from O&MN is that the former is available for obligation for 3 FYs, while O&MN expires after 1 FY. However, both appropriations have similarities since the line sometimes gets blurred about which of the two funds to use. Therefore, the investment threshold of $250,000 is used to determine whether to use O&MN or OPN.

Because of the similarities, I also decided to analyze the OPN obligation data from FY2017 to FY2021. In addition, I analyzed the trend regarding the use of sole-source for OPN-funded contracts for the exact timeline to compare it with O&MN-funded procurement.

I sorted the OPN obligation data the same way as the O&MN, through the lens of the object class for the Navy from FY2017 to FY2021. I analyzed the spending data reported to USAspending.gov by organizing the spending data reported to reflect the federal government structure. I also analyzed OPN obligation data from FY2017 to FY2021 to determine precisely how contracts are obligated. Then I selected obligations on contracts for products and services only and excluded grants, direct payments, loans, and other categories from the award type section. From this output, I further filtered the data to exclude everything but noncompetitively awarded contracts, such as

- Not available for competition
- Not competed
- Noncompetitive delivery orders
- Not competed under SAP

Figures 24 and 25 display the total amount spent on products and services contracts and OPN-funded contracts noncompetitively from FY2017 to FY2021, respectively. The subsequent tables show the number of contracts and total amount obligated on a noncompetitive basis from FY2017 to FY2021. In 2017, $13.4 billion of OPN was spent on products and services contracts. Of that amount, $5.3 billion was awarded noncompetitively, representing 39.7% and 19.5% of the total amount obligated and the total number of transactions, respectively, as displayed in Tables 4 and 5.

In 2018, $6.6 billion of $16.7 billion was obligated noncompetitively, indicating that 29% of the total transactions consumed 40% of funds allocated to the contract for products and services for that year. FY2019 shows that $8 billion of $19 billion was awarded noncompetitively, representing 30% of the total transaction and 42% of the total obligations. In FY2020, 31% of OPN-funded contracts were awarded noncompetitively, representing nearly 32% of the total budget of OPN-funded contracts for products and services, equating to $5.3 billion. Finally, FY2021 was no different in terms of obligations of funds on contracts that were awarded noncompetitively. Thirty-two percent of the transactions were sole-sourced during that year, representing 36% of the total commitments, or $4.8 billion.

From FY2017 to FY2021, the Navy awarded 31% of OPN-funded contracts for products and services noncompetitively for $29.3 billion, representing 38% of the entire obligation of $76.4 billion.

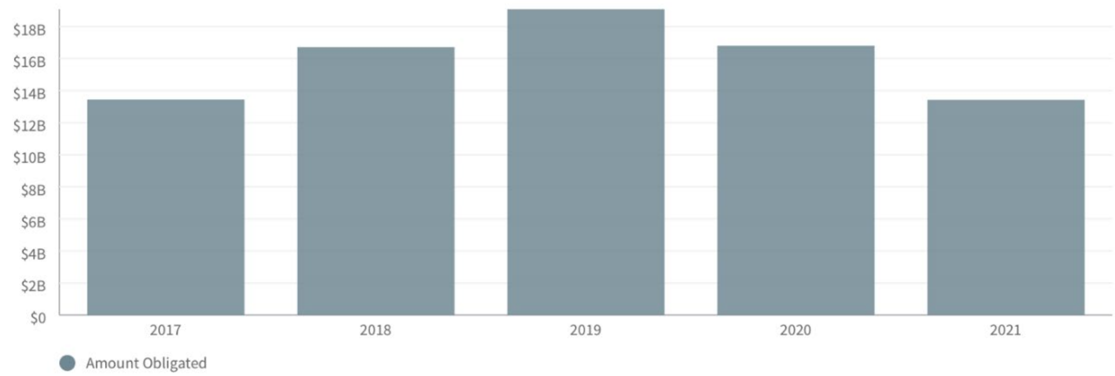

Figure 24. OPN-Funded Contracts on Products and Services, FY2017–FY2021. Source: Federal Spending Explorer (n.d.).

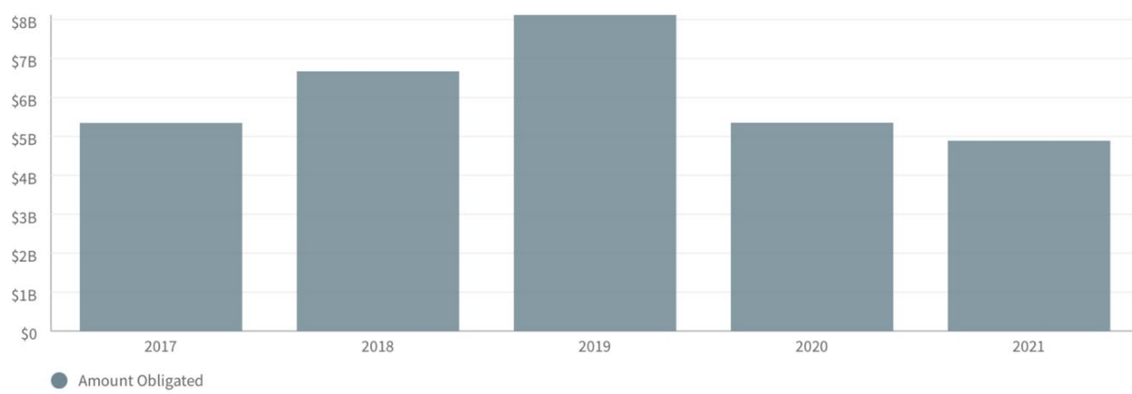

Figure 25. OPN Noncompetitively Funded Contracts for Products and Services, FY2017–FY2021. Source: Federal Spending Explorer (n.d.).

Table 4. Value of OPN-Funded Contract from FY2017 to FY2021

FY	NOT COMPETED	ALL CONTRACT	% NOT COMPETED
2017	$5,342,905,522.51	$13,451,729,485.20	0.3971
2018	$6,678,293,767.65	$16,712,343,478.64	0.3996
2019	$8,118,448,454.17	$19,082,520,934.26	0.4254
2020	$5,350,506,789.83	$16,798,998,659.97	0.3185
2021	$4,889,810,684.59	$13,424,852,086.44	0.3642

TOTAL	$30,379,965,218.75	$79,470,444,644.51	0.3822

Table 5. Total Number of OPN-Funded Contract Noncompetitively From FY2017 to FY2021

FY	# NOT COMPETED	TOTAL TRANSACTIONS	% NOT COMPETED
2017	46	235	0.1957
2018	315	1,069	0.2946
2019	856	2,765	0.3095
2020	965	3,121	0.3091
2021	678	2,074	0.3269
TOTAL	2,998	9,600	0.3122

To summarize, the data indicate that the Navy spent more of its O&MN budget on noncompetitive procurement for products and services than it does through full and open competition. For example, from 2017 through 2021, the Navy contract awards for products and services totaled $171.6 billion. Of this amount, $86.4 billion (50%) was categorized as noncompetitive. In contrast, $30.3 billion of $79.4 billion (38%) in OPN contract awards for products and services was classified as noncompetitive for the same period. Thirty-one percent of total OPN-funded awards exhausted 38% of the total budget from 2017 to 2021, indicating the flexibility inherent in the obligation of OPN budget due to its 3-year window for the new obligation. Additionally, as FYs inch closer to year-end, more contracts get awarded noncompetitively. Furthermore, given the inherently risky nature of cost-plus–type contracts, more schedule, performance, and cost risks are introduced into these contracts.

The following section discusses the findings from Chapter III and the implications they may have in answering the research questions. However, before delving into the results, it is essential to provide some background and describe the different contract types and categories of competition in awarding the contract to truly understand the significance of the findings.

a. Competitive in Contracting Act

Enacted in 1984, the Competitive in Contracting Act (CICA) is a public law that promotes full and open competition for awarding government contracts. The objective of CICA is to encourage industry to bid on government work and expand the competition base and promotes the best value for DoD through fair and reasonable competitive pricing. Therefore, it is mandated by the FAR for federal agencies to use the full and open competition to award government contracts. Should there be a need to deviate from this requirement, it must be authorized and documented by the appropriate federal official (FAR 6.304, 2022).

b. Contract Types

There are generally two main types of federal government contracts: fixed-price and cost-plus type contracts. Under the fixed-price type contract, the contractor is responsible for the performance costs and resulting profit or loss. In contrast, under the cost-plus type of contract, the contractor has less risk to assume in terms of the costs for the performance and has zero to little incentives to control costs. "In between are the various incentive contracts, where the contractor's responsibility for performance costs and the profit or reward incentives offered are aligned with the degree of uncertainties involved in the performance of the contract" (FAR 16.1, 2022).

To better understand the significance of the findings, I will briefly describe fixed-price and cost-plus–type contracts.

(1) Fixed-Price Contracts

As its name indicates, a fixed-price contract provides a specific total amount that is fixed and can only be adjusted in certain situations. For example, "when acquiring commercial products and services, the contracting officer shall use firm-fixed-price or fixed-price with economic price adjustment contracts" (FAR 16.2, 2022). Under this contract type, the cost for an item or service remains fixed, no matter how long it takes to make the item, complete the service, or how much any required materials cost, except under the economic price adjustment option, where the government can exceed the fixed price. Therefore, this contract type is less risky for the government because it enables better budgeting since the government knows the cost to procure a product or service, allowing it to budget for it. Thus, the fixed-price contract is more desirable for the government than the cost-plus type contract.

(2) Cost-Plus–Type Contracts

As per FAR 16.3, cost-plus type contracts permit payment of allowable costs incurred in the performance of a contract up to a limit delineated in the agreement, setting a cost ceiling that the contractor will not exceed without the proper authorization of the contracting officer. It is a legally binding document outlining the government's share of responsibilities to reimburse the contractor for the expenses tied to the performance of the contract and any additional fees on top of a proportionate profit.

As shown in Figure 26, this contract type shifts the financial risk from the contractor to the government. Thus, it makes this contract type less desirable for the government.

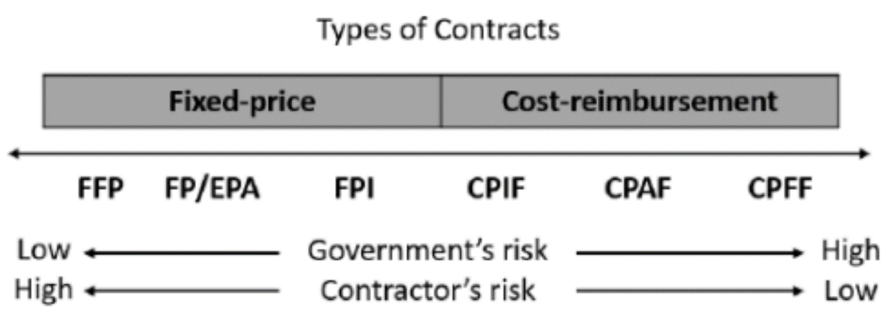

Figure 26. Type of Contracts by Risk. Source: DAU (2018).

C. RESULTS

The data reveal three interesting O&M obligation trends for the Navy. First, except for 2021, there was an increase in the sole-source contract as the FY ended. Second, except for 2021, the data prove an increase in the cost-plus–type contracts as the FY progresses. Third, a significant O&MN balance expires each year of the studied period, resulting in a considerable loss of opportunity as the accounts get closed to new obligations.

a. Increase in Noncompetitive Contract Award

When organizations compete for customers' businesses, the clear winner tends to be the customers. Likewise, the government is always better off when firms strive to win a federal contract. Therefore, competition is a crucial part of the procurement process as it demands superior products or services at a fair and reasonable price in support of the warfighters. But on the other hand, Sole-source puts the government at a disadvantage where the government is subject to low-value products that do not justify the premium price charged to the taxpayers. However, sole-source contracting produces both opportunities and drawbacks, but the disadvantages of operating in a noncompetitive environment far outweigh the benefits for the U.S. government (Adjei & Hendricks, 2022). The sole-source condition exists when "only one responsible source and no other supplies or services will satisfy agency requirements" (FAR 6.302-1, 2022). The data revealed a drastic increase in the use of sole-source as the fiscal year comes to an end with a recurring justification of "one source available." Of course, it could be a coincidence that the frequency of use of the same rationale happens to fall in the last quarter, but subsequent fiscal years revealed a pattern worth investigating further.

First, the data reveal that sole-source contracts for O&MN-funded contracts increase as the FY progresses. In FY2017, there were 492 sole-sourced contracts out of 1,892, representing just 26% of the total transactions. However, 26% of the transactions consumed 63% of the total obligation for that FY, indicating that most higher-price ticket contracts were awarded noncompetitively. Except for 2021, every FY from 2017 on has seen an increase in the number of sole-source contracts near the end of the FY, as depicted in Tables 2 and 3. The purpose of competition is to increase the number of contractors, which leads to savings for the government through lower and more competitive pricing. Overall, the Navy awarded only 28% of all contracts for products and services noncompetitively for a total cost of $86.4 billion, representing 50% of the entire spending of $171.6 billion from FY2017 to FY2021.

These expenditures from the sole-sourcing environment indicate that saving, particularly in the fourth quarter, is not as significant to the Navy as being fully obligated by September 30th. A 12-month obligation window often reduced to 9 or fewer months due to a yearly CR is not a reasonable timeline to execute 40% of total government funding (see Figure 5). Extensive studies have shown that the last quarter's spending for the annual budget drastically increases as the FY draws to a close, with as much as 31% of the yearly budget consumed in the last quarter (Spoehr, 2020). He further stated that DoD contract obligations for 2012–2016, for instance, averaged around $25 billion per month except in September, where it doubled as organizations scrambled to obligate funds. I had first-hand experienced when higher authority from headquarters scrambled to fully execute the budget by offering or near ordering me to take in and execute an additional $175,000 with 2 days left in the FY. I, of course, turned it down, stating that there is no way this amount could be executed judiciously given the number of days left in the book. This personal anecdote is one of many examples of issues with O&M short budget periodicity. Although anecdotal evidence suggests that year-end spending is wasteful, the findings did not indicate a link between sole-sourcing and wasteful spending. More details outside this research's scope are needed to make that determination. However, the data did reveal an increasing use of cost-plus–type contracts as the Navy wraps up the FY. Therefore, Congress's mandate to obligate within a year seriously impacts O&M accounts, as delays in appropriating funds reduce the number of days of available resources.

b. Uptick in Cost-Plus-Type Contract

Secondly, the data also reveal an uptick in cost-plus–type contracts for O&MN-funded contracts as the Navy moves closer to the FY's end. This type of contract shifts the financial risk from the contractor to the government, making this contract type less desirable for the government, as it exposes the government to the triple threat of schedule delay, cost overruns, and performance (see Figure 26). As depicted in Figure 15, in FY2017, the number of cost-plus–type contracts increased twofold from the third to the fourth quarter of 2017. The three subsequent budgetary years followed the same trends as FY2017, increasing cost-plus–type contracts to almost twofold from the third to the fourth quarter of 2018 and 2019, as illustrated in Figures 17, 19, and 21. Furthermore, FY2020 shows an increase in the use of cost-plus contracts but not to the level of the previous 3 FYs. Finally, 2021 is the only period where there was a decline as the year progressed in both the use of cost-plus–type contracts and noncompetitive awards, as shown in Figure 23.

c. *Significant O&MN Expired Balance*

Despite the increased use of noncompetitive contract awards and cost-plus–type contracts, the data reveal that the Navy still leaves billions in unobligated funds. From 2017 to 2021, the Navy has a combined O&M unobligated balance of $15.2 billion that is no longer available for new obligation. These funds retain their FY identity for 5 years but are forever closed for new obligations. At the end of FY2017, the Navy's O&M unobligated balance was $3.9 billion, no longer available for further obligation. Expired appropriations are not available for new obligations but retain their FY identity 5 years after the funding expires. All obligated and unobligated balances are canceled at the end of the 5 years. The matured account is closed. The remaining funds are returned to the treasury's general fund and are no longer available. In FY2018, a balance of $3.1 billion of the expired budget is no longer available for new obligations. The same is true for the remaining FYs of 2019–2021, with balances of $2.4 billion, $3 billion, and $2.7 billion, respectively, as shown in Figures 23–25.

In 2017, as shown in Figure 27, a balance of $3.9 billion was expired and no longer available for new obligations, representing a lost opportunity for that FY despite spending 63% of the procurement for products and services in sole-source contracting (Table 2).

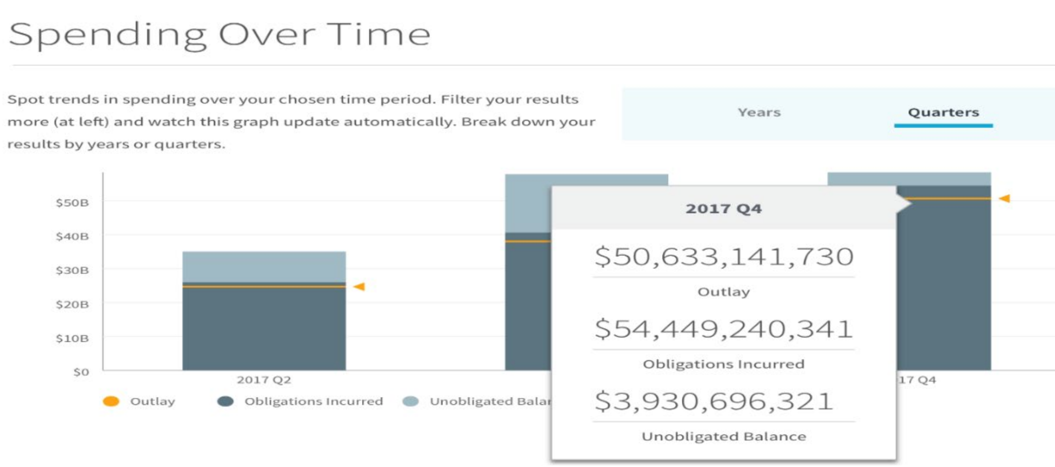

Figure 27. O&MN Funding Execution for FY2017. Source: Federal Spending Explorer (n.d.).

Figure 28 shows the 2018 O&MN expired balance of $3.1 billion that is no longer available for new obligation, representing a loss of opportunity to procure products and services supporting the mission during the first quarter of 2019 when the government is operating under a CR. This balance comes on the back of a tremendous push to fully obligate, as evidenced by the spending of 54% of total obligation for products and services through sole-source procurement valued at $19.4 billion (Table 2).

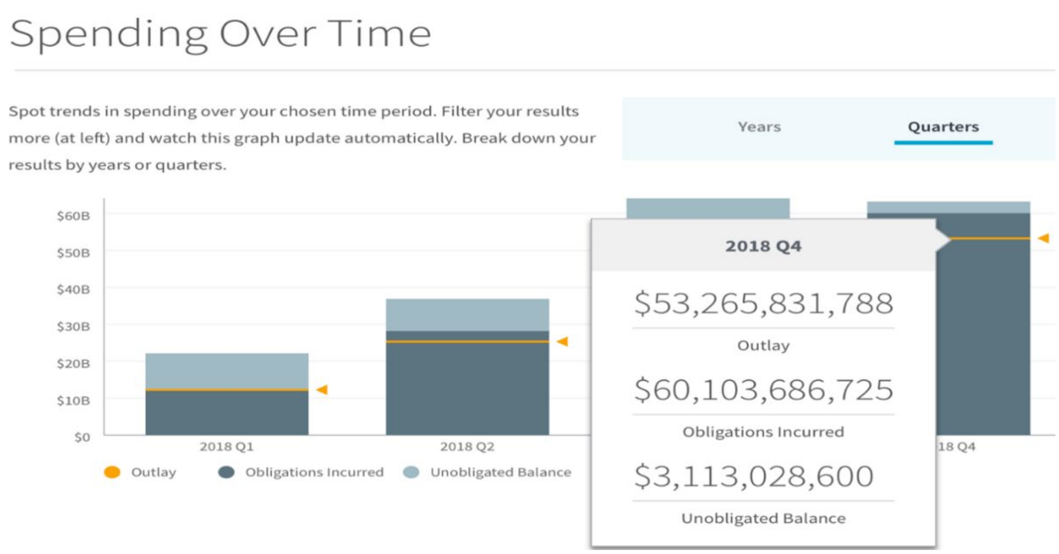

Figure 28. O&MN Funding Execution for FY2018. Source: Federal Spending Explorer (n.d.).

Figure 29 shows the expired balance of $2.4 billion as of September 30, 2019, representing another lost opportunity to fund new starts and program increases to procure products and services throughout the first quarter of 2020 while the agencies are under CR.

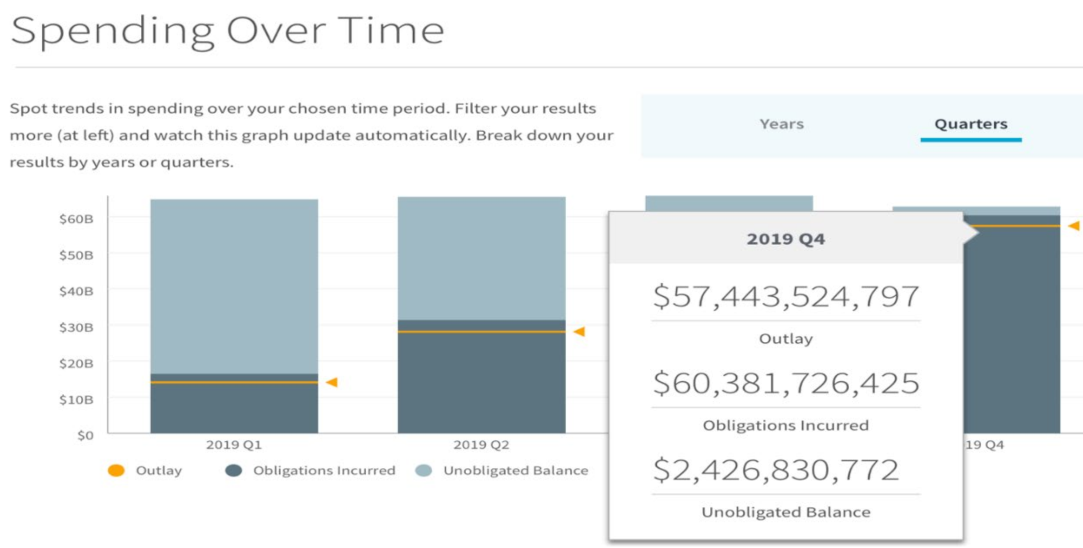

Figure 29. O&MN Funding Execution for FY2019. Source: Federal Spending Explorer (n.d.).

Likewise, years 2020 and 2021 had expired unobligated balances of $3 billion and $2.7 billion, respectively, as shown in Figures 30 and 31, irrespective of the concerted efforts by Navy agencies to obligate its O&M budget authority fully.

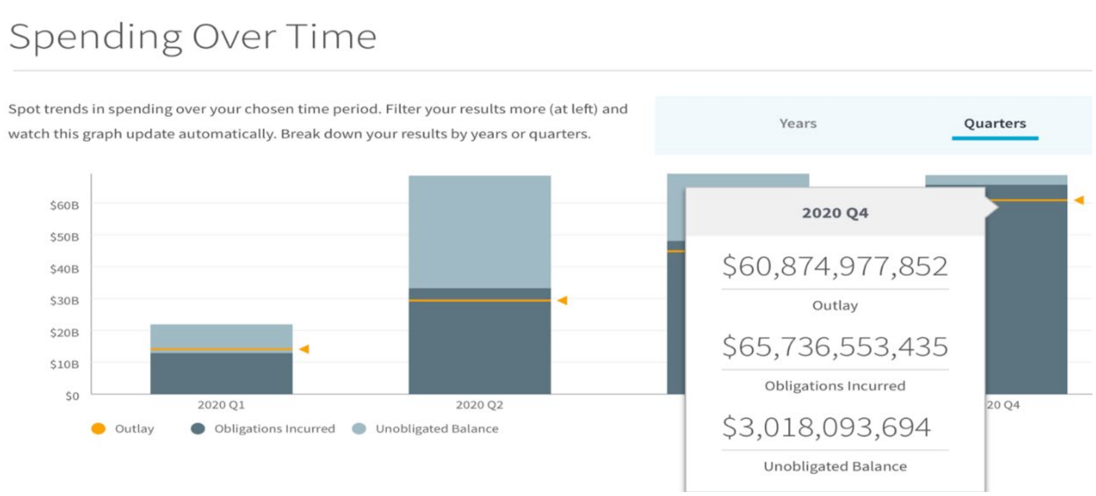

Figure 30. O&MN Funding Execution for FY2020. Source: Federal Spending Explorer (n.d.).

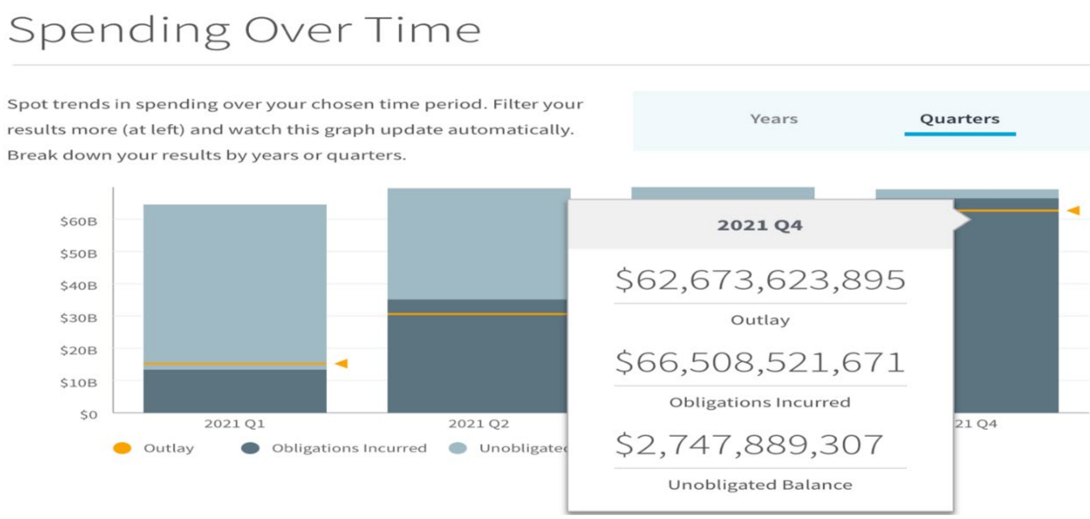

Figure 31. O&MN Funding Execution for FY2021. Source: Federal Spending Explorer (n.d.).

To sum up, there is a total of $15.2 billion of expired O&M budget authority from 2017 to 2021 for the Navy, which is a significant amount. To put it into perspective, if any country spent $15 billion per year on its defense, it would place such a government as the 18th biggest defense spender globally in 2022, according to the Global Firepower defense ranking (Global Firepower, 2022). Other military branches and DoD agencies have O&M budget execution issues that rival that of the Navy or worse, in the case of the Army. The next chapter discusses the findings and answers the thesis's primary and secondary questions regarding the benefits and drawbacks of extending O&M appropriation to 2 years while allowing a carryover to fund new starts and other projects that would otherwise not be funded under the CR.

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IV. DISCUSSION

As mentioned previously, O&M is an expense appropriation that directly supports necessary warfighting equipment such as ship and aircraft maintenance, air operations training, and maintenance of military facilities. In addition, this funding supports the purchase of essential supplies, equipment (under $250,000), fuel, training and development of service members, and civilian personnel's pay and benefits. As a result, O&MN appropriation has become the most significant budget authority in the Navy and DoD.

A. INEFFECTIVENESS OF THE STATUS QUO

Harrison and Daniels (2020) projected that O&MN funding will continue to consume 40% of the Pentagon's budget, securing its place as the largest share of any title. They projected that the procurement appropriation would remain flat at 20%, while RDT&E declines to 12% from 14%. Congress must change the O&M budget periodicity policy and allow O&M appropriation to be available for more than 1 year. The following sections demarcate some of the many contributing factors that make the 1-year fund policy obsolete and argue with legislators to grant more flexibility and extend O&M budget shelf life.

1. Unrealistic Timeline to Obligate

As O&M continues to grow and crowd out other budget titles, the more challenging it would continue to be to obligate the budget within 12 months judiciously. The passing of a CR further shortens this timeline at the beginning of almost every single FY. The passing of a CR further shortens this timeline and exerts enormous pressure on federal agencies to execute funding promptly and do it judiciously. As stated earlier, Spoehr (2020) found that federal agencies spent almost a third of their annual budget in the last quarter, which underlines the negative ramifications CR has on the management of resources (Young & Gilmore, 2020).

The data indicate an uptick in spending and an increase in the sole-source contract during the last quarter of the studied FYs. For example, in 2017, 55% of the total sole-source contracts were awarded in the last quarter of the FY, and 35% in September alone, indicating a rush to spend expiring funds. Furthermore, in the same FY, 75% of all cost-plus–type contracts in 2017 were awarded in the last quarter and 53% in September alone (Figure 15). The data show a drastic increase in spending and the level of risk against the government. More information is needed to indicate whether a wasteful expenditure of resources occurred in the last quarter. However, sufficient data were available to infer that there was a race against time to spend as much as possible, even if that meant exposing the government to more risk through cost-plus–type contract pricing.

2. CR is Here to Stay

The enactment of late appropriations has been the norm for a good portion of the last half century, and there is no indication that CR will go away anytime soon. According to the CRS, from 1977, when the FY moved to October 1, Congress only managed to pass regular appropriation acts in just four instances, FY1977, FY1989, FY1995, and FY1997, as depicted in Table 1. Candreva (2017) found that 80% of the time, the pentagon does not have its final full funding until nearly 20% of the way into the FY. Therefore, it is not realistic for the government to mandate a 1-year timeline for federal agencies to spend O&M funding. The reasoning and oversight behind the funding shelf life have some merits, as it holds agencies accountable to obligate the funds they had requested. Since the government has operated under CR for most of the past 44 years (see Table 1), the argument is that the Navy is used to operating under the CR as they adapted to the new standard imposed by legislators. One of the adaptive ways that the agencies use is not to award any contract in the first quarter of the FY. Of course, this will have a cascading effect as it delays getting the products or services to the warfighters on time.

Albeit federal agencies had learned to operate under CR, such adjustment does not make the unnecessary burdens it places on the workforce and the warfighters go away. Although the passing of a CR can be a pro as it keeps the government running, it is also a con as it does not allow specific new government programs to begin, which is very costly to the taxpayers (Mara, 2017). For instance, the Navy came close to canceling 14 ships' availabilities and shutting down carrier air wings and expeditionary squadrons in

2014 (Eckstein, 2019). According to then Assistant Secretary of the Navy for Research, Development, and Acquisition James Geurts, the Navy postponed the maintenance availabilities of both USS Bainbridge and USS Gonzalez in 2019 due to funds shortage created by the CR. This is detrimental to the Navy's readiness, especially when the likes of China and Russia are increasing military spending and challenging U.S. interests and that of its allies around the world.

The adverse impact CR has on the Pentagon is why extending the O&M period of availability beyond 12 months is crucial. As previously stated, CR will always be a part of the U.S. budget process, and every year, part of the FY is funded with the stop-gap measure, shrinking the time allotted to obligate the funds fully. Likewise, regardless of how late congress enacts the budget, the unused budget after October 1 is forever out of reach of federal agencies (Spoehr, 2020). In addition, the CR robs valuable time for agencies to efficiently obligate taxpayers' dollars as they often don't have enough time to go over the contract award cycle and promote competition, which inherently would help the government save money.

3. Uptick in Spending Through Sole-Source and Cost-Plus–Type Contracts in September

A 2013 study released by the National Bureau of Economic Research found that the expenditure rate is five times more in the last week of the FY than in a regular week. According to Lieberman & Mahoney in their 2017 report, the idea of forever losing the unused budget authority causes agencies to up their spending hoping to fully obligate even if it means expending it on low-value items. (Liebman & Mahoney, 2017). Internal DoD incentives informally applaud agencies that obligate 100% of their O&M budget before the FY ends, regardless of how they do it (Spoehr, 2020). As a result, this expectation inadvertently promotes cutting corners to award the contract to obligate funds swiftly.

Agencies looking to speed up the contracting process may skip or shorten crucial steps of the contract design (Kasdin, 2021). One of the quickest ways to obligate funding when pressing for time is via sole-source if above the micro-purchase threshold. And one of the surest ways to obligate more is through the cost-plus–type contract. In 2017, 25%

of all cost-plus contracts took place in September, 20% in 2018, 16% in 2019, and 20% in 2020. The year 2021 shows a drastic decrease in cost-plus contracts as the FY ends with a menial percentage of 1%. So, there is strong and substantiated evidence that O&M appropriation experiences a surge in obligations at the end of the FY that may not be for the best interest of the government.

These revelations provide more solid arguments for extending O&M funding. Thus, eliminating the annual artificial pressure of the year-end deadline would enable DoD to make better purchasing and contracting decisions resulting in better and more efficient outcomes, which any leader advocating for the betterment of America must desire (Spoehr, 2020).

B. ADVANTAGES OF EXTENDING O&M AVAILABILITY TO 2 YEARS PLUS CARRYOVER

As previously mentioned, and as shown in Figure 5, O&M is the most significant appropriation for the DoD, occupying more than 40% of the Pentagon's budget. Moreover, the percentage is expected to continue rising since the cost to operate and maintain weapons systems is on the rise with no signs of slowing down over time. The costs to upkeep legacy systems and the increased operating expenses for newer and more advanced weapons systems contribute to the ballooning O&M cost (Harrison, 2021). It is time to stop talking about extending O&M budget periodicity and make it a policy, providing federal agencies maximum budget flexibility to lessen the effects of the CR. By extending O&M to 2 years and allowing a carryover through the first quarter of the subsequent year, the Navy and other branches of the services will

- Focus more on readiness and only worry about the budget uncertainties inherent with the CR every other year.
- Save the government significant time by alleviating the repetitive work of the acquisition workforce. Staff time is wasted on repetitive administrative tasks such as allocating funds in small increments (Candreva, 2017, p. 339), adversely impacting the industry's confidence, which may discourage them from pursuing work with the government.
- Grant flexibility to fund new starts and program increases that would otherwise not be possible under a CR.

First, it's time to grant the Pentagon maximum flexibility with the execution of O&M funding. This appropriation funds our country's military readiness—a readiness that has eroded from degraded military equipment to undertrained service members during a time when China and Russia are more active in challenging U.S. interests globally. First and foremost, it is time to provide financial stability, and that starts with extending the O&M budget periodicity to 2 years. Some researchers have found that the spike in end-of-fiscal-year procurement is wasteful (Plot & Brady, 2019), while others believe it is a low value (Liebman & Mahoney, 2017). Therefore, it is not in the government's best interest to procure products and services that are either wasteful or of low importance when those funds could be put to better use in the subsequent FY. The "use it or lose it" phenomenon has been tough to combat because of Congress's inability to pass a timely budget and its refusal to extend the timeline to obligate. Thus, this combination exerts tremendous pressure to beat the budgetary deadline or risk a budget cut in the following year. As a result, billions of dollars are spent on office supplies and other low-priority procurement in the last month of the FY. Despite the spending spree, billions of budget authority are returned to the treasury every year (see Figures 27–31).

Some experts argued that allowing a 2-year window to obligate will only delay the wasteful or low-value procurement to another year. Although the concern is legitimate, delaying it to the following year will grant fiscal stability to the defense community and alleviate the stress that CR creates across the government, from contract awards rework to debating to keeping the pilots flight-ready. Where there is a deadline, there will be a rush to meet it—irrespective of whether it is spending a 1-year budget in O&M or a multiyear budget in other appropriations. The focus must be on continuous readiness.

Eckstein (2019) found that due to the restrictive nature of the CR, in 2019 the Navy entertained canceling the maintenance availabilities of 14 ships and shutting down a carrier air wing and expeditionary squadrons not heading into a deployment—at a time when the likes of China and Russia are bullying U.S. allies and challenging the current world order. This is a nightmare that Congress can address by allowing O&M to last longer. Then Assistant Secretary of the Navy for Research, Development, and

Acquisition James Geurts described the negative impact of CR during an interview stating,

> When the fleet looks at all the things, they've got to be able to do with the first increment of money they have, we say, well I don't want to move a ship availability to the right, but that's my only option because I can't get enough money to pay for all of that availability, and I can't just start a week's worth of it. And so, they start making hard choices.

This statement is one of many, leaders in the DoD have made in the past to no avail.

Secondly, another detrimental effect of the CR and why there needs to be an extension is uncertainty's adverse impact on the acquisition force. For instance, when federal employees are due to rotate, they should not worry about whether they will be allowed to move or be delayed due to a lack of budget. The thought and process of uprooting one's family to live in a new area are stressful enough. To add fiscal uncertainties into the mix is downright negligent. Furthermore, repeating the same task repeatedly when partial funding is available is time-consuming and costly to the government. Again, many organizations bypass the competitive award process because it is faster and less of a drain on resources for agencies with a reduced workforce to complete the cycle of awarding a contract (Kasdin, 2021). The data presented through this document give credence to Kasdin's statement since a drastic increase in sole-source awards and cost-plus–type contract pricing throughout the studied period was observed except for 2021. As alluded to by Kasdin, the increased use of sole-source is due to the looming end of the FY and the mutual familiarity with the incumbent and the government. Some organizations go to great lengths to keep them without recompeting the contract. The decision not to recompete the contract denies the government the opportunity to cut costs and save precious American dollars. Competition promotes the best value for the government in terms of cost, performance, and schedule. Therefore, Congress must do the right thing and grant O&M multi-year status. It is easier to give O&M multi-year budget status than not to have a CR, making it a more sensible decision to execute.

In addition to making O&M a 2-year budget, the third point is to allow a carryover of unobligated funds until the end of the first quarter. The legislators may be concerned with oversight and don't want to repeat the "M" account loophole. The "M" account was a repository of expired funding available to the military years after expiration. At one point, the balance was so significant that military leaders would draw from this account and fund a project they deemed essential without Congress's approval or knowledge. Some adjustment was made to the policy, taking away the loophole. The proposal to allow a carryover is not similar to the "M" account. The carryover will have limitations, such as making it available to fund only new starts and program increases for the first quarter. That way, ships' maintenance, pilots' training, and other pertinent programs are not sacrificed by the unwillingness of the lawmakers to perform their duties. Lawmakers' inability to meet their budget review schedules has reached the point where changes are required to restore discipline and stability to the budget process (Torango, 1986). U.S. adversaries are not waiting on the sideline; therefore, the readiness of U.S. armed forces should not wait either.

Operating under a CR is now the norm and is not going away. Fleet readiness is suffering, so the protection of new starts is necessary. Granted that the services have the option to ask for anomalies for specific programs, such a process is not sustainable because it can be lengthy and rarely gets approved. Young & Gilmore (2019) revealed that less than 3% of these exception requests, known as "anomalies," are ultimately granted after 4 months on average. "A potential explanation for the rarity of anomalies is that the granting of too many anomalies would reduce incentives to negotiate seriously and come to a final agreement on full-year appropriations" (Brass, 2011).

The best option is to allow O&M to be a 2-year budget and carry over unobligated funds through the first quarter. Such a move will bring the DoD fiscal stability and ensure new programs start on time, allowing the warfighters to get the requested capabilities to meet U.S. national security goals.

C. ARGUMENTS AGAINST EXTENDING O&M APPROPRIATION TO 2 YEARS WITH ROLLOVER

While there are many proponents of extending O&M to at least 2 years or allowing unobligated funds to roll over, there are also opponents of such a policy shift. One of the main arguments against any extension or rollover is that it reduces the strength of congress's oversight of the executive branch, which may minimize government accountability (Fichtner & Albanese, 2018) at a time when the DoD has yet to pass a single clean audit. Moreover, many appropriators believe that granting DoD the ability to keep unspent single-year funds and creating a multi-year appropriation within a 1-year budget will weaken the impact of congressional oversight (Spoehr, 2020). A significant role of the legislative branch is to fund the government and ensure the good use of taxpayers' dollars. Granting a multiyear budget status to an expense appropriation with the ability to carry over may be challenging to administer since it would implicate working possibly with 2 or more FYs at a time (Candreva, 2019). Furthermore, other observers and pundits believe that extending the O&M budget to 2 years does little to curve year-end spending but more to compound and exacerbate the issues. Candreva (2019) stated it would be a bad idea since "twice as much money must be managed over twice as long," worsening the management concerns and intensifying the legal ones.

All of the arguments are valid. However, it is a small sacrifice to ensure the availability of funds to address the readiness issues plaguing the U.S. armed forces. For example, Eckstein (2019) found that the Navy had to cancel the maintenance availabilities of USS *Bainbridge* and USS *Gonzalez* due to a shortage of funds created by the CR. After months of preparation and back and forth between the Navy and industry about the ships' availabilities contract, they were postponed, as lamented in the below paragraph by Geurts, then the Navy's assistant secretary for research, development, and acquisition:

> What's frustrating me about ship maintenance is, hey, we want to get our planning set, we want to award the contract early; Bainbridge was one of them we had all set, we backed the planning up, had 120 days ready in advance, the team was ready to go, we had the materials all ready to go, and then suddenly, oh, we can't do it now because we're in a CR. The real challenge: we don't know how long the next CR is when the contract is going to get awarded.

There is a growing threat from the North Korean missile program, an increasingly assertive Russian Navy in the Mediterranean, and Chinese expansion in the South China Sea. In recent years, the Chinese leadership has enjoyed investing heavily in military hardware, purchasing advanced weapons from outside vendors, mainly from Russia, or developing the technology to create their systems. Given the expedited modernization of its military, it is safe to assume that they are not dealing with the same fiscal hurdle that result from U.S. budget practices restricting and undermining the military's readiness.

Given China's swift military expansion and America's inability to be on the same page fiscally, some analysts believe that China may outclass America in terms of weapon sophistication in the coming years with the development and manufacturing of high-performance military weapons i.e., supersonic missiles. For example, in his article, Brown (2021) stated that China has overtaken the U.S. as the largest navy globally and is predicted to keep extending its fleet.

Thus, extending O&M to 2 years with rollover may be perceived as less desirable, but its potential to revamp military readiness cannot be denied as its benefits far outweigh the concerns raised by pundits. In this uncertain environment, it is paramount to provide maximum flexibility on readiness funding, and it starts with widening the obligation window to 2 years with rollover through the first quarter of the following FY. Such a policy shift is desired and supported by many leaders across the government. Freedberg Jr., (2020) has reported in his article, that Rep. Thornberry, a senior member of the House service committee has championed the lengthening of O&M budget periodicity in the following statement captured during an interview: "We can fuss and complain all we want about DoD not spending money efficiently but here the problem is us — and as a Congress, we can fix it."As a senior member of the armed services committee, Thornberry stated that the Treasury, homeland security, transportation, and the housing and urban development department could carry over O&M funds up to 50%. As a result, the end-of-year spending is less acute with the aforementioned agencies (Freedberg Jr., 2020).

D. RECOMMENDATIONS

In his report on the impact of CR on federal contracting, Kasdin (2021) stated that the budgets that are most likely to be significantly affected by CRs are the annual appropriation. However, he added that the agencies using mandatory funds (direct spending) and/or discretionary funds with carryover authority are less affected by the terms of the CR and the need to "use it or lose it." Therefore, a 2-year O&M appropriation would alleviate end-of-year spending issues as leaders would be better equipped to identify a priority of spending needs and avoid last-minute panics resulting from a CR.

The answer is affirmative to respond to the primary thesis question of whether the Navy is better off with a 2-year O&M with rollover ability. Two-year budget flexibility and the ability to carry over unobligated funds through the first quarter of the subsequent FY are crucial to readiness. Bill Greenwalt, an ex-staff of both the appropriation and authorization committees, stated that the amount of budget authority that had expired in the past two decades was more than enough to help modernize and maintain U.S. supremacy over China (Freedberg Jr., 2020). Therefore, expanding O&M will improve readiness by ensuring funding availability for ships' maintenance, pilots' training, and other vital programs to continue with operation without worrying about the constraints of the CR.

V. CONCLUSION

O&M appropriation has become too significant to be limited to 1-year availability or less. It has crowded out other budgets and shows no sign of slowing down due to the ever-increasing cost of maintaining an aging and overtasked fleet. So, after a thorough analysis of the data to answer the primary research question, it became more and more evident that providing such flexibility is the most sensible option given the readiness issues that have plagued the Navy and the armed forces in general. The Navy has postponed ships' maintenance due to lack of funding caused by the CR or, at times, been left with a tough choice to flat out cancel availabilities because of fiscal uncertainties and fleet tasking.

A. RECAP OF FINDINGS

Meanwhile, billions of dollars in budget authorities are expired every year despite last-minute pushes to execute as much of it as possible, as quickly as possible. For instance, in 2017, over 60% of the budget spent on procuring services or products was through noncompetitive means. And of that, most of the sole-source contracts come in the last quarter of the FY. Furthermore, the data revealed that the usage rate for cost-plus–type contracts was twice as much in the fourth quarter than during the previous quarters. Despite the final push to obligate, the Navy had nearly $4 billion of expired funds in FY2017 that could have served the fleet well in the first quarter of FY2018 when the Pentagon was operating under the CR, or the Navy could have used the expired $3 billion of FY2018 in the first quarter of 2019. From FY2017 to FY2021, the Navy had well over $15 billion of expired appropriations. This amount could have procured more services, leading to more readiness in terms of mission-capable ships and more trained pilots, taking the pressure off the fleet and giving notice to our adversaries worldwide.

Whether it is a multiyear or 1-year budget, as long as there is a deadline, there will be a push to obligate expiring funds before the end of the FY. The extension of O&M to 2 years plus a carryover will not eliminate the perverse end-of-year spending that many lamented in the past. It may, however, alleviate the utilization of the noncompetitive method and cost-plus–type contract pricing prevalent in the last quarter of the FY. In addition, such budget execution flexibility will help the government save precious taxpayers' dollars and ensure that the government gets one dollar or more in value for every dollar spent.

B. AREA FOR FURTHER RESEARCH

Research on this topic should include an assessment of O&M budget execution for the Air Force, Army, and non-DoD agencies in terms of whether sole-source and cost-plus–type contracts are prevalent in the fourth quarter or is it just a Navy issue. Furthermore, such research must also investigate the readiness of the other services to find out the real quantitative impact of CR on military readiness rather than anecdotal tales of the adverse effects the shortened obligation periodicity has on the armed forces.

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