SLOW AND STEADY
ANALYSIS OF THE 2022
DEFENSE BUDGET REQUEST

TRAVIS SHARP
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CSBA
Center for Strategic and Budgetary Assessments

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CHAPTER 1

Perpetuating the Past: The Topline and Two Trends

Released later than any new administration’s first budget since the 1920s, the 2022 Department of Defense (DoD) spending request maintains the status quo with the topline, the distribution of funding across appropriation accounts, and the distribution of funding across military departments.1 Together, these three areas represent the primary lenses for examining the U.S. defense budget’s trajectory.2 The request proposes a DoD topline nearly identical to the current year’s topline in inflation-adjusted terms. It also continues two longer-term trends in which DoD has allocated larger portions of its budget to 1) investment and 2) air and naval forces. This chapter looks back, exploring the request’s continuity with the past, before Chapter 2 gazes ahead, forecasting the budget’s possible future.

Steady as She Goes: Request Summary

If one phrase describes the fiscal year (FY) 2022 defense budget request, it is “steady as she goes.” The request flatlines the DoD topline at $715 billion, a -0.2 percent real decrease relative to the FY 2021 enacted level (Table 1). The request proposes an identical -0.2 percent real decrease for national defense, seeking $752.9 billion to fund DoD, Department of Energy nuclear weapons activities, and other non-DoD defense programs. In one exception to the status quo theme, the request includes war and enduring operations costs ($42.1 billion) within DoD’s base budget for the first time since 2001. The request eliminates the separate war funding account that accompanied DoD budgets for 20 years.


The request omits DoD outyear projections for FY 2023-2026 due to the constraints on long-term planning during a presidential transition. However, the Office of Management and Budget (OMB) projected DoD real growth from FY 2023 to FY 2026 at 0.2 percent per annum, a placeholder figure illustrating one notional trajectory. OMB did not describe how it generated the projections, but they closely resemble this report’s forecast of future spending based on historical data (see Chapter 2). Since OMB’s projections represent the only available reference point and track with historical trends, they will likely anchor upcoming deliberations over DoD’s FY 2023 request.

**TABLE 1: DISCRETIONARY BUDGET AUTHORITY IN PRESIDENT’S BUDGET REQUEST, FY21 TO FY26**

<table>
<thead>
<tr>
<th></th>
<th>FY21 enacted</th>
<th>FY22 requested</th>
<th>FY23 projected (OMB)</th>
<th>FY24 projected (OMB)</th>
<th>FY25 projected (OMB)</th>
<th>FY26 projected (OMB)</th>
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<tr>
<td><strong>DoD (051)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Base budget minus war costs</td>
<td>633.3</td>
<td>672.9</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Direct war requirements</td>
<td>19.9</td>
<td>14.3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Enduring operations requirements</td>
<td>34.0</td>
<td>27.8</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>OCO for base requirements</td>
<td>16.5</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>National defense (050)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DoD (051)</td>
<td>703.7</td>
<td>715.0</td>
<td>730.5</td>
<td>746.6</td>
<td>763.2</td>
<td>780.1</td>
</tr>
<tr>
<td>Atomic energy/defense activities</td>
<td>27.5</td>
<td>27.9</td>
<td>28.9</td>
<td>29.5</td>
<td>30.2</td>
<td>30.9</td>
</tr>
<tr>
<td>Defense-related activities</td>
<td>9.5</td>
<td>9.9</td>
<td>10.2</td>
<td>10.4</td>
<td>10.6</td>
<td>10.9</td>
</tr>
<tr>
<td>DoD (051) nominal growth</td>
<td>-2.7%</td>
<td>1.6%</td>
<td>2.2%</td>
<td>2.2%</td>
<td>2.2%</td>
<td>2.2%</td>
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<tr>
<td>DoD (051) real growth</td>
<td>-4.3%</td>
<td>-0.2%</td>
<td>0.2%</td>
<td>0.2%</td>
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<tr>
<td>National defense (050) nominal growth</td>
<td>-2.1%</td>
<td>1.6%</td>
<td>2.2%</td>
<td>2.2%</td>
<td>2.2%</td>
<td>2.2%</td>
</tr>
<tr>
<td>National defense (050) real growth</td>
<td>-3.7%</td>
<td>-0.2%</td>
<td>0.3%</td>
<td>0.2%</td>
<td>0.2%</td>
<td>0.2%</td>
</tr>
</tbody>
</table>


**Notes:** In billions nominal $. Real growth rates calculated using OMB, Table 10.1—Gross Domestic Product and Deflators Used in the Historical Tables: 1940–2025 (May 2021), available at https://www.whitehouse.gov/omb/historical-tables/.

**High Historically, Low Recently: FY 2022 DoD Growth Rate vs. Past First-Year Budgets**

As Biden’s first budget, the FY 2022 request invites comparison to previous presidents’ first budgets. Such a comparison should assess real growth rates, not spending levels, because a new administration’s spending level is constrained by the preceding administration’s spending level, a variable outside the new administration’s control. In contrast, growth rates depend solely on decisions made by new administrations and Congresses. This report identifies a first-year budget by comparing the date an administration entered office to the
date the president signed their first defense appropriations bill into law.\(^3\) A first-year budget thus represents an administration’s first opportunity to affect budget outcomes rather than its first opportunity to develop the budget from start to finish.\(^4\)

**FIGURE 1: FY22 DOD BUDGET REAL GROWTH RATE VS. PAST FIRST-YEAR BUDGETS**

If 0 percent real growth signifies preserving the status quo, then the proposed FY 2022 DoD growth rate of -0.2 percent represents the most status quo first-year defense budget since 1945. No administration has overseen a first-year growth rate closer to 0 percent than the FY 2022 request (Figure 1). Legislative action to date indicates that Congress likely will set the FY 2022 budget close to DoD’s request.\(^5\) Assuming that occurs, the FY 2022 budget will prove uniquely status quo.

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Maintaining the status quo is not necessarily a bad thing. After all, many new administrations cut spending initially. On average, postwar administrations’ first budgets have reduced real growth by -1.7 percent. The downward trend results from administrations entering office and winding down wars both hot (Truman, Eisenhower, Nixon, Ford) and Cold (Clinton). The proposed FY 2022 growth rate of -0.2 exceeds the average of -1.7 percent, meaning Biden’s first budget may surpass the 75-year average. Advocates of bigger defense budgets might wish that the Biden administration had proposed more spending, but they should recognize that the FY 2022 growth rate is above average for first budgets.

That said, the FY 2022 DoD growth rate looks smaller relative to the recent past. The George W. Bush, Obama, and Trump administrations bucked the downward trend, overseeing first-year real growth rates averaging 3.7 percent. Intensifying overseas military operations affected these administrations’ first budgets, making comparisons to the FY 2022 request less apt. Still, the Biden administration may break a 20-yearlong trend of new presidents upping DoD’s budget.

**Trend One: Investment’s Growing Topline Share**

The FY 2022 DoD request continues two trends that have characterized Pentagon spending over the past decade. Both trends involve steady changes in the percentage of the DoD budget, or “topline share,” allocated to certain activities. Examining topline shares can clarify shifting priorities better than other indicators. Unlike absolute spending levels, for example, which can be affected by inflation, White House policy, or Congressional intervention, topline shares primarily lie within DoD’s decision-making ambit. They therefore represent a good starting point for assessing DoD prioritization.

The first trend involves the growing topline share allocated to investment and other support versus the declining topline share allocated to pay and operations. From FY 2013 to FY

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6 The first-year averages equaled -3.7 percent during periods of sustained large-scale overseas military operations and -0.4 percent during periods without such operations. See Chapter 2 for details on designating war years.


8 The investment and other support category includes 1. procurement; 2. research, development, test, and evaluation (RDT&E); 3. military construction; and 4. family housing. The pay and operations category includes 5. military personnel; and 6. operation and maintenance (O&M). In the 1980s, Brookings Institution analysts used these two categories to reflect the time required for DoD to obligate funding after Congress appropriated it. The investment and other support category represented “slow money” that DoD took years to spend. In contrast, the pay and operations category represented “fast money” that DoD spent in the first year or two. Since outlay rates no longer sort tidily into the fast-slow dichotomy, this report retains the categories but drops the terminology. DoD, *National Defense Budget Estimates for FY 2021*, Table 5-11, pp. 72-74; and William W. Kaufmann, *A Reasonable Defense* (Washington, DC: Brookings Institution, 1986), p. 11.
2021, investment’s topline share grew from 29 percent to 36 percent (Figure 2). The shift resulted from growth in the procurement and research, development, test, and evaluation (RDT&E) topline shares. Procurement’s share grew from 17 percent to 20 percent, while RDT&E’s share grew from 11 percent to 15 percent. The procurement and RDT&E shares grew despite the U.S. military fighting Daesh (ISIS) and rebuilding readiness, two priorities that steered funding to pay and operations.

The FY 2022 request continues the trend. It allocates 35 percent of DoD’s topline to investment and other support, one percentage point less than in FY 2021. It grants procurement an 18 percent share and RDT&E a 16 percent share. Relative to FY 2021, then, the FY 2022 request reduces procurement’s share but increases RDT&E’s share.  

**FIGURE 2: INVESTMENT’S GROWING SHARE OF DOD TOPLINE, FY13 TO FY22**

Investment’s growing topline share raises three points. First, a 36 percent topline share for investment is unremarkable historically. DoD allocated the exact same percentage to investment, on average, in the 1970s, 1990s, and 2000s, three decades regarded as troughs.

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9 Although analysts commonly use “investment” to refer to RDT&E and procurement, the term is not value neutral. Investment connotes prudence and foresight, potentially implying that non-investment spending lacks those qualities. To be clear, spending on military personnel and O&M also represents an investment in the positive sense of the term.

10 In FY 2022, if Congress adds $5 billion, on net, to investment and other support, then investment’s topline share would reach 36 percent, matching FY 2021.
for weapons modernization. In contrast, DoD allocated a 45 percent share to investment during the 1950s, 1960s, and 1980s. Today's investment topline share, though growing, still lags those decades. It may struggle to reach that higher level again because the per capita cost of fielding U.S. forces continues to grow faster than inflation, hindering DoD's ability to shift funds from pay and operations to investment.

Second, although investment's growing topline share may be unremarkable historically, it still appears consistent with transitioning to great power competition while not anticipating major conflict in the next ten years. One would expect a country squaring off against near-peer competitors but not believing war is necessarily imminent—a situation the United States finds itself in today against China and Russia—to emphasize longer-term technological advancements typically funded through investment and other support. Policymakers continue to debate whether DoD is developing the optimal capabilities to deter and, if necessary, defeat China and Russia. They also continue to debate the probability of major conflicts against these countries in the nearer term. Still, DoD's shift toward investment suggests that, broadly speaking, the Pentagon budget has followed the 2018 National Defense Strategy.

Third, since RDT&E’s share has increased more steadily than procurement’s share, DoD may now risk overinvesting in RDT&E relative to procurement. Increasing RDT&E will not yield much value if it does not lead DoD to procure and field new military capabilities. The question today is, how much RDT&E spending is enough? Analysts with diverging views on current U.S. defense policy are united in their belief that technological innovation represents an enduring advantage for the American military. Yet vanishingly few instruments exist for assessing the effectiveness and efficiency of defense RDT&E. Budgetary allocations matter but are a crude indicator. If political leaders are going to bet the nation’s security and the taxpayer’s dollars on preserving the U.S. edge in defense technology, analysts must develop new techniques to diagnose how effectively and efficiently DoD converts innovative research to fielded capability.

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Trend Two: Air and Naval Forces’ Growing Topline Share

The second trend in DoD spending involves the growing topline share allocated to the Air Force and Navy versus the declining topline share allocated to the Army and Marine Corps. From FY 2013 to FY 2021, air and naval forces’ topline share grew from 48 percent to 52 percent (Figure 3). Over this period, the Air Force’s share inched steadily upward from 25 percent to 29 percent. The upward trend holds even when looking strictly at Air Force-controlled funding (i.e., the “blue” budget), although the shares are smaller after removing non-blue pass-through funds, equaling 18 percent in FY 2013 and 24 percent in FY 2021.16 During the same period, the Navy’s share, excluding the Marine Corps, fluctuated between 22 percent and 25 percent, averaging 24 percent.

Meanwhile, ground forces’ share declined from 35 percent in FY 2013 to 30 percent in FY 2016-17 before rebounding to 32 percent in FY 2021. The Army’s share decreased steadily throughout this period, shrinking from 30 percent in FY 2013 to 25 percent in FY 2021, while the Marine Corps’ share fluctuated between four percent and seven percent, averaging five percent.

The FY 2022 request continues the trend. It steers 53 percent of DoD’s topline to air and naval forces, matching the 10-year high from FY 2016. The Air Force continues its steady ascent, receiving a 30 percent share (24 percent “blue” only), while the Navy still hovers at 23 percent. The request provides a 31 percent topline share to ground forces, a one percentage point reduction from FY 2021. The request grants the Army a 24 percent share, its smallest in a decade, and the Marine Corps a 7 percent share, its largest in a decade.17

As with investment, air and naval forces’ growing topline share seems broadly consistent with China comprising the pacing threat for U.S. military planning. Many policymakers believe military competition and conflict with China will occur primarily, though not exclusively, in the air and maritime domains.18 As a result, one would expect air and naval forces to gain topline share relative to ground forces, particularly as the United States removes forces from Afghanistan and Iraq. The growing topline share allocated to air and naval forces satisfies this expectation, again indicating that the Pentagon budget has followed the 2018 National Defense Strategy.

16 The Air Force’s share included the Space Force in recent years. Author’s analysis of Department of the Air Force Budget Overview volumes from FY14 to FY22, “Budget Summary” sections, various dates and page numbers, available at https://www.saffm.hq.af.mil/FM-Resources/Budget/.
17 In FY 2022, if Congress adds $8 billion, on net, to ground forces, then its topline share would reach 32 percent, matching FY 2021.
DoD has few attractive options for continuing to increase air and naval forces’ topline share if the budget remains flat. Further reducing ground forces’ topline share offers one option. That approach would reduce American preparedness for potential conflicts with Russia, North Korea, and Iran, not to mention other potential crises requiring ground forces. Reducing defense-wide’s topline share represents a second option. Yet, the defense-wide budget supports scientific research, special operations forces, missile defense, and support functions essential to military operations. DoD leaders must weigh the risks of further reducing ground forces or defense-wide activities against the risks of not further increasing air and naval forces. Chapter 2 revisits this issue by forecasting potential future shifts in topline shares based on historical trends.

Conclusion

Submitted to Congress later than previous administrations’ first-year spending plans, the FY 2022 DoD budget request preserves the status quo by proposing a flat topline and prioritizing both investment and air and naval forces. With the Biden administration’s initial defense spending trajectory now set, we can forecast what DoD’s budget might look like in the future. To pursue that task, the next chapter analyzes how growth rates and share shifts have varied by administration year.
CHAPTER 2

Foreshadowing the Future: Growth Rates and Share Shifts by Administration Year

Analysts use two primary methods to forecast defense spending. The first, which this report calls “Delphi,” uses knowledge of policymaker preferences and budgetary processes to make predictions.\(^{19}\) The Delphic analyst generally has insider information, often gained from past government service, and uses that information to offer insights that cannot be found with Google.\(^{20}\) The Delphi method dominates press reporting and expert commentary on defense spending. That is understandable. After all, it is current policymakers, possessing preferences and navigating processes, who decide what gets spent. The Delphi method aims to intuit the likely result.

The second method, which this report calls “Moneyball,” uses history to predict the future.\(^{21}\) Rather than relying on insider information, the Moneyball analyst dissects data to identify past periods resembling current conditions under the assumption that, all else equal, what happened before might happen again.\(^{22}\) The Moneyball method is not superior to the Delphi method or vice versa.\(^{23}\) The best analysis often combines the techniques, as demonstrated by

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\(^{22}\) As an example, see Todd Harrison, “Rethinking Readiness,” *Strategic Studies Quarterly* 8, no. 3 (Fall 2014), pp. 38–68.

\(^{23}\) Baseball forecasting has come a long way since the “stats smart, scouts dumb” myth emerged in the wake of *Moneyball*. Keith Law, *Smart Baseball* (New York: William Morrow, 2017), pp. 231–244.
William Kaufmann’s impactful work. That said, the Moneyball method receives less attention than the Delphi method in press reporting and expert commentary, perhaps because data-based predictions lack the political intrigue of Delphic policymaker-based assessments.

This chapter employs the Moneyball method. It analyzes DoD topline real growth rates and topline share shifts by administration year since FY 1953, using the results to forecast possible spending outcomes from FY 2023 to FY 2026. The chapter puts some Delphic spin on its Moneyball delivery by studying toplines and shares, topics infused with partisan and bureaucratic politics. The administration year perspective is appealing because some budgets receive more emphasis than others. The Trump administration dubbing the FY 2020 budget as its “masterpiece” offers one recent example. Surprisingly, few analysts have used the administration year perspective in past research.

**Results in Brief**

Although DoD topline real growth rates tend to regress toward the mean during an administration, beginning with large increases or decreases typically results in bigger overall changes during an administration’s tenure. By proposing a flat topline in FY 2022, the Biden administration declined an opportunity to adjust DoD spending significantly during its time in office. If topline growth rates from FY 2023 to FY 2026 follow the historical trend for administrations that, like Biden, did not make large changes early, then this chapter forecasts that the DoD topline will closely resemble the OMB projections described in Chapter 1.

DoD tends to shift topline shares among military departments and defense-wide activities by the most in an administration’s third budget and by the least in the fifth budget. The FY 2022 request proposed a small share shift. However, if the Biden administration adheres to the historical trend in coming years, this chapter forecasts that DoD could potentially shift $121 billion, or about $30 billion per year, among military departments and defense-wide activities through FY 2026. The $121 billion figure represents what DoD could give to higher priorities and take away from lower priorities assuming OMB’s topline projections hold.


26 The chapter omits Truman outcomes prior to FY53 to remove outlier effects from that period.


In other words, the $121 billion illustrates what is potentially at stake, in terms of internal funding gains and losses, as the military departments compete for resources.

**Despite Regression Toward the Mean, Big Early Changes Matter:**

**Growth Rates by Administration Year**

Since FY 1953, DoD topline real growth rates have exhibited two patterns. First, dramatic budget changes have often come as the U.S. military accelerated or decelerated large-scale overseas combat operations. Growth rate peaks and troughs in the Eisenhower, Johnson, Nixon, and George W. Bush administrations accompanied changes in U.S. war policy.

**FIGURE 4: DOD TOPLINE REAL GROWTH RATE, FY53 TO FY20**


Notes: Rates calculated from discretionary and mandatory budget authority including both base budget funding and war/supplemental funding.

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29 International circumstances, Congressional pressure, strategic planning, and other factors affected the patterns.

30 The report defines war as sustained large-scale combat in a foreign country involving substantial casualties and troop deployments. During the Cold War, the United States fought wars in Korea (FY50-53), Vietnam (FY64-73), and the Persian Gulf (FY90-91). After the Cold War, the United States fought overlapping wars in Iraq and Afghanistan (FY03-11). All years listed are inclusive fiscal years. The report counts a fiscal year as a war year if war occurred during any part of the fiscal year because Congress enacts supplemental appropriations to fund unplanned military operations. For the post-Cold War period, the report counts a fiscal year as a war year if the U.S. military had more troops deployed in foreign countries than the post-Cold War average of 308,000. That procedure yields one war from 2003 to 2011, the peak years of U.S. operations in Iraq and Afghanistan. Glenn Palmer et al., “The MID4 Dataset, 2002–2010: Procedures, Coding Rules, and Description,” *Conflict Management and Peace Science* 32, no. 2 (April 2015), pp. 222–242; and Tim Kane, “The Decline of American Engagement: Patterns in U.S. Troop Deployments,” Economics Working Paper 16101 (Stanford: Hoover Institution), available at https://www.hoover.org/sites/default/files/research/docs/16101__kane__decline_of_american_engagement.pdf.
Second, except for Nixon, no administration has overseen strictly increasing or decreasing growth rates (Figure 4). Instead, each administration has overseen both positive and negative growth during its tenure. Administrations that started with cuts switched to increases, as with Eisenhower, Johnson, Carter, and Clinton. Administrations that began with increases pivoted to cuts, as with Kennedy, Reagan, Obama, and Trump. Sustaining a steady trajectory is rare, illustrating one difficulty of satisfying current policymaker calls for DoD to receive 3 percent to 5 percent real growth year after year.32

A regression toward the mean pattern becomes clearer after splitting administrations into three groups based on their first-year real growth rates (Figure 5). As defined here, “Booster” administrations’ first-year real growth rates exceeded 5 percent (Kennedy,
Reagan, George W. Bush). “Cutter” administrations’ first-year rates fell below -5 percent (Truman, Eisenhower, Nixon, Clinton). “Maintainer” administrations’ first-year rates fell between the two extremes (all others). Boosters start with big increases but, over time, their rates descend toward zero. Cutters begin with big decreases but their rates ascend toward zero. Maintainers float around the muddled middle near 0 percent.

Despite regression toward the mean, large early changes still matter according to statistical analysis. Throughout its tenure, the average Booster administration topline growth rate was 3.7 percentage points higher than the other two groups. Meanwhile, the average Cutter administration growth rate was -2.5 percentage points lower than the other groups. The analysis included a relatively limited number of observations, so future research could refine the calculations. Still, the results suggest that even if an administration’s growth rates become less dramatic over time, large early changes exert a significant overall effect on an administration’s average growth rate.

By not proposing large changes in the FY 2022 request, the Biden administration did not seize an opportunity to change the DoD topline significantly during its tenure. The Biden administration may switch later to bigger or smaller real growth rates, as past administrations have done. Based on this analysis, however, that switch may not compensate for the FY 2022 request’s inertia. If the Biden administration determines that DoD does not require major topline adjustments over the next few years, then the lack of change in the FY 2022 request will not matter. But if it instead decides that changes are needed, then it may never recover from FY 2022’s slow start.

33 The analysis selected cutoffs of 5 percent and -5 percent to reflect existing breaks in the data. The growth rates nearest to the 5 percent cutoff were George W. Bush (5.6 percent) and Trump (3 percent). The growth rates nearest to the -5 percent cutoff were Truman (-7 percent) and LBJ (-3.4 percent).

34 The analysis first performed pre-estimation tests of the time series data to assess serial correlation (Breusch-Godfrey test) and stationarity (augmented Dickey-Fuller test). Based on the results, the analysis then fitted ordinary least squares (OLS) models analyzing the effect on real growth rate (dependent variable) of administration type e.g. Booster (independent variable) controlling for three lags of the dependent variable, war (with two lags), and unified government. The analysis also used the same specifications to fit auto regressive integrated moving average models with independent variables (ARMAX). On these methods, see Sean Becketti, *Introduction to Time Series Using Stata*, revised edition (College Station, TX: Stata Press, 2020); and Janet M. Box-Steffensmeier et al., *Time Series Analysis for the Social Sciences* (New York: Cambridge University Press, 2014).

35 For the Booster administration variable, OLS reported robust standard error 1.7, p-value 0.034, 95% confidence interval 0.3 to 7.2, and model R-squared 0.45. ARMAX reported semirobust standard error 2.0, p-value 0.014, and 95% confidence interval 1.0 to 8.9. Durbin’s alternative test and Bartlett’s periodogram-based white noise test indicated no serial correlation in the OLS and ARMAX estimates, respectively.

36 For the Cutter administration variable, OLS reported robust standard error 1.4, p-value 0.067, 95% confidence interval -5.3 to 0.2, and model R-squared 0.43. ARMAX reported semirobust standard error 1.7, p-value 0.003, and 95% confidence interval -8.6 to -1.8. Durbin’s alternative test and Bartlett’s periodogram-based white noise test indicated no serial correlation in the OLS and ARMAX estimates, respectively.

37 Future research could also explore related issues such as potential differences between one-term and two-term administrations.
DoD Topline Forecast

The Biden administration falls squarely in the Maintainer group because it proposed a DoD topline real growth rate of -0.2 percent in its first budget. The Maintainer trend, therefore, provides a suitable basis for forecasting future spending. From years two to five, Maintainer administrations have averaged an annual real growth rate of 0.5 percent. Applying this rate to the FY 2022 request of $715 billion and adjusting to nominal dollars leads to a data-derived forecast for DoD spending (Table 2).

**TABLE 2: CSBA FORECAST OF DOD TOPLINE, FY23 TO FY26**

<table>
<thead>
<tr>
<th></th>
<th>CSBA</th>
<th>OMB</th>
<th>DELTA</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY23</td>
<td>733</td>
<td>731</td>
<td>2</td>
</tr>
<tr>
<td>FY24</td>
<td>751</td>
<td>747</td>
<td>4</td>
</tr>
<tr>
<td>FY25</td>
<td>770</td>
<td>763</td>
<td>7</td>
</tr>
<tr>
<td>FY26</td>
<td>789</td>
<td>780</td>
<td>9</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3,043</td>
<td>3,021</td>
<td>22</td>
</tr>
</tbody>
</table>

*Note: In billions nominal $*

The CSBA forecast resembles the OMB projections described in Chapter 1. From FY 2023 to FY 2026, the two estimates differ by only $22 billion, a pittance in the world of DoD budgets. Regardless of how OMB generated its projections, they track with what the historical data lead us to expect. Unforeseeable events may still push future DoD spending in surprising directions. Yet both OMB’s projections and CSBA’s forecast indicate that more flat budgets may lie ahead for DoD.
The Three-Year Itch: Share Shifts by Administration Year

In 1984, William Domke introduced the “shift index” to measure aggregate changes in topline shares relative to the prior year. The shift index is useful because it expresses in a single statistic how much DoD altered topline shares among military departments and defense-wide activities. The larger the shift index, the more DoD rearranged allocations. From FY 1953 to FY 2020, the average annual shift index equaled 4.2 points, so any outcome exceeding that figure is above average.

To compute the index, one calculates the departments’ percentage shares of the current year topline, subtracts those shares from the prior year shares, and sums the absolute values of the differences. The index is denominated in percentage points, though this section will use “points” for convenience. In equation form, the shift index equals:

\[
\text{Shift Index} = \left| \text{Army}_{t-1} - \text{Army}_t \right| + \left| \text{Navy}_{t-1} - \text{Navy}_t \right| + \left| \text{AF}_{t-1} - \text{AF}_t \right| + \left| \text{DW}_{t-1} - \text{DW}_t \right|
\]

Where \( t-1 \) is the prior year, \( t \) is the current year, AF is Air Force, and DW is Defense-Wide

FIGURE 6: SHARE SHIFT INDEX, FY53 TO FY20

Source: DoD, National Defense Budget Estimates for FY 2021, Table 6-10, pp. 152-159.

Notes: Figures calculated from discretionary and mandatory budget authority, including both base budget funding and war/supplemental funding. FY01 department shares calculated using total obligational authority, not budget authority, because budget authority data series distorted by DoD transferring $9.1 billion (FY92 dollars) from the military service budgets to the defense-wide budget to fund the new Defense Medical Program. DoD, Report of the Secretary of Defense to the President and the Congress (1992), p. 132.

Since FY 1953, share shifts have displayed two patterns (Figure 6). First, dramatic shifts have often occurred while resizing the Army for combat operations or implementing accounting changes. Share shifts have peaked during Army buildups or drawdowns, signifying the Army gaining or losing topline share as overseas combat operations accelerated or decelerated, respectively. Additionally, share shifts have peaked due to accounting changes, such as switching military retirement to an accrual process or introducing the Defense Medical Program. In these instances, DoD moved funds between the military departments and defense-wide spending. One exception to this pattern was the Eisenhower administration. In successive fiscal years, it oversaw large adjustments in the military departments’ topline shares, particularly for the Air Force and Army.

Second, share shifts typically have peaked earlier in administrations, with smaller shifts occurring in later years. Many administrations’ biggest shifts have already happened by their third budget. The rhythms of governance may explain this pattern. Upon entering office, an administration needs one or two years to develop and execute major policy changes, whether related to war or accounting. An administration also tends to be stronger politically early on before midterm elections and lame-duck factors erode its political clout. These procedural and political considerations help explain variation in the timing of share shift peaks. Future research could explore other explanations.

Grouping share shifts by administration year illustrates how bigger shifts have occurred earlier in administrations (Figure 7). Statistical analysis supports this conclusion. The average shift index in year three was 1.5 points higher than in other years. On the opposite end of the spectrum, the average shift index in year five was -2.4 points lower than in other years. No years besides three and five appeared statistically significant. Although the caveat about limited observations still applies, the findings indicate that administrations generally rearrange topline shares by the most in year three and by the least in year five.

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39 As with topline growth, the patterns resulted from international, legislative, planning, and other influences.


41 The analysis followed the same routine and specifications described in the previous footnote except it included fewer lags of the dependent variable in accordance with the pre-estimation tests. The analysis fitted OLS and ARMAX models estimating the effect on shift index (dependent variable) of administration year (independent variable) controlling for two lags of the dependent variable, war (with two lags), and unified government.

42 For the year three variable, OLS reported robust standard error 0.8, p-value 0.073, 95% confidence interval -0.1 to 3.1, and model R-squared 0.37. ARMAX reported semirobust standard error 0.7, p-value 0.033, and 95% confidence interval 0.1 to 2.9. Durbin’s alternative test and Bartlett’s periodogram-based white noise test indicated no serial correlation in the OLS and ARMAX estimates, respectively.

43 For the year five variable, OLS reported robust standard error 1.2, p-value 0.046, 95% confidence interval -4.7 to -0.04, and model R-squared 0.38. ARMAX reported semirobust standard error 0.9, p-value 0.017, and 95% confidence interval -3.7 to -0.4. Durbin’s alternative test and Bartlett’s periodogram-based white noise test indicated no serial correlation in the OLS and ARMAX estimates, respectively.
The FY 2022 DoD budget request features a shift index of 1.9 points, falling below the historical average from FY 1953 to FY 2020. This low index provides another example of the FY 2022 request maintaining the status quo. The Biden administration may decide that the current topline shares strike the right balance and not adjust them in the years ahead. If the administration reaches the opposite conclusion, however, this analysis helps illustrate how much funding the Biden administration might reallocate among military departments and defense-wide activities.

**FIGURE 7: SHARE SHIFT INDEX BY ADMINISTRATION YEAR, FY53 TO FY20**


Notes: Figures calculated from discretionary and mandatory budget authority including both base budget funding and war/supplemental funding. Administration years determined using method described in Figure 5.
Share Shift Scenario

The Maintainer trend again provides a good foundation for divining possible share shifts by the Biden administration. From years two to five, Maintainer administrations have averaged a shift index of 4 points per annum. Multiplying this average by the OMB projections for DoD’s topline leads to a data-derived estimate for potential share shifts from FY 2023 to FY 2026 (Table 3).

<table>
<thead>
<tr>
<th></th>
<th>OMB PROJECTION</th>
<th>AVG SHIFT INDEX</th>
<th>CSBA SHIFT ESTIMATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY23</td>
<td>$731B</td>
<td>0.04</td>
<td>$29B</td>
</tr>
<tr>
<td>FY24</td>
<td>$747B</td>
<td>0.04</td>
<td>$30B</td>
</tr>
<tr>
<td>FY25</td>
<td>$763B</td>
<td>0.04</td>
<td>$31B</td>
</tr>
<tr>
<td>FY26</td>
<td>$780B</td>
<td>0.04</td>
<td>$31B</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$3,021B</td>
<td>–</td>
<td>$121B</td>
</tr>
</tbody>
</table>

Notes: In billions nominal $ and shift index points

If the Biden administration adjusted topline shares according to the Maintainer average, then it would shift $121 billion, or about $30 billion per year, among the military departments and defense-wide activities from FY 2023 to FY 2026. To be clear, these estimates represent potential internal funding rearrangements within the OMB-projected topline. The $121 billion figure thus represents funding that DoD could reallocate from lower priorities to higher priorities — if it proves willing to incur the risks associated with doing so.

Conclusion

This chapter demonstrated that although the FY 2022 DoD budget request already has narrowed the possibilities for large-scale change during the Biden administration, opportunities still exist to adjust defense spending significantly. The various strategy reviews currently being prepared by the White House and DoD will help set the terms of the spending debate. As the next chapter discusses, however, the strategy reviews will face challenges shaping budget outcomes.
CHAPTER 3

Strategy Pileup on I-395

Like many new administrations, the Biden administration started numerous national security strategy reviews upon entering office. According to news reports, social media, and congressional testimony, the White House and DoD have initiated 14 reviews since January 2021 and have completed five through late June (Figure 8). Several major reviews, including the “big two,” the national security strategy and national defense strategy, will not conclude until after the military services submit their FY 2023 budget proposals, known as program objective memoranda (POMs). Not all the reviews relate directly to DoD plans, forces, and spending, but the majority do. Additionally, not all the reviews will necessarily result in standalone assessments. Administration officials have stated that they may combine reviews depending on how the assessments fit together. Still, senior defense strategists in the Biden administration clearly have their work cut out for them.

The current strategy pileup carries two implications for DoD spending. First, Congress will ask tough questions about whether the FY 2022 and FY 2023 budgets reflect the ongoing strategy reviews. Congress will be loath to enact major budgetary changes if the Pentagon cannot demonstrate that the changes align with the reviews. Some of this skepticism no doubt reflects members of Congress seizing on a convenient critique that also happens to align with their parochial preferences. Regardless, the Pentagon has already encountered this type of resistance.44 In June, lawmakers questioned senior DoD leaders about internal Navy guidance to stop funding development of a sea-launched nuclear cruise missile, a decision that some legislators deemed premature since DoD has not completed a nuclear posture review.45 DoD likely will receive similar scrutiny on other issues as the FY 2022 budget winds its way through Capitol Hill.


Second, DoD will face challenges building a FY 2023 budget request that reflects uncompleted strategy reviews. DoD’s continuous budgeting process does not easily absorb periodic strategy adjustments, particularly when the adjustments come from draft reviews that senior DoD leaders have not yet endorsed. The ease of superficially rebranding existing initiatives as strategy-aligned and the difficulty of translating strategy words to budget numbers complicate matters further.

Given these challenges related to process, politics, and analysis, the FY 2023 budget request likely will not fully reflect the strategy reviews. Rather, the FY 2024 request stands a better chance of encapsulating the Biden administration’s strategic vision. The FY 2024 request also will be the administration’s third budget, the time when topline shares typically shift most based on Chapter 2’s analysis. If the Biden administration chooses to adjust U.S. defense spending significantly, FY 2024 may prove to be the year of maximum effect.

**FIGURE 8: WHITE HOUSE AND DOD PLANNING INITIATIVES, 2021-2022**

<table>
<thead>
<tr>
<th>Legend</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>green = completed</td>
<td>Jan</td>
<td>Feb</td>
</tr>
<tr>
<td>red = ongoing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>blue = start</td>
<td></td>
<td></td>
</tr>
<tr>
<td>blue = estimated start</td>
<td></td>
<td></td>
</tr>
<tr>
<td>red = estimated finish</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**White House initiatives**

1. Interim national security strategic guidance
2. 2021 national security strategy
3. Cyber security internal rapid review
4. Joint warfighting concept
5. DoD China task force
6. 100-day strategic and critical materials review
7. 90-day independent review on sexual assault
8. Zero-based advisory committee review
9. 120-day climate risk analysis
10. Global force posture review
11. 2022 national defense strategy
12. Nuclear posture review
13. Integrated deterrence review
14. Missile defense review

**DoD initiatives**

- [Legend](#)
- [FY 2023 POM estimated due date](#)
- [Sources (by planning initiative number):](#)


CHAPTER 4

Conclusion

Slow in submission and steady in substance, the FY 2022 DoD budget request preserves the defense spending trajectory that prevailed under the Trump administration. It proposes a DoD topline virtually indistinguishable from current spending in inflation-adjusted dollars and continues delivering enlarged slices of budgetary pie to both investment and air and naval forces.

The request’s steadiness foreshadows what may lie ahead for DoD. If the Biden administration follows the historical trend for administrations overseeing steady first-year budgets, then the DoD topline would remain flat from FY 2023 to FY 2026 in line with OMB’s May 2021 placeholder projections. Even under a flat topline, however, DoD could rearrange spending internally to fund higher-priority activities. Again, if the Biden administration adhered to the historical trend for administrations overseeing steady first-year budgets, then DoD would internally shift $121 billion, or about $30 billion per year from FY 2023 to FY 2026, among the military departments and defense-wide activities, assuming the OMB topline projections hold.

The Biden administration’s ongoing strategy reviews will assess the risks of maintaining a flat topline and executing internal funding shifts. Given the inherent challenges of process, politics, and analysis, the reviews likely will not imprint themselves on the DoD budget until FY 2024. Until then, policymakers and analysts have no choice but to continue grappling with a fundamental question: What kind of race is the U.S. military running, if it is indeed in a race, and can slow and steady win it?
# LIST OF ACRONYMS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AF</td>
<td>Air Force</td>
</tr>
<tr>
<td>CSBA</td>
<td>Center for Strategic and Budgetary Assessments</td>
</tr>
<tr>
<td>DoD</td>
<td>U.S. Department of Defense</td>
</tr>
<tr>
<td>DW</td>
<td>defense-wide</td>
</tr>
<tr>
<td>FY</td>
<td>fiscal year</td>
</tr>
<tr>
<td>GDP</td>
<td>gross domestic product</td>
</tr>
<tr>
<td>ISIS</td>
<td>Islamic State of Iraq and Syria</td>
</tr>
<tr>
<td>OCO</td>
<td>overseas contingency operations</td>
</tr>
<tr>
<td>OMB</td>
<td>Office of Management and Budget</td>
</tr>
<tr>
<td>RDT&amp;E</td>
<td>research, development, test, and evaluation</td>
</tr>
</tbody>
</table>