

39th Annual Cowen Aerospace/Defense Conference New York, New York

What Defense Strategy Means



- The focus is shifting from irregular, low-intensity conflict to more conventional "Big Power" conflict with China, Russia
- There are some smaller power and regional concerns: North Korea, Iran
- There is a wide-spread consensus that American technological advantage has greatly eroded if not disappeared in some areas
- There is a new focus on new domains of potential conflict:
 - Cyber
 - Space
 - Artificial Intelligence (AI)
 - Biological
- There is a parallel consensus that current processes and procedures have grown too:
 - Cumbersome
 - Risk averse
 - Time consuming

Some Key Areas That Matter



- Re-capitalization of the nuclear triad with focus on:
 - Columbia-class submarine (Ohio replacement)
 - Upgrade of the nuclear command and control system
- A larger Naval fleet to execute an Indo-Pacific strategy
- An Air Force with range and payload for Indo-Pacific
- A more modern Army to deal with more lethal conventional and nonconventional threats
- Aggressive development and accelerated investments in:
 - Autonomous systems
 - Artificial Intelligence
 - Missile defense and space protection
 - Hypersonics
 - Advanced computing

Army may be a Leading Indicator



- Established a new Futures and Modernization Command (FMC):
 - Combining more closely requirements and acquisition
 - Establishing Cross Functional Teams (CFT)
- Army modernization priorities (the "Big Six"):
 - Long-range precision fires
 - A next-generation combat vehicle
 - New helicopters and vertical lift
 - A robust communications network
 - Enhanced missile defenses
 - Enhanced soldier systems and soldier lethality
- The Army is moving at least \$1 billion into S&T, 2019-2022
- Army may be decreasing the value of force structure (capacity) in favor of modernization (capability)

Some Major Take-Aways



- The focus has returned to big power conventional competition:
 China and Russia
- Organizational and procedural changes are in the wind:
 - USD (R&E)
 - Emphasis on prototyping
 - Emphasis on S&T (a former SecDef William Perry priority)
 - Seeking to assume more risk
 - Prepare requirements with:
 - Less restrictive detail
 - Better informed by the state of technology
 - With a focus on future upgrades
 - With a recognition of sustainability
 - With consideration of exportability
- But budget issues and headwinds remain

Defense Spending Under the New Administration



Positive Indicators

- Normally, new administrations make minimal changes to the last budget of the prior administration.
 However, the Trump administration was able to increase the FY17 defense base by \$15B and OCO spending by \$11B over the Obama approved levels, a significant indication of political intent
- The Trump administration's first budget, the FY18 request, asked for \$574B for the defense base budget reflecting an increase of \$54B above defense sequester caps and \$24B over the FY18 level proposed in the Obama FY17 FYDP. Congress has passed the NDAA with a level of \$605B for the base defense budget
- News reports indicate that a two year bipartisan budget deal setting spending caps for defense and non defense has been reached and will be put to vote on 8 February 2018 and is expected to pass. The agreement increases Defense spending caps under the BCA/Sequester by \$80B and \$85B for FY18 and FY19 respectively, and increases non defense spending caps under the BCA/Sequester by \$63B and \$68B for FY18 and FY19 a two year increase of \$296B
- The total spending level for defense in FY19 of \$716B matches the level described as needed by Secretary
 of defense Mattis, but is "no growth" in real dollars over FY18 levels

Challenges/Headwinds

- Finalizing the details: The BBA only approves funding caps and appropriators will need to resolve differences between house and senate spending bills before spending at the program, project, and activity level can occur
- Recent tax cut legislation combined with the BBA increases in discretionary spending could drastically raise concerns about the impact of deficit spending and the national debt that could force downward pressures on discretionary spending in FY20 and beyond
- A two year agreement should improve DoD's ability to plan, program, budget, and execute resources with a more stable funding environment for FY18 and FY19
- It is clear that the administration will continue to request and support increases to defense spending regardless of headwinds and other political issues

Breakout of the FY18 BBA



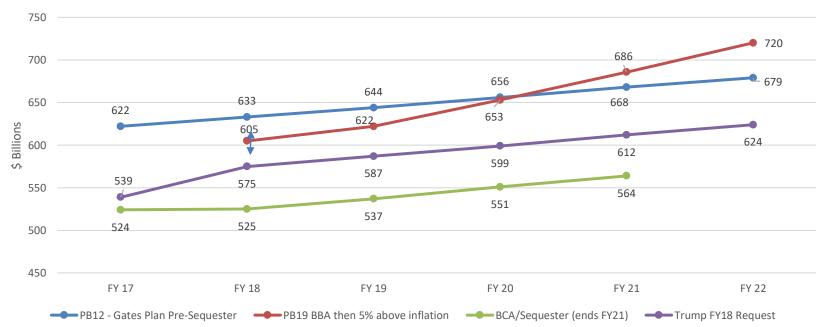
Defense Spending Under BBA (\$B)	FY17	FY18	FY18 % Chg	FY19	FY19 % Chg
Base DoD (051) Spending Caps	524	525		537	2.3%
BBA Add-back*	15	80		85	
New Base DoD (051) Spending Caps	539	605	12.2%	622	2.8%
Defense OCO/Emergency Spending	68	71		69	
Total DoD (051) Spending	607	676	11.4%	691	2.2%
* FY17 increase based on FY17 Amendment					
Non Defense Spending Under BBA (\$B)	FY17	FY18	FY18 % Chg	FY19	FY19 % Chg
Non Defense Caps	519	579		597	3.1%
BBA Add-back*		63		68	
New Non Defense Caps	519	579	11.6%	597	3.1%
OCO/Emergency Spending	21	12		8	
Total Non Defense Spending	539	591	9.6%	605	2.4%

- The BBA increases DoD base budget spending in FY18 by 12.2% above FY17, an increase of 11.4% when including OCO funding. FY19 defense base budget spending increases by 2.8% in nominal terms, but depending on inflation assumptions represents flat growth in real terms. Sequester caps are increased by 15% in both years over current levels
- The BBA increases non defense spending in FY18 by 11.6% above FY17, an increase of 9.6% when including OCO funding. FY19 non defense spending increases by 3.1% in nominal terms which is flat to slightly positive in real terms. Sequester caps are increased by 11% in both years over current levels

Potential Defense Future Year Funding





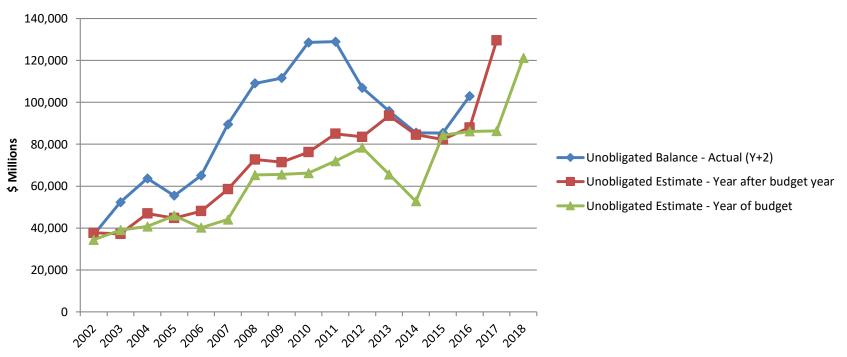


- The primary question now that the BBA appears to be an the track to become law is what will happen to funding in FY20 and beyond. Secretary of Defense Mattis has requested that the defense base budgets be increased in future years by 5% real growth. Should FY20 levels be increased at a 5% real growth rate, the DoD base budget will be close to levels believed to be necessary in the original pre-sequester defense spending plan
- Sequester caps remain in effect for FY20 and FY21 and would require additional legislation to increase those caps. The results of the mid term elections may play a key role in future outcomes
- Wildcard OCO levels could be modified to increase funding over levels set by caps

Trends in Obligations



DoD Unobligated Balances Over Time, as Adjusted

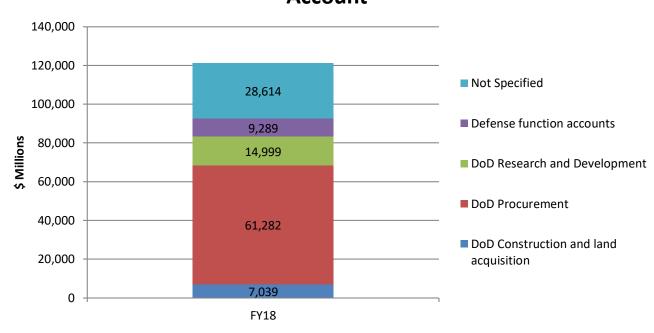


- FY18's budget request shows a projected increase in unobligated balances and adjusted FY16 and FY17 levels higher
- We generally see increases in unobligated balances during upturns in the budget cycle and decreases in unobligated balances during downturns. In the majority of years the budget estimate is lower than the revised levels in later years

Profile of Unobligated Balances



DoD Unobligated Balance Estimates in FY18 PB by Account

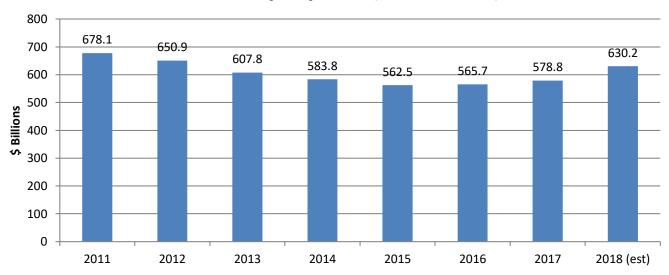


- DoD procurement is the largest account with unobligated balances. This is due to the multi-year purchase cycle for major items of equipment. R&D is historically the second largest account, also due to longer lead times for system design and development
- The FY18 budget has a large amount of unobligated balances not attributed to a specific account. This is an anomaly since prior year data generally matched overall projections

Defense Outlay Trends



DoD Outlays by Year (Base + OCO)



- The Treasury reports monthly outlays by agency, providing an insight into past spending patterns and estimates for the current fiscal year. Their data includes all spending – base + OCO, mandatory + discretionary
- The overall trend is consistent with trends seen in overall budget authority, and the data confirm our prior estimate that outlays would grow in FY16, increase again in FY17, and the FY18 estimate shows significant growth of 8.9%, up \$51.4B. The projected increase for FY18 mirrors the requested increase in budget authority. Since outlay increases tend to lag budget authority, we would expect the estimate for FY18 to be revised downward as the year progresses, but if a higher level of budget authority is appropriated the FY18 estimate could be realized

11

Defense Outlay Observations



- The Treasury outlay data provide trends in month to month and year to year execution of spending given appropriated levels in legislation
- Decreases in outlay expenditures from 2011 to 2015 have amounted to an accumulated -17%, primarily due to the decreases in OCO funding and troop withdrawals from overseas conflicts
- FY16 represented the first year that showed an increase in outlays over the prior year. While the increase was less than ½ of 1 percent, the stable funding levels under the last two bipartisan budget agreements helped stop the annual funding declines in prior years
- FY17 outlay levels continued to show an increase over the prior year. Outlays increased, in total, \$13.1B or 2.3% over FY16 levels.
- FY18 estimates show a prospective increase of \$51.4B or 8.9%. This
 increase is dependent on the status of appropriations for the fiscal year.
 Currently spending is only authorized at current services levels under a CR,
 so if this continues then outlay levels would remain flat. The longer a delay
 occurs in legislating final budget levels, the smaller the percentage increase
 will occur in the current year

Bottom Line



- The final outcome for DoD's base budget funding in the BBA for FY18 have ended up being on the higher estimate side at the top line level set in the NDAA of \$605B
 - The DoD base budget level will be \$80B above the BCA/sequester caps, with an increase of \$63B in non defense discretionary spending over the spending caps
 - A CR will still be necessary to allow time for appropriators to resolve differences at the program, project, and activity level which will further delay DoD's ability to commence spending at the higher levels
- FY19's submittal will start at a requested level at or near \$622B for DoD's base budget, \$85B higher than the BCA/sequester cap for DoD in FY19.
 Depending on when FY18 is finalized, some adjustments to FY19 will have to be made after the fact if the administration submits the budget on February 12 as reported