Navy Shipbuilding Industrial Base

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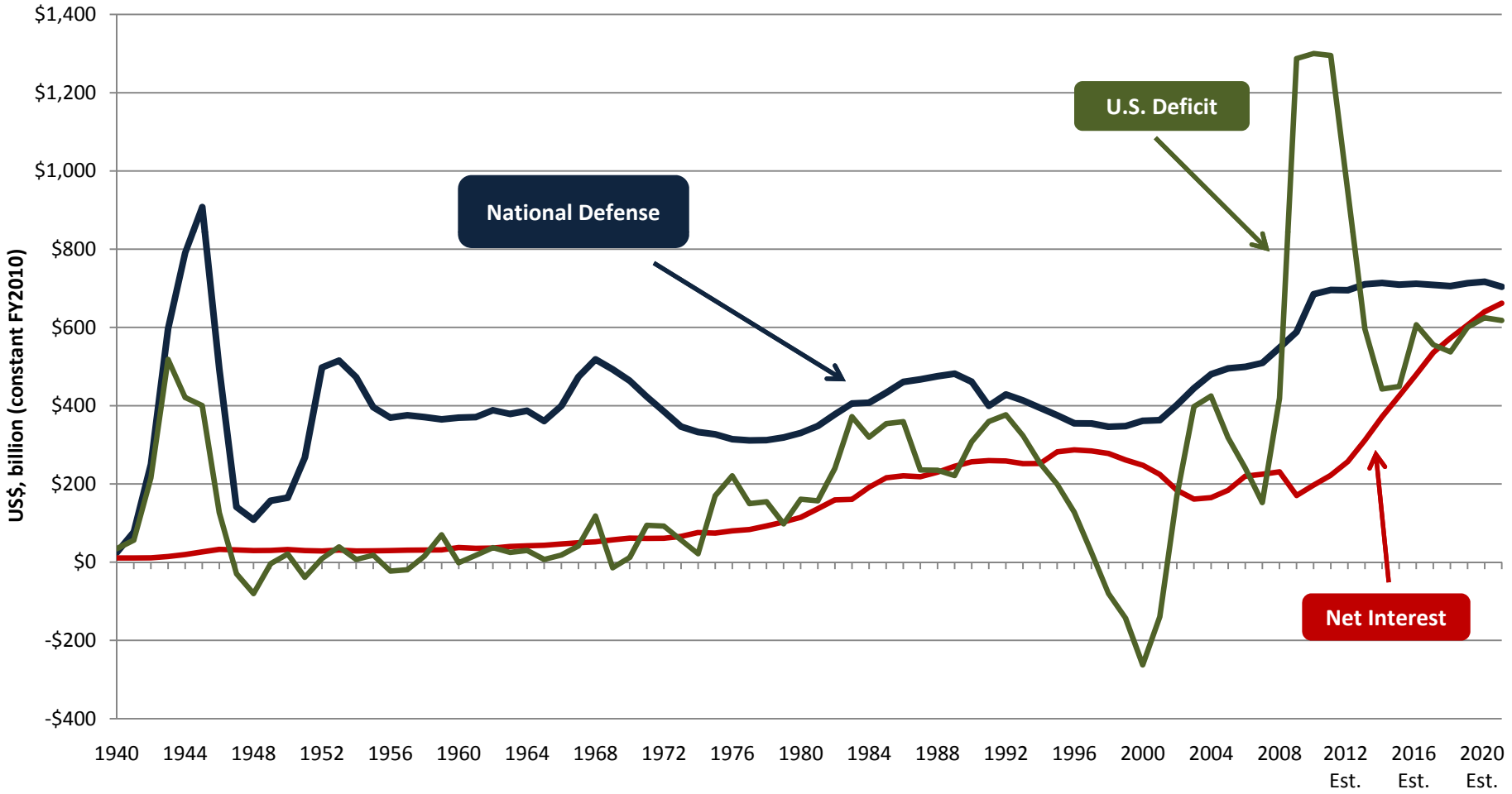
Navy Shipbuilding Industrial Base

- Key questions remain unanswered
  - How many ships are needed, and what types?
  - For what missions? To which purposes?
- 313 ship Navy goal in 2010 QDR
- "Low 320s" goal in Navy testimony on FY 2012 budget
- For industrial base assessment, the required number of Navy ships required and their capabilities is imprecise and evolving

Defense Spending and Deficit Trends



Source: Congressional Budget Office; Office of Management and Budget actual and projected; analysis by CSIS Defense-Industrial Initiatives Group

Navy Shipbuilding Industrial Base

- What makes up the Navy Shipbuilding Industrial Base?
    - Ship construction yards, both large and mid-tier
    - Construction workforce at shipyards
    - Design and engineering workforce
    - Supplier base
    - Combat systems
- For today, focus first on ship construction yards

Navy Shipbuilding Industrial Base – Core Shipyards

- Electric Boat (EB)
- Bath Iron Works (BIW)
- National Steel and Shipbuilding Company (NASSCO)
- Newport News
- Ingalls Shipbuilding – Pascagoula, Pascagoula facility
- Ingalls Shipbuilding – Pascagoula, Avondale facility
- Mid-tier (LCS) yards
    - Marinette Marine (Wisconsin)
    - Austal (Alabama)

Defense Companies on the Fortune 100 List

1988			
Rank	Company	Revenue ($ millions)	Profits ($ millions)
26	McDonnell Douglas	$13,146.0	$313.0
30	Lockheed Corporation	11,370.0	421.0
39	General Dynamics	9,344.0	437.0
53	Raytheon	7,659.0	445.0
69	Northrop Corporation	6,053.0	94.0
79	Martin Marietta	5,165.0	231.0
96	Litton Industries	4,420.0	138.0
Total		$57,157.0	$2,079.0
% of Fortune 100		4.4%	3.2%
# of Companies = 7			

2008			
Rank	Company	Revenue ($ millions)	Profits ($ millions)
57	Lockheed Martin	$41,862.0	$3,033.0
76	Northrop Grumman	32,032.0	1,790.0
87	General Dynamics	27,294.0	2,072.0
Total		*$101,188.0*	*$6,895.0*
% of Fortune 100		1.5%	1.9%
# of Companies = 3			

Source: Fortune Magazine, "Fortune 500"; analysis by CSIS Defense-Industrial Initiatives Group

Navy Shipbuilding Industrial Base – Challenges

- Number one challenge is affordability – how can we have a shipbuilding industrial base that can produce the ships we need for the funding we are likely to get
- Parallel challenge is how to use competition to sustain the industrial base and prevent allocation of contracts without regard to cost
- Industry no longer competitive on global market
- Workforce (construction and design/engineering) hard to sustain
- Supplier base too often one-deep, with little overall knowledge industry-wide
- All of these challenges will get worse as budgets decline and defense industry becomes a smaller part of the US economy

Navy Shipbuilding Industrial Base – Threats to Affordability

- Chronic underutilization of capacity – production rates are too low to use the full capacity of the major shipyards
- Overhead costs increase faster than inflation
- Sub-optimum use of cost-engineering tradeoffs
- Stakeholder objectives not aligned

Navy Shipbuilding Industrial Base – Three Broad Categories

- Nuclear shipyards – EB and NNS
- Large Surface Combatants – BIW, Ingalls
- Large Amphibious and Auxiliary Ships – Ingalls, NASSCO
- Issues differ for each category, solutions also need to differ

Navy Shipbuilding Industrial Base – Status and Future Prospects

- Nuclear shipyards – existing programs (carriers, Virginia-class submarines) combine with ORP for sufficient demand to use base capacity
- Large Surface Combatants – projected construction rates below capacity, below historical rates, creating serious potential underutilization (with LCS complication)
- Large Amphibious and Auxiliary Ships – similar low rate problem to Large Surface Combatants

Navy Shipbuilding Industrial Base - Aligning Requirements, Resources, and Programs

- Affordability means making cost-engineering tradeoffs and incorporating the results into requirements, programs, and funding
- Three simple challenges
    - Get the fleet to agree to changes in specs and requirements
    - Get the Navy to agree to lower spending in some accounts
    - Get the companies to give up revenue

Navy Shipbuilding Industrial Base – Competition or Allocation

- **Allocation Option**
  - **Align 5 broad categories with 5 major shipyards**
- **Competition Options**
  - **Beyond competitive dual sourcing**

Navy Shipbuilding Industrial Base – Conclusions

- Uncertain requirements, future missions
- Size of fleet will vary over time
- Shipbuilding industrial base has excess capacity UNLESS affordability can be achieved AND requirements-cost tradeoffs can be incorporated
- Acquisition options: allocation or competition