



## **CRS Report for Congress**

### **Costs of Major U.S. Wars**

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#### **Summary**

This CRS report provides estimates of the costs of major U.S. wars from the American Revolution through current conflicts in Iraq, Afghanistan, and elsewhere. It gives figures both in “current year dollars,” that is, in prices in effect at the time of each war, and in inflation-adjusted “constant dollars” updated to the most recently available estimates of FY2008 prices. All estimates are of the costs of military operations only and do not include costs of veterans benefits, interest paid for borrowing money to finance wars, or assistance to allies. The report also provides estimates of the cost of each war as a share of Gross Domestic Product (GDP) during the peak year of each conflict and of overall defense spending as a share of GDP at the peak. This report will be updated periodically to reflect additional appropriations for ongoing conflicts and to adjust constant dollar figures to prices of the current fiscal year.

Since the terrorist attacks of September 11, 2001, Congress has appropriated more than \$800 billion for military operations in Afghanistan, Iraq, and elsewhere around the world, including \$65 billion to cover costs for the first few months of FY2009. Almost as soon as the next Administration takes office, the military services are expected to submit requests for additional funds — quite possibly \$100 billion or more — to cover costs of overseas operations and of repairing and replacing worn equipment through the remainder of the fiscal year. In the face of these rather substantial and growing amounts, a recurring question has been how the mounting costs of the nation’s current wars compare to the costs of earlier conflicts.

The following table provides estimates of costs of major wars from the American Revolution through Korea, Vietnam, the Persian Gulf war of 1990-1991, and current conflicts. It also provides estimates of war costs as a share of the economy. Comparisons of costs of wars over a 230 year period, however, are inherently problematic. One problem is how to separate costs of military operations from costs of forces in peacetime. In recent years, the Defense Department has tried to identify the additional “incremental” expenses of engaging in military operations, over and above the costs of maintaining standing military forces. Before the Vietnam conflict, however, the Defense Department and others did not view war costs in such terms.

## Military Costs of Major U.S. Wars

(Updated to Include Appropriations Enacted Through June 30, 2008)

	Years of War Spending	Peak Year of War Spending	
	Total Military Cost of War in Millions/Billions of Dollars	War Cost % GDP in Peak Year of War	Total Defense % GDP in Peak Year of War
<b>American Revolution</b>	<b>1775-1783</b>		
Current Year \$	101 million	NA	NA
Constant FY2008\$	1,825 million		
<b>War of 1812</b>	<b>1812-1815</b>		<b>1813</b>
Current Year \$	90 million	2.2%	2.7%
Constant FY2008\$	1,177 million		
<b>Mexican War</b>	<b>1846-1849</b>		<b>1847</b>
Current Year \$	71 million	1.4%	1.9%
Constant FY2008\$	1,801 million		
<b>Civil War: Union</b>	<b>1861-1865</b>		<b>1865</b>
Current Year \$	3,183 million	11.3%	11.7%
Constant FY2008\$	45,199 million		
<b>Civil War: Confederacy</b>	<b>1861-1865</b>		
Current Year \$	1,000 million	NA	NA
Constant FY2008\$	15,244 million		
<b>Spanish American War</b>	<b>1898-1899</b>		<b>1899</b>
Current Year \$	283 million	1.1%	1.5%
Constant FY2008\$	6,848 million		
<b>World War I</b>	<b>1917-1921</b>		<b>1919</b>
Current Year \$	20 billion	13.6%	14.1%
Constant FY2008\$	253 billion		
<b>World War II</b>	<b>1941-1945</b>		<b>1945</b>
Current Year \$	296 billion	35.8%	37.5%
Constant FY2008\$	4,114 billion		
<b>Korea</b>	<b>1950-1953</b>		<b>1952</b>
Current Year \$	30 billion	4.2%	13.2%
Constant FY2008\$	320 billion		
<b>Vietnam</b>	<b>1965-1975</b>		<b>1968</b>
Current Year \$	111 billion	2.3%	9.5%
Constant FY2008\$	686 billion		
<b>Persian Gulf War /a/</b>	<b>1990-1991</b>		<b>1991</b>
Current Year \$	61 billion	0.3%	4.6%
Constant FY2008\$	96 billion		
<b>Iraq /b/</b>	<b>2003-Present</b>		<b>2008</b>
Current Year \$	616 billion	1.0%	4.2%
Constant FY2008\$	648 billion		
<b>Afghanistan/GWOT /b,c/</b>	<b>2001-Present</b>		<b>2007</b>
Current Year \$	159 billion	0.3%	4.0%
Constant FY2008\$	171 billion		
<b>Post-9/11 Domestic Security (Operation Noble Eagle) /b/</b>	<b>2001-Present</b>		<b>2003</b>
Current Year \$	28 billion	0.1%	3.7%
Constant FY2008\$	33 billion		
<b>Total Post-9/11 — Iraq, Afghanistan/GWOT, ONE /d/</b>	<b>2001-Present</b>		<b>2008</b>
Current Year \$	809 billion	1.2%	4.2%
Constant FY2008\$	859 billion		

**Sources:** All estimates are of the costs of military operations only and do not reflect costs of veterans benefits, interest on war-related debt, or assistance to allies. Except for costs of the American Revolution and the Civil War costs of the Confederacy, all estimates are based on U.S. government budget data. Current year dollar estimates of the costs of the War of 1812 through World War II represent the increase in Army and Navy outlays during the period of each war compared to average military spending in the previous three years. For the Civil War costs of the Confederacy, the estimate is from the *Statistical Abstract of the United States*, 1994. For the American Revolution, the estimate is from an unofficial financial history of the United States published in 1895. For the Korean War, the estimate represents increased expenditures of the Department of Defense during the period of the conflict compared to the projected trend from the average of three years before the war to three years after. For the Vietnam War and the Persian Gulf War, figures are Department of Defense estimates of the incremental costs of operations, meaning the costs of war-related activities over and above the regular, non-wartime costs of defense. For operations since September 11, 2001, figures reflect CRS estimates of amounts appropriated to cover war-related costs. The current year dollar estimates are converted to constant prices using estimates of changes in the consumer price index for years prior to 1940 and using Office of Management and Budget and Department of Defense estimates of defense inflation for years thereafter. The CPI estimates used here are from a data base maintained at Oregon State University. The data base periodically updates figures for new official CPI estimates of the U.S. Department of Commerce.

### Notes

- a. Most Persian Gulf War costs were offset by allied contributions or were absorbed by DOD. Net costs to U.S. taxpayers totaled \$4.7 billion in current year dollars. Source: Department of Defense Annual Report to Congress for Fiscal Year 1994, January, 1993.
- b. Totals for post-9/11 operations include all funds appropriated through the enactment of FY2008 supplemental appropriations and FY2009 “bridge fund” appropriations in P.L. 110-252, which the President signed into law on June 30, 2008. Totals are for military operations only and do not include costs of reconstruction assistance, diplomatic security, and other activities by other agencies. Figures for post-9/11 costs are for budget authority — all other figures are for outlays.
- c. Reflects funding for “Operation Enduring Freedom,” the bulk of which is for operations in Afghanistan but which also includes amounts for operations in the Philippines, the Horn of Africa, and other areas.
- d. Based on data available from DOD, CRS is not able to allocate \$5.5 billion (in current year dollars) in FY2003 by mission. That amount is included here in the total for all post-9/11 operations.

Figures are problematic, as well, because of difficulties in comparing prices from one vastly different era to another. Inflation is one issue. Perhaps a more significant problem is that wars appear more expensive over time as the sophistication and cost of technology advances, both for wars and for civilian activities. Adjusted for inflation, the War of 1812 cost about \$1.3 billion in today’s prices, which appears by contemporary standards to be a relatively small amount. But using commonly available estimates of gross domestic product, the overall U.S. economy 195 years ago was less than 1/1400th as large as it is today. The data in the attached table, therefore, should be treated, not as truly comparable figures on a continuum, but as snapshots of periods of U.S. history viewed through very different lenses over time.

## Varying Definitions of War Costs

For the Vietnam War and the 1990-1991 Persian Gulf War, the figures reported here are Department of Defense estimates of the “incremental” costs of military operations — i.e., the costs of war-related activities over and above the normal, day-to-day costs of recruiting, paying, training, and equipping standing military forces. Estimates of the costs of post-9/11 operations in Afghanistan, Iraq, and elsewhere are by Amy Belasco of CRS, based on (1) amounts appropriated by Congress in budget accounts designated to cover war-related expenses and (2) allocations of funds in reports on obligations of appropriated

amounts by the Department of Defense.<sup>1</sup> These figures appear to reflect a broader definition of war-related expenses than earlier DOD estimates of incremental costs of the Vietnam and Persian Gulf conflicts.

In years prior to the Vietnam War, neither the Defense Department nor any other agency or organization attempted to calculate incremental costs of war-related operations as opposed to normal peace-time activities. In the absence of official accounts of war expenditures, CRS estimated the costs of most earlier wars — except for the American Revolution, the Confederate side of the Civil War, and the Korean conflict — by comparing war-time expenditures of the Army and the Navy with average outlays for the three years prior to each war. The premise is the cost of wars reflects, in each case, a temporary buildup of forces from the pre-war level.

During the Korean War, however, the United States engaged in a large buildup of forces not just for the war, but elsewhere in the world as well. For the Korean conflict, therefore, CRS compared outlays for the Department of Defense during the war with a trend line from average expenditures of the three years before the war to average expenditures of the three years after the war.

Data on the costs of most conflicts from the War of 1812 through the Korean war are based on official estimates of the budgets of the Army, Navy, and, for Korea, the Air Force. No such official figures are available, however, for the Revolution or for the confederate states during the Civil War. Estimates of the costs of the American Revolution are from a financial history of the United States cited in a thorough Legislative Reference Service memo prepared in 1956.<sup>2</sup> Estimates of the Civil War costs of the confederacy are from the *Statistical Abstract of the United States* 1994 edition.

## Sources of Data on Military Expenditures and GDP

Data on Army and Navy outlays prior to 1940 are from the Department of Commerce, *Historical Statistics of the United States from Colonial Times to 1970, Part 2*, 1975. GDP estimates prior to 1940 are from Louis D. Johnston and Samuel H. Williamson, “The Annual Real and Nominal GDP for these United States, 1790 - Present.” Economic History Services, October 2005, at [<http://www.eh.net/hmit/gdp/>]. Outlays and GDP figures from FY1940 on are from the Office of Management and Budget.<sup>3</sup>

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<sup>1</sup> For a full discussion see CRS Report RL33110, *The Cost of Iraq, Afghanistan, and Other Global War on Terror Operations Since 9/11*, by Amy Belasco, updated regularly.

<sup>2</sup> Raymond E. Manning, Senior Specialist in Taxation and Fiscal Policy, Legislative Reference Service, “Cost of U.S. Wars,” October 1956, 34pp. The Legislative Reference Service was renamed as the Congressional Research Service in 1970.

<sup>3</sup> Office of Management and Budget, *Historical Tables: Budget of the United States Government Fiscal Year 2009*, February 2008, Table 3.1 and Table 10.1.

## Sources of Data on Inflation Adjustments

For each conflict, CRS converted cost estimates in current year prices into constant FY2008 prices using readily available inflation indices. For years since 1948, CRS used an index of inflation in defense outlays from the Department of Defense. For years from 1940-1947, CRS used an index of inflation in defense outlays from the Office of Management and Budget.<sup>4</sup> For years prior to 1940, CRS used an index based on the Consumer Price Index (CPI) that the U.S. Department of Labor, Bureau of Labor Statistics (BLS) maintains and updates quarterly. That index extends back to 1913. For earlier years, CRS used an extension of the CPI by academic researchers which is maintained at Oregon State University.<sup>5</sup> That index also uses the official BLS CPI from 1913 forward and periodically updates both earlier and later figures to reflect new, official CPI estimates.

Inflation adjustments extending over a period of more than 200 years are problematic in many ways. The estimates used here are from reliable academic sources, but other experts might use different indices of prices or might weight sources differently and come up with quite different results. In addition, over long periods, the relative costs of goods within the economy change dramatically. It is difficult to know what it really means to compare costs of the American Revolution to costs of military operations in Iraq when, 230 years ago, the most sophisticated weaponry was a 36-gun frigate that is hardly comparable to a modern \$3.5 billion destroyer. Comparisons of costs in inflation adjusted prices, therefore, should not be taken as anything more than a very rough exercise. Finally, the inflation indices used here are more specialized for more recent periods. Figures since 1940 are adjusted using factors specific to defense expenditures, but no such index is available for earlier years.

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<sup>4</sup> U.S. Department of Defense, Under Secretary of Defense (Comptroller), *National Defense Budget Estimates for FY2009*, March 2008, Table 5-8, “DOD Outlay Deflators by Title” for figures from FY1970 on and Table 6-11 “Outlays by Appropriations Title — FY1948-FY2013” for calculated figures from FY1948 on (DOD provided copies of both tables to CRS in advance of publication). Office of Management and Budget, *Historical Tables: Budget of the United States Government Fiscal Year 2009*, February 2008, Table 10.1 “Gross Domestic Product and Deflators Used in the Historical Tables: 1940-2010.”

<sup>5</sup> Robert Sahr, Oregon State University, “Inflation Conversion Factors for Dollars 1665 to Estimated 2017,” available on line at [<http://oregonstate.edu/cla/polisci/faculty/sahr/sahr.htm>]. The data prior to 1913 are based on research reported in John J. McCusker, “How Much Is That in Real Money?,” *Proceedings of the American Antiquarian Society* (2001). A number of alternative indices are provided at [<http://measuringworth.com/calculators/uscompare/>], and at [<http://eh.net/hmit/>].