Abstract

The precise effects of changes in government spending on key macroeconomic aggregates remain unknown. Existing research posits a variety of outcomes depending on model specification. This paper uses the narrative approach to identify the effects of exogenous, unanticipated increases in government spending on output, consumption, employment, and interest rates. We record announcements of changes in military, national security, and counter-terrorism spending in the form of a defense and civil defense news variable. This variable captures exogenous variation in defense and civil defense spending since September 11, 2001. This time period provides a natural experiment setting in which frequent and meaningful changes in defense and civil defense spending occurred independently of global and national business cycles. We implement a unique and extensive data gathering process to combine data from six nations. Using a panel vector autoregression model and Bayesian estimation methods, we show that this variable correctly identifies unanticipated changes in total government expenditures. We propose a new set of stylized facts describing the effects of exogenous changes in government purchases. These facts support the predictions of the neoclassical model and describe a value of the fiscal multiplier that is nonpositive and close to zero.

JEL Classification: E62, F52, H56
Keywords: Fiscal Policy, Government Expenditure, National Defense, National Security
1 Introduction

The confusion surrounding the specific effects of changes in government spending on consumption, wages, output, and interest rates is costly for researchers and policymakers. As economies move along the path of the business cycle, fiscal spending is a critical tool for central banks and governments to smooth disturbances and sustain economic progress. But uncertainty surrounding the correct scale and timing of proposed stimulus packages can limit their welfare effects. Government stimulus packages enacted worldwide in response to the global financial crisis of the late 2000s were designed to mitigate recessions and widespread job losses that affected many countries. In the United States, the American Reinvestment and Recovery Act (ARRA) earmarked $840 billion to be spent over a 10-year period lowering taxes, increasing unemployment benefits, and funding construction and infrastructure projects (Congressional Budget Office, 2015). Australia, Canada, Italy, France, and the United Kingdom each used combinations of infrastructure spending, tax relief, and labor market interventions to jump-start their economies during the post-crisis years (IILS, 2011).

With the multitude of policy actions taken during this period – from changes in interest rates to troubled asset relief – it is very difficult to quantify the orthogonal effects of these stimulus packages. Ideally, economic models studying the effects of fiscal spending should isolate variation that is independent of business cycle dynamics. However, exogenous changes in government spending are difficult to extract given the coarse nature of macroeconomic aggregates and the large number of potential explanatory variables. Any attempt to include all or most of the hundreds of macroeconomic indicators in a regression or vector autoregression (VAR) model would likely lead to overparameterization and overfitting.

In the absence of controlled experiments, macroeconomists can use creative research design to reduce endogeneity in empirical analyses. One such method, the narrative approach, is a non-statistical technique that identifies exogenous variation in time series data by reviewing the historical record. By creating variables derived from media reports, policy records, and official data sources describing non-business-cycle-driven changes, economists can test how macroeconomic variables of interest respond in the months and quarters following shocks. This procedure stands in contrast to the identification approaches of structural VAR models that do not filter time series data for exogenous variation prior to analysis. Such models that apply shocks to total government spending find contrast-
ing effects on consumption and wages relative to studies identifying government spending shocks using via military buildups. This dichotomy has implications for governments and policymakers, and for economists whose theoretical models are evaluated in comparison with economic data.

In the analysis that follows we utilize the narrative approach to develop an exogenous measure of government spending changes in a panel of mature, developed nations. From articles appearing in national newspapers, we extract the dates, amounts, and spending horizons of changes in military and civil defense expenditures related to military buildups, acts of terrorism at home and abroad, and other geopolitical events over the period since the September 11, 2001, attacks in the United States. We have identified this period as one in which frequent and meaningful changes in defense and civil defense spending levels were motivated by factors independent of the global business cycle. This period affords us a unique experimental setting where we can more clearly assess causality between macroeconomic variables. We record these spending amounts in the form of a “defense and civil defense news” variable and show that shocks to defense and civil defense spending correctly identify changes in total government spending. We use this variable in a panel VAR model with output, interest rates, consumption, unemployment, and wages in 6 advanced economies to develop a new set of stylized facts describing the effects of exogenous changes in government spending.

By gathering data from multiple nations, we are able to increase the dimensions of our dataset in spite of a sample period that is short relative to empirical studies reviewing several decades of data. As discussed in Canova and Ciccarelli (2009, 2013), panel, or multicountry, VARs combine time series data from a collection of nations, markets, or sectors. Panel VARs have previously been used to examine business cycle dynamics in groups of nations (e.g., Canova and Ciccarelli (2012)), to study the spillover effects of government spending shocks across borders (Beetsma and Giuliodori (2011)), and to investigate the transmission of financial shocks between countries in an optimum currency area (Ciccarelli, Maddaloni, and Peydró (2013)). Our multicountry VAR model provides estimates of the representative effects of unanticipated changes to government spending in an advanced economy. The model generates these estimates while also accounting for factors specific to each country that could influence these representative estimates.

The structure of our panel, which has a short cross-section and a moderate time series length, precludes us from using certain classical methods that rely on larger dimensions to sustain the asymptotics required for efficient and unbiased inference. For this reason,
and because of the benefits provided by shrinkage in a model with over 200 unknown parameters, we estimate our model using Bayesian methods. The shrinkage provided by our prior distribution enables us to more easily manage the large number of parameters in our model and reduce much of the uncertainty in the responses of our dependent variables. In conjunction with our uniquely constructed defense and civil defense news variable, these tools sharpen the conclusions we make regarding the effects of unanticipated changes in government spending.

Similar to Ramey (2011), our estimates of the effects of unanticipated increases in government spending on consumption, unemployment, and the real wage support the results of the neoclassical model. The neoclassical model predicts that households reduce consumption and supply more labor in response to increases in government expenditures financed by lump-sum taxes. In the short term, this reduces the equilibrium real wage and increases the marginal product of capital. Interest rates rise, fueling an increase in investment; capital accumulates and the real wage returns to its steady state level. The results of our panel VAR model show that consumption and unemployment each fall in response to an unanticipated increase in government spending. Our results stand in contrast to New Keynesian and habit formation models predicting increases in consumption and the real wage following shocks to government purchases. We provide new evidence explaining the macroeconomic responses in advanced economies to defense and civil defense spending events that have become increasingly common over the last 15 years.

We proceed as follows. Section 2 reviews the relevant pieces of the existing literature. Section 3 describes our Ramey (2011)-inspired instrument for exogenous defense spending and the data collection process that generated it. Section 4 describes the rest of our data, the model we estimate, and the Bayesian estimation procedure. Section 5 presents our results and Section 6 provides concluding remarks.

2 A Review of Precedent Literature

The Theoretical and Empirical Effects of Government Spending

According to neoclassical theory, an increase in government spending financed by lump sum taxes triggers a negative wealth effect that lowers consumption and precipitates an increase in agents’ labor supplied. This lowers the equilibrium real wage and increases the marginal product of capital. The real interest rate rises, capital accumulates, and
the marginal product of capital falls, with the real wage declining to its original level. Hall (1980), Barro (1981), Aiyagari, Christiano, and Eichenbaum (1992), and Baxter and King (1993) each examine the effects of changes in government spending in a neoclassical framework. Hall (1980) and Barro (1981) find that hours worked and output are expected to increase under either temporary or permanent increases in government spending. Aiyagari, Christiano, and Eichenbaum (1992) and Baxter and King (1993) find that the response of output is greater when the government spending increase is permanent. In contrast, Blanchard and Perotti (2002) use a structural VAR model and U.S. data to show that increasing government spending leads to increases in output and consumption. Perotti (2007) utilizes a structural VAR approach with long-run annual data and finds evidence that the response of consumption to government spending shocks can be positive. Galí, López-Salido, and Vallés (2007) use a similar approach and also conclude that consumption and the real wage increase following shocks to government spending. They propose a New Keynesian model with sticky prices and rule-of-thumb consumers to justify these results.

Exploiting military buildups as sources of exogenous variation in government spending is used throughout the literature to address the endogeneity concerns inherent in traditional VAR analyses. In these traditional VAR models (e.g., the aforementioned Blanchard and Perotti (2002), Perotti (2007), and Galí, López-Salido, and Vallés (2007)), the assumptions made regarding the ordering of variables – specifically, that government spending is exogenous to all other variables in the system – is ubiquitous but relatively unproven. To the extent that output determines taxes, and subsequently the level of government expenditure, including consumption, taxes, and various types of investment as additional variables in these VARs leads to questions regarding the validity of these suppositions.

To address this, the literature has turned to empirical analyses identifying the effects of government spending by focusing on variation in military spending. This strategy relies on two key factors. First, changes in military spending are unlikely to be correlated with the business cycle. As Hall (2009) writes, “military spending does not respond to forces determining GDP or consumption... but only to geopolitical events.” He also asserts: “the most direct way to measure the government purchases multiplier is to exploit large and arguably exogenous fluctuations in military spending.” Using military spending as the lens through which to view shocks to government spending reduces researchers’ exposure to endogeneity criticisms.

Secondly, the types of consumption undertaken by governments for defense purposes is likely to be distinct from the types of consumption undertaken by households. We
expect that defense spending shocks are likely to have no effect on contemporaneous labor-leisure tradeoffs that households make in response to announcements of increases in defense spending. As Ramey (2011) notes, aggregate government spending includes expenditures related to welfare programs, education, and institutions, spending on each of which may influence households' spending decisions and muddle estimates drawn from models using this as the source of variation.

Ramey and Shapiro (1998) construct a series that uses dummy variables to identify large military buildups in the U.S. at 3 key dates: the Korean War, the Vietnam War, and the Soviet invasion of Afghanistan. Estimates from an autoregressive model indicate increases in output and declines in consumption and real wages consistent with a neoclassical model. Edelberg, Eichenbaum, and Fisher (1999) present an extension of Ramey and Shapiro in which shocks to government spending elicit increases in output and employment but decreases in consumption and the real wage. Ramey (2011) shows that shocks to government spending in traditional VAR models can be predicted by the “war dates” shocks of Ramey and Shapiro, and that differences in the responses of consumption and the real wage between the two approaches are consequences of timing. Due to lengthy processes related to procurement and awarding of contracts, delays between the dates of defense spending announcements and the actual increases in government spending they generate lead traditional VAR models to overlook initial declines in consumption and wages following shocks to government spending. Ramey shows that shocks identified by the Ramey-Shapiro war dates approach Granger-cause traditional VAR shocks, and that delaying the Ramey-Shapiro war dates by several periods generates impulse responses matching those of the traditional VAR models. She enriches the Ramey-Shapiro war dates by constructing a “defense news” variable that measures the present discounted value of defense spending as a percentage of lagged nominal GDP. Shocks to this defense news variable produces results in line with Ramey and Shapiro (1998), in which consumption and the real wage fall following shocks to the defense news variable.

The Narrative Approach and Natural Experiments in Economics

Both Ramey and Shapiro (1998) and Ramey (2011) use variables constructed from newspaper and media reports of changes in military spending to construct new measures of government spending. The procedure of extracting relevant information from the historical record, termed the narrative approach, first appeared in Friedman and Schwartz (1963)
and has been used more recently by Romer and Romer (1989) to identify monetary policy shocks from meeting minutes and policy records of the Federal Reserve Board of Governors and the Federal Open Market Committee. Romer and Romer (2010) review economic and Congressional reports to identify changes in tax legislation and the resultant effects on output. Romer and Romer (2015) examine historical economic reports prepared by the Organisation for Economic Co-operation and Development (OECD) to construct a measure of financial distress that measures the length and severity of financial crises. The variable they construct captures changes in the cost of credit in crisis-stricken nations and allows the authors to quantify the effects of financial crises – and their intensity – on GDP and aggregate economic activity.

As we have described above, applying this technique to identification of government spending shocks is a creative way to tease out exogenous variation in macroeconomic time series data that cannot easily be captured by statistical techniques. This method also allows us to examine our research questions in a natural experiment setting that is generally elusive in social science research. As defined in Fuchs-Schuendeln and Hassan (2015), natural experiments “provide observable, quasi-random variation in treatment subject to a plausible identifying assumption.” This definition applies to our beliefs about the nature of changes in military spending: they are highly likely to be the result of geopolitical events (i.e., quasi-random) and uncorrelated with the optimizing decisions of households (a plausible identifying assumption).

3 A Richer Measure of Exogenous Changes in Government Spending

The objective of our unique and extensive data collection process is to find and record all unanticipated announcements of changes to military and civil defense spending using the narrative approach. These announcements are made, depending on the country and the legislative process, by prime ministers, presidents, finance ministers, defense ministers, cabinet departments, and/or legislative bodies. These announcements capture both increases and decreases in expenditures related to emergency situations, acts of terrorism at home and abroad, reinforcements to existing military or civil defense operations, new departments and initiatives, and new capital projects (weapons, buildings, aircraft, etc). We search databases of media sources, primarily newspapers, to gather the data needed
to construct a variable that is the foundation of our analysis. We believe that this variable identifies exogenous changes to government spending because it captures significant changes in government expenditures that are, for the most part, a response to geopolitical events that occur independently of the business cycle. This differentiates our analysis from the works described above that rely on models identifying what is likely to be endogenous variation in government spending.

The variable we create, defnews, is very similar to the defense news variable used in Ramey (2011). The differences between what Ramey creates in her U.S.-only dataset and what we construct for a panel of nations are twofold. First, our sample period includes only the 54 quarters from the third quarter of 2001 (3Q01) to the fourth quarter of 2014 (4Q14). We have identified this period as one in which homeland security became a large priority for the advanced nations we study. In response to the 9/11 attacks, French President Jacques Chirac remarked, “we must fight against terrorism by all means.” United Kingdom Prime Minister Tony Blair said, “mass terrorism is the new evil in our world,” and that “[this is a battle] between the free and democratic world and terrorism.” The 9/11 commission report released in 2004 by the U.S. government acknowledged that “countering terrorism has become, beyond any doubt, the top national security priority for the United States.” According to the Human Rights Watch, more than 140 countries, including all 6 in our panel, passed counterterrorism laws since September 11, 2001. Focusing our attention on the variation in spending levels that took place during a period in which numerous resources were mobilized to protect populations, military personnel, and national borders from the burgeoning threat of terrorism provides us with a natural experiment setting in which government spending levels changed independently of the state of the global economy.

Second, our defnews variable captures changes in civil defense spending in addition to purely military and defense spending. These civil defense expenditures include airport security operations, intelligence services, bioterrorism prevention measures, police resources, and other programs designed to protect borders and civilians. Although the amounts of civil defense spending announcements are often lower than the military spending announcements, their costs still range into the billions of units of national currency. We believe that they complement the exclusively military data points and add a degree of depth to our defnews variable above that of Ramey.

Our panel consists of 6 countries: Australia, Canada, France, Italy, the United Kingdom, and the United States (N = 6). We have chosen these nations because of their status as advanced economies and global military powers. As determined by either development
level (using the Human Development Index) or purchasing power parity GDP per capita, each of these countries is in the top 30 globally. These countries are attractive choices in which to examine military, defense, and civil defense spending because of their ongoing commitments to international security and stability. Among G7 nations, Italy, France, the United Kingdom and the United States are the top 4 nations as measured by the average of annual defense spending as a percentage of overall government spending over the period from 2000 to 2014. Australia is included due to its participation in the Iraq War and, if it were in the G7, the third-highest defense spending metric just described. Canada is included due to its membership in the G7 and its participation, along with Australia, the U.K., and the U.S., in the 2001 invasion of Afghanistan. Together, the nations in our panel have a combined 240+ membership years on the United Nations Security Council and account for over $27 trillion in 2014 purchasing power parity GDP.

A typical entry into our collection of defense news events consists of a description of the spending measure, the amount of spending, and the horizon of spending. As in Ramey (2011), the value of $defnews$ for a quarter consists of the sum of present discounted values of all announcements during that quarter taken as a percentage of the previous quarter's nominal GDP. 10-year nominal government bond yields are used to discount the announcement totals. As in Ramey (2011), announcements made during the last week of a quarter are recorded in the following quarter to more accurately reflect the time period in which the announcement affects the economy.

Many of our entries highlight changes scheduled to take place in the next or subsequent fiscal years, though some – generally those related to emergencies or geopolitical events at home or abroad – describe immediate increases or decreases in spending. In many cases, multiple accounts of these spending announcements appear in the newspapers we search. Wherever possible, we survey multiple accounts for consistency and clarity of amounts and spending horizons. In very few cases across our entire news series do we include a spending announcement that has not been corroborated with more than one news report. To be consistent with our goal of finding exogenous, unanticipated changes in government spending, we record only initial announcements of new, previously undisclosed spending episodes. In the event that the details of a spending plan are rumored or released prior to

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1HDI data are from the 2014 Human Development Index Report from the United Nations Development Program. PPP GDP data from World Bank, 2014.

an official announcement, we record the earliest reliable account of the spending package.

Additionally, it is often the case that previously announced spending initiatives undergo revision, cancellation, upsizing, and downsizing due to a multitude of factors. In these cases, we record the present discounted value of the revision—positive or negative—in the period in which the revision was announced. For example: in the second quarter of 2001, the government of Australia announced a plan to spend A$47 billion on new capital equipment projects for the Australian Defense Force over a 10-year period. In the first quarter of 2004, this spending plan was revised to add A$11.1 billion of new projects. In this case we would record the present discounted value of the amount of the new projects as a positive shock in the first quarter of 2004. We do not retroactively edit the value of defnews for the second quarter of 2001, as this future change would have been unknown at the time of the original announcement.

The overwhelming majority of media reports for all nations outside of Australia are searched via Dow Jones' Factiva database. The Factiva subscription we used provided access to more than 30 years of media coverage from thousands of news sources in more than 20 languages. Data from Australia was found using the ProQuest Australia & New Zealand newsstand database, a collection of more than 30 national and regional media sources. Although the database used for gathering data in Australia is different from the other 5 nations in our panel, each of the sources we draw from to create values of the defnews variable for Australia is available in our subscription to Factiva. We believe it is reasonable to assume that this idiosyncrasy in the data gathering process for Australia has no material effect on our results.

The process of querying these databases for the news reports needed to generate defnews involves developing a set of keywords or search terms, selecting a time frame in which to search, and selecting a collection of news sources to inspect. We describe this process in greater detail below.

The search terms we used in conjunction with the databases mentioned above are listed in Table 1. In Italy and France, nations where the media reports we examined were printed primarily in terms of those countries' official languages, we translated the English versions of our keywords word-for-word into Italian and French using Google Translate. The Google

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3A small number (< 20) of news articles for several nations in the earliest years of our sample were found using the ProQuest Newsstand database rather than Factiva. Since the publication coverage of the two databases is very similar, it is unlikely this small inconsistency has any impact on the quality of our data or results.
Translate technology built into the Google Chrome web browser made reading these foreign language news articles quite easy. We occasionally came across phrases in the news articles we examined that Google Translate was unable to translate back to English, as well as some idiomatic expressions whose English translation seemed illogical, but given our emphasis on corroborating across multiple sources, these issues did not impede our progress or affect our results.

We searched our sample period in smaller intervals, often years, to break up the sample into pieces where it was easier for us to clue in on the flow of spending announcements and government actions in each nation. At several points in our sample, circumstances occurring in a particular country (e.g., a terrorist attack at home or in a neighboring country) concentrated the debate over spending proposals and military buildups in that nation around these high profile events. In these situations, we narrowed our search to a shorter period immediately following these high profile events to more carefully determine what actions were taken, if any, to increase unanticipated government spending levels.4

For each of the 5 countries in which we used Dow Jones’ Factiva database to find news articles, each time we initiated a search we were required to select news sources to query. The publications we selected are listed in Table 2. In each nation, we chose the 2 most widely circulated (as measured by daily volume) national broadsheet newspapers plus, depending on the nation, between 1 and 3 additional media sources. These additional sources may be other national newspapers (as in the case of the U.S., the U.K., and Italy), local newspapers (Canada), or newswire services (France). For Australia, the ProQuest Australia & New Zealand newsstand database searches its entire directory of media sources without requiring input from the user. For the U.S. defnews series, we use Ramey’s data and augment it by adding civil defense-related spending announcements that occur during our sample period. We do not make any adjustments to Ramey’s values of defnews, and we add only civil defense expenditures that are not already included in Ramey’s data.5

We have collected 54 quarters of defnews data for each nation in our panel. Of the 324 total country-quarter values, 119 are nonzero, meaning that in over one-third of these country-quarters we found some announcement of defense and/or civil defense spending. Summary statistics for the defnews variable are given in Table 3. Graphs of the defnews

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4An example of this would be France and the United Kingdom in the weeks following the July 7, 2005, London Underground bombings.

time series for each nation are shown in Figure 1. All of the spending amounts, time frames, announcements, dates, and the sources used in constructing defnews are included in the data appendix.

At several points in our data collection process we were forced to make judgment calls about the amounts or horizons for new spending plans, or regarding revisions to previously announced spending initiatives. This issue was reported by Ramey as well. The need to make these assumptions is borne out of conflicting and incomplete news reports that are occasionally inconsistent in the ways they report expenditure announcements. It is often the case that the currency amounts appearing in headlines or the first few sentences of a news article contain amounts that include previously announced spending totals or aspects of spending programs that are not relevant to our analysis. Occasionally news articles will disclose large budget amounts without any further breakdown of what these figures include. Failure to further investigate these general accounts could dilute the accuracy of our defnews variable. We mitigate this by checking multiple news articles for more detailed accounts, which we often find, although in several situations we are left to make assumptions about spending totals in the absence of clear information. When they exist, we also consult official sources and budget documents for further clarification. As we will describe below, we test the sensitivity of our results to misinformation and errors in judgment by introducing measurement error into the values for defnews, similar to Ramey (2011). We find that it does not have a material impact on our results.

4 Empirical Methodology

Model and Data

The goal of our empirical analysis is to determine the representative effects of exogenous changes in government spending on output, interest rates, consumption, unemployment, and the real wage in an advanced economy. The data we gather are used in a panel VAR model similar to those discussed in Canova and Ciccarelli (2013). The nations we have chosen for our panel are modern economies whose contributions to the global economy are significant. They are also nations in which we are likely to continue to see unanticipated changes in government spending manifested in ways identical to what we identify via defnews. To the extent policy makers all over the world remain concerned with global events as they make spending choices and forecast economic outcomes in the near term,
knowledge of the representative effects of spending changes reduces uncertainty in their decision-making process.

Our model uses quarterly data from seven macroeconomic variables: the present discounted value of defense and civil defense news as a percentage of lagged nominal GDP \((\text{defnews})\), log of real government spending \((\text{rgov})\), log of real GDP \((\text{gdp})\), a three-month interbank rate adjusted for inflation \((\text{tmo})\), log of private final consumption expenditures \((\text{consume})\), unemployment rates for all persons age 15 and older \((\text{unempl})\), and the log of an hourly index for manufacturing earnings \((\text{wage})\). All data other than \text{defnews} are collected from the OECD Main Economic Indicators database.\(^6\) \text{defnews} is constructed according to the previous section. For each nation, the nominal GDP figures used to construct \text{defnews} are adjusted by the respective GDP deflator to generate quarterly real GDP.\(^7\) Real government spending figures are generated by adjusting nominal government expenditures using the GDP deflator.\(^8\) A nominal 3-month interbank rate is adjusted using the GDP deflator annual rate of change to create a real interest rate. The other 3 variables are unadjusted from their original form other than taking logs.\(^9\) These variables and their units are described in Table 4.

Our panel VAR model pools the observations from each nation in our panel. The resulting structure is similar to traditional VAR models that do not use panel data. Before aggregating across countries and time periods, our model is shown in (4.1). Column vector \(y_t\) contains current period (period \(t\)) values of \text{defnews}, \text{rgov}, \text{gdp}, \text{tmo}, \text{consume}, \text{unempl}, and \text{wage} for nation \(i\). Four quarters of lagged values of \(y_t\) are included.\(^{10}\) We also include a constant term \(a\) and dummy variables \(c_i\) for individual countries. For each nation \(i = 1, \ldots, N\), and for each time period \(t = 1, \ldots, T\):

\[
y_t' = a + y_{t-1}' \beta_1 + y_{t-2}' \beta_2 + y_{t-3}' \beta_3 + y_{t-4}' \beta_4 + c_i + u_t'.
\]

\(^6\)We obtained the data via the Federal Reserve Bank of St. Louis’ FRED (Federal Reserve Economic Data) database.

\(^7\)2009 is the base year.

\(^8\)Nominal government expenditure data for Australia is not available; instead we use real government expenditure data and adjust it to be consistent with the other nations.

\(^9\)The unemployment rate in France is calculated by dividing the population of unemployed persons age 15 and older by the working age population ages 15 to 64. Only annual estimates of the latter quantity are available before 2003, so we assume that the quarterly figures are the same as the annual figures in these periods.

\(^10\)We ran AIC and BIC lag selection tests on models with lags of 1, 2, 3, and 4 quarters. Our calculations indicated that 4 lags are marginally better than 1, 2, or 3 lags.
To pool these data, first we aggregate \(y^t_i, y^t_{-j},\) and \(u^t_i\) over \(t\) into \(y^t_{t,i}, y^t_{t-i,j},\) and \(u^t_{t,i},\) each of which contains all observations, across time, for a country \(i:
\[
y^{t,i}_t = \begin{bmatrix}
y^{t,1}_t \\
y^{t,2}_t \\
\vdots \\
y^{t,N}_t
\end{bmatrix}, \quad y^{t-j,i}_t = \begin{bmatrix}
y^{t-j,1}_t \\
y^{t-j,2}_t \\
\vdots \\
y^{t-j,N}_t
\end{bmatrix}, \quad \text{and} \quad u^{t,i}_t = \begin{bmatrix}
u^{t,1}_t \\
u^{t,2}_t \\
\vdots \\
u^{t,N}_t
\end{bmatrix}.
\]

We then combine each individual country’s data into an aggregate sample. This step creates a representative advanced economy. Each country’s \(y^{t,i}_t, y^{t-j,i}_t,\) and \(u^{t,i}_t\) are stacked to form \(Y, X,\) and \(U.\) \(X\) includes the constant term and all lagged values of the variables in \(Y.\)

\[
Y = \begin{bmatrix}
y^{t,1}_t \\
y^{t,2}_t \\
\vdots \\
y^{t,N}_t
\end{bmatrix}, \quad X = \begin{bmatrix}
y^{t-1,1}_t, \ldots, y^{t-4,1}_t \\
y^{t-1,2}_t, \ldots, y^{t-4,2}_t \\
\vdots \\
y^{t-1,N}_t, \ldots, y^{t-4,N}_t
\end{bmatrix}, \quad \text{and} \quad U = \begin{bmatrix}
u^{t,1}_t \\
u^{t,2}_t \\
\vdots \\
u^{t,N}_t
\end{bmatrix}.
\]

The matrix \(D\) contains the country dummy variables to be used as additional regressors. Since our model contains a constant, \(N - 1\) country dummy variables are added. Formally:

\[
D = \begin{bmatrix}
D_1 \\
D_2
\end{bmatrix}
\]

where \(D_1 = I_{N-1} \otimes T\) has dimension \((N - 1)T \times (N - 1),\) \(D_2\) is a matrix of zeros with dimension \(T \times (N - 1).\) \(I_{N-1}\) is the \(N - 1\) square identity matrix and \(T\) is a \(T \times 1\) vector of ones. If we combine our regressors such that

\[
\tilde{X} = \begin{bmatrix} X \mid D \end{bmatrix},
\]

our global model can be expressed more compactly as:

\[
Y = \tilde{X}B + U.
\]  

The matrix \(B\) contains coefficients for 4 lagged values of each variable, the constant term, and the coefficients on the dummy variables for the \(N - 1\) nations. Data from all 6 \((N = 6)\) nations of our panel enter as both independent and dependent variables in (4.2).
This is in contrast to other panel VAR studies (Love and Zicchino (2006) and Ciccarelli, Maddaloni, and Peydró (2013)) that divide their cross-sectional units into groups and estimate coefficients conditional on sections of their data. Our sample period ranges from the third quarter of 2001 to the fourth quarter of 2014. Our panel is balanced: accounting for lags, we have 50 (\( T = 50 \)) quarters of data for each nation, generating an overall sample of 300 observations.

**Prior Selection and Estimation**

The classical method of estimating a panel VAR with fixed effects, pooled observations, and finite \( T \) is the generalized method of moments approach detailed in Arellano and Bond (1991). This technique requires differencing all variables in the model. Given the stacked nature of our data, this would require differencing each of our 7 variables for each of the 6 nations in our panel, resulting in a loss of nearly 10% of our sample.

Our 7-variable, 4-lag VAR model contains over 200 parameters. Bayesian estimation methods suit our model well because of the shrinkage benefits they provide. With Bayesian inference, we are able to reduce the task of finding point estimates for each of the elements of \( B \) to selecting a small number of parameters (hyperparameters) based on general facts about the macroeconomic data of the system. The Bayesian principle updates the nonsample information contained in our prior with the explanatory power of \( \text{defnews} \) and our rich panel dataset to generate a posterior distribution we can use to analyze the relationships between government spending and consumption, wages, and interest rates. We choose the Normal-Wishart prior to estimate our model. The Normal-Wishart prior is a conjugate prior for the multivariate normal distribution; thus, both the prior and posterior distributions of the VAR coefficients are multivariate normal. The Normal-Wishart prior extends the Minnesota prior of Litterman (1986) by eliminating the assumption of a fixed diagonal variance-covariance matrix for the residuals \( u_t \). Additionally, conjugate priors like the Normal-Wishart provide computational simplicity. We can sample from our posterior distribution without investing in computationally expensive techniques like Gibbs sampling.

To describe our prior, we follow the notation used in Koop and Korobilis (2010).\(^\text{11}\) The Normal-Wishart prior has the form

\[^{11}\text{We adapt the code found at http://personal.strath.ac.uk/gary.koop/bayes_matlab_code_by_koop_and_korobilis.html to estimate our model.}\]
\[ \alpha | \Sigma \sim N(\alpha, \Sigma \otimes V) \]  

(4.3)

where

\[ \Sigma^{-1} \sim W(S^{-1}, \nu). \]  

(4.4)

with \( N \) and \( W \) denoting the multivariate normal and Wishart distributions, respectively. In (4.3), \( \alpha = \text{vec}(B) \) from our global model in (4.2). \( \alpha, V, S, \) and \( \nu \) are hyperparameters whose values are chosen as follows. \( \alpha \) contains the prior means for the coefficients on our explanatory variables. Per Litterman (1986), we assign prior coefficient means based on the way each variable is measured. Variables measured in levels or log-levels are assumed to follow a random walk pattern. The initial values of the coefficients for each variable measured in levels or log-levels are 1 on the first own lag and zero elsewhere. For \textit{defnews}, measured as a percentage of lagged nominal GDP, we set the prior mean on all coefficients to zero. The prior means of non-lagged variables (i.e., the constant and the country dummies) are also set to zero.

To construct the prior variance-covariance matrix \( V \), we proceed according to section 3.2.1 in Karlsson (2013) and choose a vector of three hyperparameters \( \pi = (\pi_1, \pi_3, \pi_4) \).\(^{12}\) \( \pi_1 \) controls the overall prior tightness. As \( \pi_1 \) decreases in value, it increases the probability weight on the prior distribution (relative to the likelihood function) in constructing the posterior distribution. \( \pi_3 \) controls the speed at which lagged values are shrunk to zero. As \( \pi_3 \) increases, the values of longer lagged variables have less probability weight in constructing the posterior distribution. \( \pi_4 \) controls the probability weight assigned to values of deterministic variables (i.e., the constant terms in \( A_0 \)). We assign a very large probability weight to the information in our sample for the deterministic variables. Our benchmark parameter settings for \( \pi \) are (.2, 2, 100,000). These settings are derived from initial values suggested in Canova (2007). We test several additional sets of hyperparameters that assign different levels of probability weight to our prior and sample information. These settings are described in Table 5. We do not modify the value of \( \pi_4 \) across any of our hyperparameter specifications given the lack of theoretical motivation in the literature for doing so.

\( S \) and \( \nu \) initialize the distribution from which we draw \( \Sigma \), the variance-covariance matrix used to identify the structural shocks of our model. The initial value for \( S \) is a

\(^{12}\pi_2 \) controls the relative tightness on own lagged variables versus lags of other variables. In our implementation of the Normal-Wishart prior, this value is normalized to 1.
diagonal matrix. Estimates of these diagonal entries come from autoregressive models for each independent variable. We regress current period values of each independent variable on 4 quarters of own lagged values and a constant. The estimates of the error variance from each of these regressions form the entries of \( \Sigma \). \( \nu \) represents the degrees of freedom of the prior and is constructed according to Kadiyala and Karlsson (1997). In our model, \( \nu = 9 \).

Applying Bayes’ rule yields a multivariate normal posterior distribution from which we draw values of the coefficients in (4.2). Our posterior has the form

\[
\alpha|\Sigma \sim N(\bar{\alpha}, \Sigma \otimes \bar{V})
\]

where

\[
\Sigma^{-1}|y \sim W(\bar{S}^{-1}, \bar{\nu}).
\]

\( \bar{\alpha}, \bar{V}, \bar{S}, \) and \( \bar{\nu} \) are constructed analytically as follows:

\[
\bar{V} = [V^{-1} + \tilde{X}'\tilde{X}]^{-1}
\]
\[
\bar{B} = \bar{V}[V^{-1}B + \tilde{X}'\tilde{X}B]
\]
\[
\bar{S} = S + \tilde{X}'\tilde{X}B + B'V^{-1}B - B'V^{-1} - (\tilde{X}'\tilde{X})B
\]
\[
\bar{\nu} = NT + \bar{\nu}.
\]

In (4.5), \( \bar{\alpha} = \text{vec}(B) \). In (4.7), \( B \) is formed by transforming \( \alpha \) from a vector back into a matrix (i.e. back into the shape of \( B \)), and \( S = (Y - \tilde{X}B)'(Y - \tilde{X}B) \), where \( \tilde{B} \) is the OLS estimate of \( B \).\(^{13}\)

We identify the structural shocks of our model using a Choleski decomposition on \( \Sigma \) and examine the responses of each variable. We describe these results below.

5 Results and Interpretation

The impulse responses shown in Figures 2-8 are calculated by drawing coefficient values from our posterior distribution. On each set of axes we plot the median response from 10,000 posterior draws of \( \alpha \) along with 68% confidence bands.\(^{14}\) Figure 2 shows the

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\(^{13}\)Koop and Korobilis (2010), Kadiyala and Karlsson (1997), or Karlsson (2013) provide complete mathematical derivations of the items in (4.5), (4.6), (4.7).

\(^{14}\)These confidence bands are constructed by plotting the 16th and 84th percentiles of the responses of each variable to \textit{defnews} shocks.
responses of each of our 7 variables to a 1% shock to defnews using our benchmark hyper-
parameter settings. We find that a 1% increase in the present discounted value of defense
and civil defense spending leads to a significant increase in real government spending after
approximately 2 quarters, with peak response approximately 5 quarters after the shock.
This delay between the defnews shock and the observed increase in government spending
speaks to the timing differences described in Ramey (2011) that account for the differences
in results of empirical studies identifying shocks with the traditional VAR approach versus
military buildups and the narrative approach. defnews captures the unanticipated effects of
government spending changes by pinpointing the initial mention of exogenous expenditure
changes.

We find that the initial response of real GDP is negative. The real interest rate rises
sharply on impact. Consumption decreases on impact and is significantly negative after
approximately 5 quarters. Unemployment falls slightly on impact and increases steadily
for 6-8 quarters thereafter. Wages fall on impact but do not vary much over the 5-year
period after the defnews shock. The initial decline in GDP is likely due to the immediate
decrease in consumption following an increase in government spending. For each of our
6 nations, consumption makes up the largest portion of output. Combined with the im-
mediate decreases in the unemployment rate and wages, we find modest evidence of the
negative wealth effect predicted by the neoclassical model: upon hearing of increases in
government spending, households reduce consumption and work more.

The gradual rise in the unemployment rate shown in our results is consistent with the
neoclassical model’s prediction that households supply more labor. Households supplying
more labor means that some portion of these households is likely to be re-entering the labor
force but unable to find immediate work. The sharp increase in interest rates may temper
firms’ demand for additional workers given the tightness in the loanable funds market that
could be generated by increases in government spending financed by borrowing. Ideally, we
would use data measuring hours worked to more firmly establish an increase in households’
labor supply, but these data are not available for all of the nations in our panel. This
also has implications for wages, which do not respond meaningfully to the defnews shock.
This is could the result of wage stickiness or the fact that our measure of changes in labor
market supply is somewhat clouded.

Through the decline in the interest rate after its initial rise, our model may be capturing
increases in saving by households. This spike in savings, which is consistent with the
decline in consumption and GDP over the same period, may be the result of the uncertainty
associated with the geopolitical events that generate many of the spending changes captured by \emph{defnews}. As interest rates return to pre-shock levels, GDP and consumption begin to rise and unemployment falls.

The lack of significant responses throughout Figures 2-8 may be a product of the types of government spending we are identifying via \emph{defnews}. The nature of defense and civil defense expenditures is more likely to be temporary in nature relative to non-defense government spending for social programs or infrastructure. Indeed, Barro (1981) comments that military spending is temporary in nature. In our sample, a significant portion of the spending done by Australia, Canada, the U.K., and the U.S. in the early years of our sample is related to these nations’ role in the post-9/11 invasions of Afghanistan and Iraq. To the extent we have identified largely temporary changes in defense and civil defense spending, this may explain for the lack of significance in our impulse response functions. Baxter and King (1993) find that the response of output to changes in government spending is smaller when the government spending changes are temporary. Aiyagari, Christiano, and Eichenbaum (1992) describe the response of output and unemployment to transitory movements in government expenditures as “small.” Additionally, Aiyagari, Christiano, and Eichenbaum (1992) find that for both temporary and permanent changes to government spending, the response of the real interest rate is very small.

The negative movement in output following shocks to \emph{defnews} could also be a consequence of the ways in which defense and civil defense news shocks are financed. Unfortunately there is not sufficient detail in the news articles we use to construct \emph{defnews} to determine whether new spending is financed by borrowing or taxes. In the latter case, the type of taxes levied may influence households’ labor supply and consumption decisions. Baxter and King (1993) note that the lump-sum tax versus distortionary tax choice facing policymakers has substantial implications for empirical research. They find that output falls in response to government spending financed by income taxes since households are less willing to supply labor when the after-tax returns are lower. In several of the precedent empirical studies we have mentioned above, including Ramey (2011), marginal tax rates are included as a control for tax changes. Regrettably, data of this sort is not available for all of the nations in our panel.

Figures 3-7 show the impulse responses of our 7 variables under different hyperparameter settings described in Table 5. The hyperparameters in these cases adjust the overall prior tightness as well as the probability weight assigned to values of lagged variables. We find that the responses in each of these cases are nearly identical to those of the bench-
mark case in Figure 2. Figures 5-7 show impulse responses using an alternative version of \( \mathbf{\alpha} \), the matrix of prior coefficient means. For this alternative version of \( \mathbf{\alpha} \), those variables that have prior means of 1 on the first own lag also have prior means of 0.75, 0.5, and 0.25 on the second, third, and fourth own lags, respectively. This specification reflects a belief that these variables exhibit a stronger degree of persistence than the random walk model captures. We again find that our results are robust to these new hyperparameter settings.

Out of concern for errors in assumptions or other mistakes made during the data gathering process for defense and civil defense news, we test the sensitivity of our results to measurement error in \textit{defnews}. We follow the procedure laid out in the appendix of Ramey (2011). This procedure adjusts the value of \textit{defnews} in each quarter to account for a mistiming by one quarter, past or future, of up to 20\% of that quarter’s value for \textit{defnews}. This procedure simultaneously allows the value of \textit{defnews} to be over- or under-estimated by 20\%. These responses are shown in Figure 8, and we find that adding measurement error to \textit{defnews} has little effect on our responses.

We also test a smaller version of our model containing only 5 of our 7 independent variables at a time. This reduction in the number of variables affects the nature of the multivariate normal posterior distribution from which the coefficients are drawn. In this specification we include the core variables \textit{defnews}, \textit{rgov}, \textit{gdp}, and \textit{tmo} with each of \textit{consume}, \textit{unempl}, and \textit{wage} rotated in one at a time. Additionally, we test a 7-variable model in which we add dummy variables marking the seven quarters spanning the global financial crisis. These dummy variables account for any idiosyncrasies particular to the period from the fourth quarter of 2007 to the second quarter of 2009. For all of these alternative specifications, we find that they have no material effects on our results.

### 6 Concluding Remarks

Determining causality in the macroeconomy is a tall task for empirical research. In the absence of model economies or households willing to be the subjects of field experiments, the narrative approach is well-equipped to help us establish some degree of cause and effect in the global macroeconomy. The narrative approach insulates us from the questionable identifying assumptions of structural VAR analyses focusing on total government spending as a source of exogenous variation. The Bayesian principle of combining a prior distribution with sample information is an intuitive method of weighing our beliefs about the overall nature of macroeconomic data with the rich, unique dataset we have constructed. We
find moderate evidence in favor of the neoclassical growth model’s prediction of a negative wealth effect that follows unanticipated increases in government spending. Our estimates of the response of output to government spending shocks indicate a value of the fiscal multiplier that is nonpositive and close to zero. According to our results, policymakers eyeing fiscal policy as a tool to increase economic growth should carefully consider other options.

In the economies we study, the degree of uncertainty that geopolitical events over the last 15 years have injected into optimizing decisions of households may have significant consequences for the responses of macroeconomic variables to changes in government purchases. As Bloom (2009) has found, uncertainty shocks – which may be a side effect of the forces driving the changes in government spending we identify via defnews – have substantial implications for employment and output. At any rate, the questions we have answered here are central to further empirical and theoretical study of advanced economies. We expect that they will continue to be the subject of inquiry and exploration.
References


Appendix

<table>
<thead>
<tr>
<th>Country</th>
<th>Keywords</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>australiap AND (million OR billion) AND (defence OR military) AND (spending OR budget)</td>
</tr>
<tr>
<td>Canada</td>
<td>(million OR billion) AND (defence OR military OR security) AND (spending OR budget)</td>
</tr>
<tr>
<td>France</td>
<td>(securite OR terrorisme OR depenses) AND (defense OR militaire)</td>
</tr>
<tr>
<td>Italy</td>
<td>(milioni OR miliardi) AND (dofesa OR militari OR sicurezza) AND (spesa OR bilancio)</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>(million OR billion) AND (defence OR military OR security) AND (spending OR budget)</td>
</tr>
<tr>
<td>United States</td>
<td>(million OR billion) AND (defense OR military OR security) AND (spending OR budget)</td>
</tr>
</tbody>
</table>

Table 1: Search terms used to construct the defnews variable.

<table>
<thead>
<tr>
<th>Country</th>
<th>News Sources Searched</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>The Globe and Mail*, National Post*, Ottawa Citizen, Toronto Star, Vancouver Sun</td>
</tr>
<tr>
<td>France</td>
<td>Le Figaro*, Le Monde*, Agence French Presse</td>
</tr>
<tr>
<td>Italy</td>
<td>Corriere della Sera*, La Repubblica*, La Stampa</td>
</tr>
</tbody>
</table>

Table 2: Media sources used in searches for defense spending announcements. Note: Starred sources are the top 2 most widely circulated national broadsheet newspapers in each respective country. Australia data is from ProQuest Australia & New Zealand newsstand database and requires no specifically named news sources to search.
<table>
<thead>
<tr>
<th>Variable</th>
<th># Obs</th>
<th># Nonzero</th>
<th># &gt; 1%</th>
<th># &gt; 2%</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>54</td>
<td>19</td>
<td>13</td>
<td>9</td>
<td>-5.8%</td>
<td>30.6%</td>
</tr>
<tr>
<td>Canada</td>
<td>54</td>
<td>22</td>
<td>9</td>
<td>6</td>
<td>-4.6%</td>
<td>4.7%</td>
</tr>
<tr>
<td>France</td>
<td>54</td>
<td>10</td>
<td>6</td>
<td>3</td>
<td>-0.3%</td>
<td>33.7%</td>
</tr>
<tr>
<td>Italy</td>
<td>54</td>
<td>21</td>
<td>1</td>
<td>1</td>
<td>-0.6%</td>
<td>2.3%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>54</td>
<td>27</td>
<td>8</td>
<td>2</td>
<td>-0.3%</td>
<td>6.3%</td>
</tr>
<tr>
<td>United States</td>
<td>54</td>
<td>20</td>
<td>16</td>
<td>12</td>
<td>-11.9%</td>
<td>20.3%</td>
</tr>
</tbody>
</table>

Table 3: Summary statistics for defnews variable. defnews is measured as a percentage of lagged nominal GDP.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>defnews</td>
<td>PDV of defense/civil defense spending as a % of lagged nominal GDP</td>
</tr>
<tr>
<td>gov</td>
<td>Log of real government expenditures</td>
</tr>
<tr>
<td>rgdp</td>
<td>Log of real GDP</td>
</tr>
<tr>
<td>tmo</td>
<td>3-month interbank rates, adjusted for inflation</td>
</tr>
<tr>
<td>consume</td>
<td>Log of private final consumption expenditures</td>
</tr>
<tr>
<td>unempl</td>
<td>Unemployment rate of working population, age 15+</td>
</tr>
<tr>
<td>wage</td>
<td>Log of manufacturing hourly wage index</td>
</tr>
</tbody>
</table>

Table 4: Macroeconomic variables used in VAR model.

<table>
<thead>
<tr>
<th>Hyperparameter settings</th>
<th>Description (comparisons relative to benchmark values)</th>
</tr>
</thead>
<tbody>
<tr>
<td>πbenchmark = [.2, 2, 100, 000]</td>
<td>Moderate tightness; inspired by Karlsson (2013) and Canova (2010)</td>
</tr>
<tr>
<td>π = [.8, 2, 100, 000]</td>
<td>More loose on coefficients; more weight given to sample data</td>
</tr>
<tr>
<td>π = [.05, 2, 100, 000]</td>
<td>Tightest hyperparameter settings; most weight given to prior information</td>
</tr>
<tr>
<td>π = [.2, 1, 100, 000]</td>
<td>Moderate tightness; assigns more weight to lagged values</td>
</tr>
<tr>
<td>π = [.8, 1, 100, 000]</td>
<td>Loose prior; assigns more weight to lagged values</td>
</tr>
<tr>
<td>π = [.05, 1, 100, 000]</td>
<td>Tight prior; assigns more weight to lagged values</td>
</tr>
</tbody>
</table>

Table 5: Hyperparameter settings used for model estimation.
Figure 1: Plots of time series of \textit{defnews} over the period 3Q01 to 4Q14. \textit{defnews} is measured as the present discounted value of the spending shock as a percentage of the previous quarter’s nominal GDP.
Figure 2: **Benchmark case:** $\pi = [.2, 2, 100, 000]$. Prior coefficient means set to 1 on the first own lag and zeros elsewhere for all variables other than *defnews*, whose prior mean is zero everywhere. 68% confidence bands shown.
Figure 3. $\pi = [8, 2, 100, 000]$. Prior coefficient means set to 1 on the first own lag and zeros elsewhere for all variables other than $defnews$, whose prior mean is zero everywhere. 68% confidence bands shown.
Figure 4: $\pi = [.05, 2, 100, 000]$. Prior coefficient means set to 1 on the first own lag and zeros elsewhere for all variables other than $\text{defnews}$, whose prior mean is zero everywhere. 68% confidence bands shown.
Figure 5: \( \pi = [.2, 1, 100, 000] \). Prior coefficient means set to 1, .75, .5, and .25 on the first, second, third, and fourth own lags (zeros elsewhere) for all variables other than defnews. Prior mean of defnews is zero everywhere. 68% confidence bands shown.
Figure 6: $\pi = [.8, 1, 100, 000]$. Prior coefficient means set to 1, .75, .5, and .25 on the first, second, third, and fourth own lags (zeros elsewhere) for all variables other than defnews. Prior mean of defnews is zero everywhere. 68% confidence bands shown.
Figure 7: \( \pi = [.05, 1, 100, 000] \). Prior coefficient means set to 1, .75, .5, and .25 on the first, second, third, and fourth own lags (zeros elsewhere) for all variables other than defnews. Prior mean of defnews is zero everywhere. 68% confidence bands shown.
Figure 8: $\pi = [.2, 2, 100, 000]$ with defnews variable containing measurement error. Prior coefficient means set to 1 on the first lag and zeros elsewhere for all variables other than defnews, whose prior mean is zero everywhere. 68% confidence bands shown.
Data Appendix – newspapers and periodicals used in constructing the defense news panel variable

Australia

12/7/00 – Sydney Morning Herald, Sydney
"Winning strategy for votes; DEFENCE THE FUTURE"
ProQuest document ID 363479553

"The Defence White Paper is a key part of the Federal Government’s re-election strategy appealing to nationalism, boosting industry and defence establishments in regional Australia and building political momentum."

"The paper... provides $23 billion in extra spending over 10 years..."

AUS 4Q00: Spread $23 billion in spending over 10 years

6/27/01 – The Courier-Mail, Brisbane
"Air force wins lion’s share of $47 billion spend-up"
ProQuest document ID 354619981

"The Australian Defence Force will spend $47 billion on new capital equipment projects during the next 10 years. Defence Minister Peter Reith yesterday released the Defence Capability Plan which outlines 88 projects ranging from new fighter planes, ships and army helicopters to personal communications systems."

AUS 3Q01: Spread $47 billion in spending over 10 years

5/15/02 – The Age, Melbourne
"What the treasurer said Budget 2002 - THE SPEECH"
ProQuest document ID 363548072

"The budget spends $1.3 billion over five years to upgrade airport security, give spy agencies more money to detect threats, put plainclothed air marshals in the skies, set up new crack counter-terrorism teams and build up a stockpile of antidotes and vacines in case of a chemical attack."

"Border protection... is reinforced with spending worth nearly $2.9 billion over the next five years - an increase of $2.2 billion..."

AUS 3Q02: Spread $2.5 billion over 5 years

5/14/03 – The Australian, Canberra
"Security upgrade to protect borders - BUDGET 2003: ROUND-UP"
ProQuest document ID 357692512

"The Howard Government’s resolve to protect Australians from terrorism was reinforced strongly in last night’s budget as Peter Costello allocated an additional $411 million on homeland security over the next five years."

5/14/03 – The Mercury, Hobart
"Record $15.8b for defence upgrade"
ProQuest document ID 353268788

"Fast Facts: Defence budget to increase by $2.1 billion over five years. * Defence funding for 2003-2004 to rise to $5.8 billion, about 2 per cent of GDP. * Defence to receive $645 million over three years to meet costs of war with Iraq and ongoing operations. * $156 million over four years to pay for new Special Operations Command and boost special forces numbers... Defence to spend $1.145 billion over five years to boost logistics support."

AUS 2003: Spread $411 million over 5 years, $645 million over 3 years, $156 million over 4 years, and the remainder of the $2.1 billion, $(2.1- .645- .156) = $1.299 billion, over 5 years

2/5/04 – Sydney Morning Herald, Sydney
"Air and sea security at heart of $50bn defence upgrade"
ProQuest document ID 364028348

"Australia is to spend billions of dollars more to boost its maritime defences against ballistic missiles and enhance airborne surveillance capability, it was revealed yesterday. Delivering the new blueprint for the Government’s $50 billion upgrade of military equipment, the Defence Minister, Robert Hill, said the change in priorities was spurred by new threats from terrorism, weapons of mass destruction and regional instability."

Australian Strategic Policy Institute
"Strategic insights: Reviewing the Defence Capability Plan 2004-2014"

"Some 65 project phases currently valued at around $17.9 billion have been carried forward from the 2001 DCP, and 44 new phases valued at $11.1 billion have been added. These numbers largely exclude phases generated by renaming or sub-dividing existing ones."

**The above paragraph, found on page 2, highlights the fact that some of these spending amounts in the updated Defence Capability Plan (DCP) were announced previously as part of the June 2001 DCP. We use only the $11.1 billion amount that captures new spending**

1Q04: Spread $11.1 billion over 10 years

5/12/04 – The Age, Melbourne
"Paying the price of a nation’s security; Budget 2004 - Defence and Security"
ProQuest document ID 363728877

"Australia will spend an extra $754.5 million on security and counter-terrorism measures, including new ‘biometric’ passports, increased surveillance by intelligence agencies and high-tech equipment to detect explosives on planes. The money, to be spent over five years..."

5/12/04 – Herald Sun, Melbourne
"$750m to fight terrorism threat"
ProQuest document ID 360336794

"Protecting the homeland from terrorism is a major focus of the Budget... More than $250 million will be spent over five years, and across 10 government departments... The $244 million in new grants this year includes $46 million for enhanced spyng, $37 million for protective security and $23 million for border protection and $23 million for regional co-operation."

5/12/04 – Sydney Morning Herald
“War on terrorism triggers $1.8bn boost; Budget 2004 big spenders”
ProQuest document ID 364048803

“Defence spending will be boosted by $1.8 billion over the next four years in preparation for possible conflicts and expanded links with special forces from nearby countries to improve counter-terrorism capability.”

5/12/04 – The Advertiser, Adelaide
“BUDGET 2004: Home front to benefit most from $1.8bn”
ProQuest document ID 355613354

“Major military hardware, such as new helicopters and missiles, are on hold while the Federal Government devotes most of a $1.8 billion defence spending spree to facilities in marginal Coalition seats. Defence will receive a $400 million boost this year to improve the supply chain and base facilities and for a down-payment on two new airborne early warning aircraft.”

AUS 4Q04: Take $244 million + $400 million as immediate spending; spread $29.6 million over 4 years

7/21/04 – The Australian, Canberra
“Labor fires shots at $10bn coastal security plan”
ProQuest document ID 377470039

... a $102 million maritime security package announced by the Howard Government to better track potential terrorist threats around the country’s coastline. A new terrorism taskforce will be set up to check security at offshore oil and gas facilities, while nearly $50 million will be pumped into better X-ray facilities at container terminals.

7/20/04 – Transcript of remarks by Prime Minister John Howard

“I am pleased to announce that Australia’s maritime security will be further strengthened by a series of measures worth $102 million over four years.”

AUS 3Q04: Spread $102 million over 4 years

30/6/04 – Sydney Morning Herald, Sydney
“Counter-terrorism core of $37m intelligence policy; THE CHOICE 2004”
ProQuest document ID 364017079

“A number of additional counter-terrorism policies were outlined in the Coalition’s $37 million intelligence policy. The money comes on top of $127 million in extra funding announced for ASIO in the budget in May.”

“Mr Howard announced yesterday that Australia would train foreign spies from South-East Asia and the Pacific under a $200 million, four-year plan.”

“Other initiatives include spending $9.6 million over four years to upgrade ASIO’s computer networks and infrastructure to increase their ability to track and keep records on people.”

“KEY POINTS: $20 million centre for counter-terrorism intelligence and training for Australia, South-East Asia and the Pacific. $3 million to boost ASIO’s language skills.

$9.6 million to aid ASIO background checks.
$4 million for counter-terrorism exercises.”

AUS 4Q04: Spread $29.6 million over 4 years and treat $7 million as immediate spending (no horizon given for those funds)

5/1/05 – The Sunday Times, Perth
“$20b boost for defence”
ProQuest document ID 365497833

“AUSTRALIA will embark on a huge increase in defence spending to keep the nation ahead of emerging Asian rivals. Treasurer Peter Costello has revealed plans for a $20 billion boost in military funding over a decade.”

“Costello said the Australian Defence Force would receive more than $20 billion in extra funding above the already scheduled annual budgets -- between 2010 and 2020. The 2000 Defence White Paper has already given extra money to re-equip the armed forces, with increased funding each year.”

5/11/05 – The Age, Melbourne
“Protection against the threat of terror; Budget 2005 - SECURITY AND DEFENCE”
ProQuest document ID 363797123

“Warning that Australia is still in the sight of terrorists, the Government has committed an additional $1.1 billion to strengthening national security over the next four years.”

5/11/05 – The Age, Melbourne
“New Iraq troops set to cost $240m; BUDGET 2005”
ProQuest document ID 363857782

“Increasing costs of operations such as Iraq, along with military counter-terrorism measures, brings the total Defence Department budget to $17.5 billion next year, an increase of $300 million. That rise does not include the $2.3 billion, 3 per cent annual increase guaranteed under the Government’s defence white paper. The Government has also brought forward $300 million for buying new weapons, delayed in previous budgets.”

“*This release also includes the previously announced $36.6 million from 4Q04, so we will exclude that to avoid double counting. The amount of $2.3 billion that was referred to in the defense white paper is omitted, as that was accounted for back in December 2000*”

AUS 2Q04: Take $244 million + $400 million as immediate spending; spread $(750 - 244) = $506 million over 5 years and spread $(1.8 - 4) = 1.4 billion over 4 years

6/04 – Sydney Morning Herald, Sydney
“Counter-terrorism core of $37m intelligence policy; THE CHOICE 2004”
ProQuest document ID 364017079

“Mr Howard announced yesterday that Australia would train foreign spies from South-East Asia and the Pacific under a $200 million, four-year plan.”

“Other initiatives include spending $9.6 million over four years to upgrade ASIO’s computer networks and infrastructure to increase their ability to track and keep records on people.”

“KEY POINTS: $20 million centre for counter-terrorism intelligence and training for Australia, South-East Asia and the Pacific. $3 million to boost ASIO’s language skills.

$9.6 million to aid ASIO background checks.
$4 million for counter-terrorism exercises.”

AUS 4Q04: Spread $29.6 million over 4 years and treat $7 million as immediate spending (no horizon given for those funds)

5/1/05 – The Sunday Times, Perth
“$20b boost for defence”
ProQuest document ID 365497833

“AUSTRALIA will embark on a huge increase in defence spending to keep the nation ahead of emerging Asian rivals. Treasurer Peter Costello has revealed plans for a $20 billion boost in military funding over a decade.”

“Costello said the Australian Defence Force would receive more than $20 billion in extra funding -- above the already scheduled annual budgets -- between 2010 and 2020. The 2000 Defence White Paper has already given extra money to re-equip the armed forces, with increased funding each year.”

5/11/05 – The Age, Melbourne
“Protection against the threat of terror; Budget 2005 - SECURITY AND DEFENCE”
ProQuest document ID 363797123

“Warning that Australia is still in the sight of terrorists, the Government has committed an additional $1.1 billion to strengthening national security over the next four years.”

5/11/05 – The Age, Melbourne
“New Iraq troops set to cost $240m; BUDGET 2005”
ProQuest document ID 363857782

“Increasing costs of operations such as Iraq, along with military counter-terrorism measures, brings the total Defence Department budget to $17.5 billion next year, an increase of $300 million. That rise does not include the $2.3 billion, 3 per cent annual increase guaranteed under the Government’s defence white paper. The Government has also brought forward $300 million for buying new weapons, delayed in previous budgets.”

“*This release also includes the previously announced $36.6 million from 4Q04, so we will exclude that to avoid double counting. The amount of $2.3 billion that was referred to in the defense white paper is omitted, as that was accounted for back in December 2000*”

AUS 2Q04: Take $244 million + $400 million as immediate spending; spread $(750 - 244) = $506 million over 5 years and spread $(1.8 - 4) = 1.4 billion over 4 years

10/16/05 – Sunday Herald, Melbourne
“Spooks boost $50m for terror fight”
ProQuest document ID 360703381

“ASIO will receive a $50 million funding boost and plans to employ 500 more agents in a bid to counter terrorism. The latest terrorist attacks in Bali and London have prompted the move, to be announced today by Attorney-General Philip Ruddock. The build-up is part of a five-year strategic plan to strengthen the counter-terrorism and counter-espionage capability of the Australian Security Intelligence Organisation.”

12/14/05 – Herald Sun, Melbourne
“$1.5 billion plan for bigger, faster army”
ProQuest document ID 360750049

“$1.5 billion secured”
ProQuest document ID 360839327

“Taxpayers will pay $1.6 billion for national security over the next four years. Of this, $800 million will go on training new spies and providing them with the latest espionage technology. ASIO will get more than $500 million of the new money, but the overseas spying agency, the Australian Secret Intelligence Service, also gets an extra $350 million.”

“More federal police agents to tackle crime and terrorism”
ProQuest document ID 354880812

“Spending up, savings deferred”
ProQuest document ID 364605437

“The Government has been forced to devote more than $650 million of new money to directly target the illegal movement of people, including $365 million for extra surveillance of our northern approaches.”

“A major outlay is the $6.6 billion to be spent over 13 years on buying, arming and operating 24 Super Hornet fighter-bombers to replace the F-111 bombers and supplement the existing Hornets until the Joint Strike fighter is available in about 2014.”

**This Super Hornet purchase was not mentioned in the 2001 or 2004 DCPs**

“A $20 billion savings plan has been largely postponed even though the funds are needed to pay for a 20-year build-up of the nation’s naval and air power... But it revealed that savings of $20 billion have largely been put off to future years, with just $5 billion to be saved in the next four years.”

“The Government’s white paper, released on May 2, featured a range of big-ticket purchases for the navy and air force... The extra initiatives are forecast to cost $43 billion and will be funded by increases to the defence budget and the savings program. The Government has kept its commitment to increase defence spending by 3 per cent
each year and will increase the budget from $21.5 billion to $25.1 billion in 2009-10. Defence will receive $308 billion in the next decade and $146 billion in additional funding across the life of the white paper to 2030.*

S/1/09 – The Australian, Canberra
*Afghanistan war funding to double – BUDGET 09 – DEFENCE*

The Defence Department has been charged with finding $20 billion in savings and efficiency gains over the next decade to pay for new capital equipment including 12 new generation submarines... The Defence budget would deliver about $308 billion to Defence over the next decade.

Australian Parliament – Senate documents, page 28

As detailed on page 136 of the Budget Paper No 2, over the period to 2029-30, the Government will provide additional new funding of $146.1 billion to Defence (against funding projections for Defence at the time of the Updated Economic and Fiscal Outlook).**

**Since we are attempting to capture changes in government spending, of the initiatives announced in the new white paper, we include only the $146 billion that captures increases above existing and previously announced funding levels covering the 20 year period to 2029-30.**

AUS 2Q09: Spread $1.35 billion ($885 million + $650 million) over 6 years; spread $346 billion over 20 years

S/12/10 – The Courier-Mail, Brisbane
*Keeping the troops and borders safe*

The Rudd Government will spend $1.2 billion extra on securing Australia’s borders, and $500 million on national security initiatives such as a new passport system and 500 new Australian Federal Police officers.

Aviation security will be boosted by a $300 million cash injection over five years to enhance screening technologies at ports and airports and a 50 per cent increase in firearms and explosive detection dogs at international airports.

S/12/10 – The Daily Telegraph, Sydney
*Guarding Australia a priority – BUDGET 2010: SPECIAL EDITION*

The Rudd Government will also spend $15.7 million over the next two years to maintain a boat permanently at Ashmore Reef off the north coast of West Australia.*

**Exclude the illegal fishing funding, as this is part of neither defense nor civil defense. Spending horizon is not disclosed for a majority of the $1.7 billion, so we will assume the programs are 5 years in length.**

AUS 2Q10: Spread $15.7 million over 2 years, $220 million over 5 years, $102.3 billion ($69.4 + $32.9) million over 4 years, $100 million over 6 years, and an additional $1.119 billion over 5 years.

5/11/13 – The Daily Telegraph, Sydney
*Military mission to cut spending - NATIONAL SECURITY - FEDERAL BUDGET: SPECIAL EDITION*

"Defence’s cost-cutting holiday has ended with a jolt, with $2.7 billion in savings to be squeezed out over four years... Defence will also hand back 1.1 billion in capital funds cash that it failed to spend in 2010-2011."

"Despite the savings plan, the defence budget will jump by $744 million to $26.5 billion or more than $1500 for everyone in Australia."

5/18/11 – The Australian, Canberra
*DEFENCE CUTS CRIPPLE THE NATION’S OPTIONS IN A CRISIS*

The two key funding promises in the 2009 Defence white paper have now been broken. The government promised to sustain 3 per cent real growth in the defence budget until 2017-18 and it also promised to reinvest all savings from Defence’s strategic reform program back into priority defence capabilities. Both of these promises are now null and void.”

**Without more detailed information, will assume that the $744 million increase in defense spending for 2011-12 was part of the previously scheduled (announced) spending plan. To capture the effects of the removal of the pledge to increase defense spending 3% per year (in real terms) to 2017-18, we reference the following table:**

<table>
<thead>
<tr>
<th>fiscal year (FY)</th>
<th>at 3% real growth per year ($Bn)</th>
<th>at 2.5% real growth per year ($Bn)</th>
<th>difference ($Bn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011-12</td>
<td>$26.5</td>
<td>$26.5</td>
<td>$0.0</td>
</tr>
<tr>
<td>2012E-13E</td>
<td>28.0</td>
<td>27.2</td>
<td>0.8</td>
</tr>
<tr>
<td>2013E-14E</td>
<td>29.5</td>
<td>27.8</td>
<td>1.7</td>
</tr>
<tr>
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<td>2.6</td>
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<td>2015E-16E</td>
<td>32.8</td>
<td>29.3</td>
<td>3.6</td>
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<tr>
<td>2016E-17E</td>
<td>34.6</td>
<td>30.0</td>
<td>4.7</td>
</tr>
<tr>
<td>2017E-18E</td>
<td>36.3</td>
<td>30.7</td>
<td>5.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$160.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*For real defense spending to increase 3% annually, we schedule 5.5% nominal increases in defense spending over the 6 year period to 2017-18, following the Reserve Bank of Australia’s long-term inflation target of 2.5%. We compare these increases to constant real defense spending (2.5% nominal growth). Taking the difference of the spending amounts in these two cases leaves us with an approximate cut of $19.1 billion over 6 years.**

AUS 2011: Spread $2.7 billion in cuts over 4 years, $19.1 billion over 6 years, and apply $1.1 billion in immediate cuts.

5/9/12 – The Age, Melbourne
Biggest hit strips $5.5 billion from military’s spending

ProQuest document ID 1011460691

“Five-and-a-half billion dollars will be ripped from Defence over the next four years by stalling a series of multi-billion-dollar projects and slashing its civilian workforce. In what was the single-biggest cut in the budget, Defence will be forced to reduce its non-military workforce by 3000 over the next two years, as well as delay or cut about $3 billion in big-ticket hardware acquisitions and $1.2 billion in capital works.”

“The budgets of Australia’s six intelligence agencies will also stall, with just under $2 billion cut out over the next four years and long-standing plans to increase the staff of Australia’s domestic security service, ASIO, put on hold… The federal police will also feel the bite of the efficiency dividend, with a plan to recruit 500 officers by 2015 delayed by a year, at a saving of $26 million.”

AUS 2Q12: Spread $5.5 billion in cuts over 5 years, $82 million in cuts over 4 years, and apply $26 million in immediate cuts

4/24/14 – The Age, Melbourne

“Running costs double jets’ price tag to whopping $24b”

“The cost of running the 58 Joint Strike Fighters announced by the Abbott government will double the price tag for a series of multibillion-dollar projects and slashing its civilian workforce. A US$12 billion aircraft and equipment… and a further $12 billion to keep them operational” – doubling the total hit to taxpayers.”

“Mr Abbott revealed that the three squadrons of lockheed Martin F-35 planes would be delivered by 2023, transforming the nation’s air combat capability within less than a decade.”

“Estimates place the life of the planes at around 35 years, so we apply $12 billion for the purchase over the 9 years to 2023 and spread $12 billion over 15 years from 2023 to 2038”

5/14/14 – The Australian, Canberra

“Extra cash for military ‘repair’”

ProQuest document ID 1523860578

“The cash-strapped Abbott government has boosted defence spending to $29.2 billion in the coming year, laying firm foundations for its promise to build the sector’s funding up to 2 per cent of GDP within a decade. That $29.2 billion takes spending for 2014-15 to 1.8 per cent of gross domestic product, well up on the previous government’s spending on the current year of $25.4 billion, about 1.6 per cent of GDP.”

“The government has also provided Defence with supplementary funding of $570.5 million for the current year, 2013-14. That included $24.956 million to cover the ADF’s share of the cost of the search for the missing Malaysia Airlines Flight MH370. But The Australian has been told the bulk of the money is needed to enable Defence to pay its bills.”

“Given the widespread dismissal of the white paper as an authentic source of spending projections, we exclude it from our news series”

AUS 2Q13: Apply $21 million in immediate cuts, $152 million in immediate spending, spread $215 million over 7 years, and spread $9.9 billion in spending over 4 years

8/6/14 – The Canberra Times, Canberra

“Funding boost to agencies to fight local terrorists”

ProQuest document ID 1551209930

“Australia’s spy and counter-terrorism agencies will receive a $60 million funding boost to fight the threat of home-grown terrorism, which Prime Minister Tony Abbott says ‘has not changed’ and is still ‘as high as it has ever been’.”

“Other articles mention that the horizon for this spending package is 4 years”

AUS 3Q14: Spread $630 million over 4 years
In addition to the new defence funding, Ottawa has also increased spending on Canada's Coast Guard by $94 million over the next two years. That money will be used to repair the Coast Guard fleet and communications facilities such as radio towers on shore.

**Unless indicated, dollar amounts refer to Canadian dollars**

12/11/01 – Financial Times
"Canada to boost security funding BUDGET OTTAWA AIMS TO CREATE BORDER 'OPEN TO TRADE BUT CLOSED TO TERROR'"
ProQuest document ID 249324153

"Canada yesterday unveiled plans to boost security and military spending by C$7.7bn (US$4.9bn) over the next five years in response to the September 11 attacks on the US. The spending includes C$1.2bn for increased security on the border with the US, the country's biggest trading partner."

12/11/01 – The Citizen
"Manley to cut $200M from military: Government to use $119M to double capacity of Joint Task Force 2"
ProQuest document ID 240334318

"The federal budget tabled yesterday allots $7.7 billion over the next five years to fund the fight against global terrorism, prevent extremists from finding haven in Canada, and better track down and prosecute terrorists. The figure includes some $280 million in security measures already announced in response to the September attacks on the United States -- sobering events that vaulted the counter-terrorism file to the top of the federal agenda."

CAN 4Q01: Treat CAD $280 million as immediate spending and spread CAD $7.42 (= 7.7 - .28) billion over 5 years

2/19/03 – National Post
"Sporing gap 'gone': McCallum: Experts disagree: Base budget rises by 7%, plus $270M for outstanding bills"

"Canada's cash-strapped military has been promised up to $2.2-billion in new funding over the next two years to help solve chronic funding problems in the armed forces and pay for the escalating costs of the war on terrorism."

"The military's budget will climb a total of $950 million over 2003-2004 from $11.8 billion to $12.75 billion, an increase that includes the $800 million in new funding and a $150 million adjustment for inflation in each of the next two years. Another $270 million in emergency funding for the current fiscal year is being spent to pay outstanding military bills, including $170 million to repair ageing equipment and $100 million for Canada's ongoing role in Operation Apollo, the war on terrorism."

"In addition, Ottawa has set aside $325-million in 'contingency' funds to pay for Canada's upcoming deployment of troops to the international peacekeeping mission in Kabul, Afghanistan, and for a possible war in Iraq."

"Of this total, we have...$393-million for the Afghanistan mission, including $193-million in new money, and more than $100-million in salary increases, he said."
CAN 4Q03: Treat CAD $193 million as immediate spending

3/23/04 – The Globe and Mail
“Defence: Spending barely grows”

“The federal budget yesterday increased defence spending by relatively modest $300-million to cover the incremental costs of operations in Afghanistan and Haiti. This will bring total defence spending to about $13.6-billion this year.

3/24/04 – Vancouver Sun
“Port security to be a priority: $605 million in new spending is intended for increased defences against terrorism”

“Bolstering security at marine ports will be among the priorities for $605 million in new spending on defences against terrorism... The $605 million, also to be spread over five years, will be used to address priorities such as marine and cyber security, intelligence, border protection, and better coordination of systems, information, the at assessments and emergency response.”

“Public Safety Minister Anne McLellan said the money, $115 million of which will be earmarked for this fiscal year, represents a ‘substantial investment’ in making Canada a more secure.”

**As these items were announced very close to the end of the first quarter, we move them into 2Q04**

4/15/04 – The Globe and Mail
“Martin boosts defence spending: Soldiers applaud new purchases, decision to extend military’s mission in Afghanistan”

“The Canadian military was given another mission in Afghanistan and a $7-billion plan to buy new equipment by Prime Minister Paul Martin yesterday... The spending plan includes several previously announced measures: $3-billion to replace the 40-year-old Sea King helicopters, $700-million for a mobile gun system and $1.3-billion for new search-and-rescue airplanes. The only new money was $2.1-billion for three navy supply ships, which has been under discussion for several years.”

**This entry is complicated. We have confirmed that the $3 billion for the helicopter purchase was announced back in August 2003, so we exclude that here. The mobile gun system (also referred to as the “Stryker light tanks”) was financed with previously announced increases to the defense budget, as disclosed in October 2003, so we exclude that here as well. For the other 2 pieces of this apparent spending increase, we introduce an excerpt from the 2004 Canadian budget plan**

3/23/04 – Canada budget plan 2004

“Another major priority for Canada’s military is the purchase of modern Fixed Wing Search and Rescue aircraft (SAR) to replace older Hercules aircraft and Canada’s fleet of Buffalo aircraft. Under Defence’s current plan, deliveries of the new aircraft will begin much later in the decade. This budget sets aside non-budgetary resources to allow the Department of National Defence to move this acquisition forward in time without displacing other planned capital investments... This measure will allow Defence to spend an additional $300 million on capital in 2005-2006 and similar amounts in subsequent years until this procurement is completed.”

“Other major acquisitions consistent with the current capital budget include replacements for the navy’s replenishment ships that will be capable of supporting naval task forces at sea as well as providing other capabilities such as sea-lift of Canadian Forces en route to missions. Final decisions will await the results of the International Policy Review.”

**With the above in mind, we exclude the supply ship piece of the extra spending due to its consistency with the current capital budget and the fact that final decisions have not been made. While the headline amount for the search-and-rescue planes was $1.3 billion, we include here only $300 million to be spent in 2005-06 as described in the budget plan**

4/22/04 – National Post
“Ottawa unveils security plan to beef up defences; Emergency response, data centres, policing, seaports targeted in $690-million policy”

“The federal government rushed out a $690-million national security plan yesterday on the eve of Paul Martin’s first trip to Washington as Prime Minister. The money, to be doled out over five years, is intended to tighten security at seaports and computer data centres, make it more difficult to forge Canadian passports, allow security agencies to hire more officers, improve the analysis of intelligence, and make it easier for agencies to operate alongside each other during a crisis.”

**The timing of this package is odd given the proximity to the $605 (now $615) million in spending disclosed in October 2003, so we exclude that here as well. For the other 2 pieces of this apparent spending increase, we introduce an excerpt from the 2004 Canadian budget plan**

3/24/05 – Ottawa Citizen
“Ottawa unveils security plan to beef up defences; Emergency response, data centres, policing, seaports targeted in $690-million policy”

“The federal government pushed out a $690-million national security plan yesterday on the eve of Paul Martin’s first trip to Washington as Prime Minister. The money, to be doled out over five years, is intended to tighten security at seaports and computer data centres, make it more difficult to forge Canadian passports, allow security agencies to hire more officers, improve the analysis of intelligence, and make it easier for agencies to operate alongside each other during a crisis.”

**The timing of this package is odd given the proximity to the $605 (now $615) million in spending announced last month, but commentary from this period indicates this new spending may have been politically motivated. We were unable to find evidence linking the two packages, or any indication that the second amount is redundant**

CAN 2Q04: Treat CAD $415 (= 300 + 115) million as immediate spending; apply CAD $300 million in spending for 2005-06; spread CAD 500 (= 605 – 115 + 10) over 4 years beginning in 2005-06; spread CAD $490 million over 5 years

2/24/05 – Ottawa Citizen
"Military is promised $12.8B raise: Critics note largest portion of increase weighted near end of 5-year plan" 

"The Canadian Forces received the largest federal government spending commitment in decades -- $12.8 billion over five years -- but the bulk of the money in yesterday's budget will not come for at least another three years."

"However, this year's initial $500 million increase and next year's $600 million budget top-up falls short of the $1.5 billion various parliamentary committees and lobby groups say must be added to the base budget to halt the decline of the Forces."

2/2/05 – Canada budget plan 2005, page 130

"ITA 1Q05: Treat CAD $322 (= 500 - 272) million as immediate spending, apply CAD $272 (= 500 - 222) million to this year's initial $500 million budget top-up falls short of the $1.5 billion various parliamentary committees and lobby groups say must be added to the base budget to halt the decline of the Forces."

2/2/05 – Toronto Star
"How Liberals aim to keep U.S. happy"

"Measures in Wednesday's federal budget aimed at boosting ties with the United States: $12.8 billion more for the military over five years, including $7 billion in newly announced cash, $433 million over five years in improved border security, $3 million for fight against international money laundering and terrorist financing, $16 million over five years to improve air security, $222 million over five years to improve marine security. $88 million over five years to boost Canada-U.S. measures to improve security of container traffic. Promise of new and continuing infrastructure investment at Windsor-Detroit border, the busiest link between Canada and the U.S."

** The amounts listed in the third article are separate from the $12.8 billion for defense, so we include them separately.**

3/2/05 – National Post
"Military to lose $178m in 'clawback': Ottawa reclaims savings: 'Outrageous' move makes mockery of budget: critics"

"The Canadian military will be forced to return $178 million in "internal savings" to the government next year, the National Post has learned, more than a third of the funding increase promised in last week's federal budget. Critics say the Liberals' "clawback" of Department of National Defence funding makes a mockery of their promise to boost spending on the Canadian Forces by nearly $13 billion over the next five years."

"Major-General Douglas Dempster, the Forces' director-general of strategic planning, told the National Post yesterday that the military will be required to give back $1.178 billion -- which amounts to 35.6% of the hike -- in the coming fiscal year. In the year after that, when Defence was to get a $600-million increase, the department will be required to return $2.722 billion -- or 45.3% of the hike -- to the government's central coffers."

ITA 1Q05: Treat CAD $322 (= 500 - 272) million as immediate spending, apply CAD $272 (= 500 - 222) million to this year's initial $500 million budget top-up falls short of the $1.5 billion various parliamentary committees and lobby groups say must be added to the base budget to halt the decline of the Forces."

5/3/06 – Ottawa Citizen
"Military put on hold: Forces will get $1.1B over two years, but there's no sign of new planes and helicopters"

"In his first budget, Finance Minister Jim Flaherty gave the Forces $1.1 billion over the next two fiscal years, but the military will have to wait until at least 2008 for any of the remaining $4.2 billion of the $5.3 billion the Conservatives promised in new defence spending in the federal election campaign."

"The budget gives the military an extra $400 million for this fiscal year, over what the Liberals promised in their heavily back-loaded budget of February 2005, and another $725 million in 2007-08, but the budget gives few specifics about how the remaining $4.2 billion will be delivered, beyond promising to deliver the full $5.3-billion campaign promise over the next five years."

5/3/06 – The Global and Mail
"Defence costs take back seat to public security"

"Mounties and border guards emerged the only significant winners in a low-key federal security package that contained few surprises and left several large questions unanswered. In total, the government intends to spend $1.61 billion on new border and security measures over the next two years, Finance Minister Jim Flaherty told the House of Commons yesterday."

"The anti-crime package includes $161 million to hire and train 1,000 new RCMP officers and $37 million to expand and upgrade facilities at the Mounties' national training academy. Just over $200 million has been allocated for providing border guards with sidearms, a change the guards have long sought."

"The government will also move to eliminate or beef up border posts currently staffed by only one guard. And there is $303 million for an undefined 'border strategy to promote the movement of low-risk trade and travellers within North America.'"

**The $2.5 billion figure referenced in the news article refers to the $1.1 billion in defence funds already announced for 2006-07 and 2007-08. The $1.4 billion for security refers to a number of programs; we have listed the relevant ones above.**
Budget 2006 provides $37 million to better secure our financial system.”

“$64 million to enhance Canada’s anti-money laundering and anti-terrorist financing regime.”

**The other $9 million of this $73 million for the financial system is related to preventing currency counterfeiting. Since this is not related to national security, we exclude it**

6/1/06 – Toronto Star
“Transportation system gets safety boost; PM earmarks $2.54 million for screening, checks TTC says money not enough to combat looming risk”

Vowing to keep Canada “one step ahead” of terrorists, Prime Minister Stephen Harper announced a two-year, $254 million plan to upgrade safety and security on planes, trains and ships across the country."

“The $254 million is part of $1.4 billion in new security money set aside in last month’s federal budget. It means $133 million extra for Canadian Air Transport Security Authority to better and more quickly screen air passengers and their luggage. $95 million for rail and marine security, which can be spent to do background checks on dock workers at ports or to buy cameras to monitor subway stations. $26 million for air cargo security measures.”

**The $26 million for air cargo was not part of the amounts above, so we add that to the 2-year security spending total**

CAN 2Q06: Treat CAD $400 million as immediate spending, apply CAD $725 million for 2007-08, and spread the remaining CAD $4.2 billion over the years 2008-09, 2009-10, and 2010-11; spread CAD $920 million ($161 + 37 + 101 + 303 + 133 + 95 + 64 + 26) over 2 years

6/27/06 – The Globe and Mail
“Ottawa to buy three new supply ships for $2.1-billion; Expenditure part of planned $15-billion in new gear for Canada’s military”

“The federal government will buy three new supply ships — at a cost of $2.1 billion — over the next six years as part of a multibillion-dollar defence buildup... The new ships, the first of which is to be delivered in 2012...”

“The winning bidder will also receive an $800-million contract to provide support and maintenance throughout the [20 year] life of the ships.”

**The supply ships purchase was rumored back in March 2004 but was never finalized (see the 3/23/04 entry above). We include it here instead, along with the $800 million for maintenance**

6/28/06 – The Globe and Mail
“Military to spend $1.2-billion on trucks; 2,300 vehicles will replace decaying fleet”

“The federal government will spend $1.2-billion to buy 2,300 military trucks to replace the decaying fleet used to transport and supply the Canadian Armed Forces, it said yesterday... Delivery will begin in 2008 and continue through 2010.”

6/29/06 – National Post
“Military committing $4.7b for 16 helicopters to replace fleet”

“The Canadian military is committing $4.7-billion for the purchase 16 new helicopters to replace its aging fleet, Defence Minister Gordon O’Connor announced yesterday. A contract for the choppers, classified as medium-to-heavy-lift, could be settled as early as this winter and the first of the helicopters could be ready for use as early as three years... The contract will include $2-billion for the purchase of the new machines and $2.7-billion for a 20-year contract to service the helicopters.”

**The helicopter replacement program was partially budgeted back in 2005 as the following news article describes. The spending horizon is not formally announced, so we proceed the estimate above that the contract begins in 2007 and runs 3 years**

2/28/05 – The Globe and Mail
“Canada considering buying, leasing U.S. ships”

“The budget includes $2.8-billion specifically for, among other things, 12 to 18 transport helicopters, starting in 2007-08. They would replace about 15 Chinooks that Canada sold more than a decade ago.”

**Subtract $2.8 billion in immediate spending against the PDV of the $2 billion + $2.7 in maintenance costs associated with the 6/29/06 announcement**

6/30/06 – Ottawa Citizen
“New planes won’t end need for rentals: 2004 Forces report contradicts minister’s self-reliance boast”

“The government’s plan is to purchase four “strategic lift” planes – which are designed to carry heavy cargo or large groups of people, such as the Disaster Assistance Response Team – at a cost of $2.1 billion. The other 17 tactical aircraft will cost $3.2 billion. The remaining $3.3 billion will be budgeted for maintenance and contract costs.”

**$3100 million of the funds for the replacement for the Hercules transport/search-and-rescue planes were accounted for in 2004 (again see the 3/23/04 entry), which we net against the costs described above. The Hercules replacements are the smaller tactical aircraft whose cost is $3.2 billion. The 4 strategic lift planes are, as far as we can tell, new spending. For maintenance costs, assume a 20-year life. No spending horizon is given, so assume the contract is signed in 2007 and funds are spent over 3 years as in the case of the helicopters**

CAN 3Q06:
For supply ships: spread CAD $2.1 billion over 6 years and CAD $800 million over 20 years beginning in 2012
**For military trucks:** spread CAD $1.3 billion over 3 years from 2008-2010

**For helicopters:** apply CAD $2 billion in spending over 3 years beginning in 2007 plus CAD $2.7 billion over 20 years beginning in 2007. LESS CAD 2.8 billion in previously announced immediate spending.

**For planes:** apply CAD $5.0 billion in spending over 3 years beginning in 2007 plus CAD $3.3 billion over 20 years beginning in 2007.

9/26/06 – The Globe and Mail
“Ottawa’s $2-billion hit list; Liberal programs long loathed by Tories get axe despite government’s big surplus”

“Prime Minister Stephen Harper’s government tightened federal purse strings by $2-billion yesterday — slashing spending hated by manyConservatives, such as medicinal marijuana research — even as Ottawa disclosed that its coffers are bulging with another near-record budget surplus.”

“Some of the programs, initiatives and other areas being eliminated or reduced to help the federal government save $1-billion over the next two years — part of a $2-billion savings plan — and the amount of savings for each:

$4.25 million : Consolidation of foreign missions

$13.9-million: Cancellation of National Defence High-Frequency Surface Wave Radar Project”

**These were the only cuts that fell under the defence/national security umbrella. Since this news came so late in the quarter, we move this small negative shock to the fourth quarter of 2006.**

CAN 4Q06: Apply CAD $18.15 (+ 4.25 + 13.9) million in immediate cuts

7/6/07 – Vancouver Sun
“$3.1-billion frigate refit program announced; Government expected to follow with news of patrol ship plan”

“Prime Minister Stephen Harper and Defence Minister Gordon O’Connor, after announcing Thursday a $3.1-billion frigate refit program to be done in Victoria and Halifax... the upgrades to the navy’s Halifax-class frigates, to begin in 2010 and conclude in 2017, will create jobs in Canada’s shipbuilding industry as well as boost the navy’s capability.”

**In 2006, several announcements regarding purchases of equipment were actually funded with existing/previously announced funds. In this case, however, we could not find any mention of this refit project in older spending releases.**

7/10/07 – Vancouver Sun
“$3 billion to be spent on Arctic patrol ships; But new vessels won’t be able to operate in the region year-round as Conservative government decides against ice-breakers”

“The Conservative government will spend more than $3 billion on new ships to patrol the Arctic, but the vessels won’t be able to operate in the region year-round.”

“Government officials say the Arctic patrol ships will cost $3.1 billion. Another $4.3 billion will be spent on operations and maintenance over their 25-year life. Six to eight vessels will be bought, but delivery of the first ship is not expected until 2013.”

**Once again, we attempt to determine what part of the $7.3 billion is actually “new” spending. Below we consider an article from August 2006 that provides an estimate of how much was previously budgeted for Arctic patrol ships.**

8/19/06 – Toronto Star
“Arctic defence; Sure, he missed the AIDS conference, but Stephen Harper made waves in the Arctic this week But were the PM’s tough words on Arctic sovereignty anything more than just mere talk?”

“When Harper announced during the winter election campaign that there would be three new polar icebreakers built, Byers says he was elated and every Canadian Arctic expert thrilled. But since then, he says, there was no mention of icebreakers in the federal budget, or in the $17 billion in defence procurement announcements — or in Harper’s Arctic speech.

During the campaign, Harper promised to focus new resources on the Arctic, vowing to create a new Arctic national sensor system, build a deep water docking facility in Iqaluit, deploy new search and rescue aircraft in Yellowknife, establish a new Arctic army training centre, expand and revitalize the Canadian Rangers — and purchase three new, heavy, naval ice breakers.

Tories acknowledge privately that the promise — estimated to cost $2 billion — was originally planned to be quietly announced, but that when polls showed the Liberals were gaining ground by arguing that Harper was dangerously pro-American, they decided to showcase the commitment.

Then, shortly after the election, Harper took the opportunity to publicly snap back at U.S. Ambassador David Wilkins, who had reiterated the U.S. opposition to Canada’s Arctic sovereignty claim.

In May, the new government’s budget set aside an additional $5.3 over five years to, among other things, ‘increase the Canadian Forces’ capacity to assert Canada’s Arctic sovereignty.”

**This passage discloses that approximately $2 billion was previously budgeted for this project. We assume that the $2 billion applies to the purchase price of the ships rather than the 25-year maintenance plan. We assume that the spending horizon for the remaining $1.1 billion in purchase prices lasts from the present until first delivery in 2013, and that the maintenance funds are needed for 25 years beginning in 2013.**

CAN 3Q07: Spread CAD $3.1 billion over the 7 years from 2010 to 2017, spread CAD $1.1 billion over 6 years; spread CAD $4.3 billion over 25 years beginning in 2013

2/27/08 – Ottawa Citizen
“New passport unveiled”

“Details of the new passport emerged in a two-year, $165-million spending package aimed at enhancing border security, while still keeping people and goods flowing. The new measures included $26 million to
introduce the use of biometric data, such as fingerprints and live photographs, in the visas of foreign visitors, following the lead of the United States, Australia and Britain.”

2/27/08 – The Globe and Mail

“Intensechunk of security measures aimed at foreigners”

“Large chunk of security measures aimed at foreigners”

“The Communications Security Establishment will receive $43 million over the next two years. The CSE is charged with collecting signals intelligence – essentially listening in to various forms of communications abroad. The money is intended to update the agency’s equipment and boost its manpower to keep up with advancements in technology.”

**According to the Canada budget plan for the year 2008, these two amounts ($43 million and $165 million) are mutually exclusive. The budget plan also reveals that $29 million of these funds are from existing sources.**

2/27/08 – Vancouver Sun

“Liberal leader pulls his punches; Party won’t defeat Tories over the budget, which contains nothing to justify an election, Stephane Dion says”

“Indeed, Prime Minister Stephen Harper had announced the budget’s main defence initiative – raising the annual increase from 1.5 per cent to two per cent starting in 2011 – in a speech last week... Over all, this year’s $18.2 billion defence budget will increase, as projected, to $19 billion.”

2/27/08 – Toronto Star

“$100 million boost pegged for aid to Afghanistan; One-time spending hike will go primarily toward security initiatives, such as training police, army”

“The Canadian Forces are also getting more money out of this budget, in the form of an automatic annual increase in defence spending to 2 per cent from 1.5 per cent. Coming into effect in 2011-12, it will give the forces approximately $12 billion over the next two decades to buy new equipment to keep up with military advances.”

**The standing 1.5% automatic increase in defense spending is raised to 2% beginning in 2011-12 for 20 years. We calculate the amount of new spending that in generated by this policy change below.**

**The estimate given in the news article of a $12 billion increase in spending refers to the difference between the current defence budget of $18.2 billion in 2007-08 and the estimated budget of approximately $30 billion in 2031-32 under the newly proposed spending plan.**

<table>
<thead>
<tr>
<th>(CAD in billions)</th>
<th>Under 1.5% annual increases for entire period from 2008-09 to 2011-12</th>
<th>Under 1.5% annual increases for for 2008-09 to 2010-11 and 2.0% increases thereafter</th>
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Total, 2011-12 to 2031-32: $496.578 + $314.784 = $811.362 million over 20 years beginning in 2011-12

5/13/08 – National Post

“Defence plan to cost $50 billion over 20 years”

“Harper Pledges $30B For Military; Long-term plan to expand, better equip forces”

Stephen Harper yesterday announced a 20-year defence strategy worth about $30 billion that pledges to give the military the troop numbers and equipment it needs to do its job.”

“Many elements of the strategy, such as the $3.1-billion program to modernize and refit 12 Halifax-class frigates, long-considered the workhorses of the navy, and the purchase of strategic and tactical lift aircraft, joint support ships, helicopters and armoured vehicles have already been released in previous announcements.”

5/15/08 – The Globe and Mail

“Defence plan to cost $50 billion over 20 years”
“Canada’s new defence strategy will cost up to $50 billion over two decades — $20 billion more than the Harper government announced earlier this week — one of the country’s top generals said yesterday as the military scrambled to quell criticism that the plan lacks sufficient detail.”

“Lieutenant General Walter Natynczyk, Vice-Chief of the Defence Staff, said the military would spend between $45 billion and $50 billion on planes, combat vehicles, ships and fighters. Under the Canada First Defence Strategy, the Conservative government’s plan for the military that was originally released Monday without comprehensive details.”

“The Canada First Defence Strategy’s shopping list includes many items the Tories have already talked about buying, including: 17 fixed wing search and rescue aircraft to enter service by 2015; up to 12 maritime patrol aircraft by 2020 and 65 fighters by 2017.”

“Ottawa to face $179M bill for G8, G20 security; Unforeseen Costs”

“The federal government is expected to rack up $179.4 million in unforeseen costs to plan and prepare security for this summer’s G8 and G20 summits, newly tabled documents reveal.”

“Defence spending slows”

“First, we take into account the $2.5 billion in cuts announced for the years 2012-13, 2013-14, 2014-15. However, growth of 2% per year on top of smaller initial budget will lead to a much larger defence spending cut than the headline amount of $2.5 billion. We calculate this amount below**

“Ottawa is slapping higher security fees on airline travellers a week before the 2010 federal budget — yet insists Conservatives are staying true to their pledge not to raise taxes... The new fees, which require parliamentary approval, will increase by $2.58 to $8.91 each way depending on the destination, on top of the current charges that range from $4.90 to $17 a passenger each way. The minister said the Canadian Air Transport Security Authority will receive $1.5 billion in new money over five years as part of the security expansion.”

“Three years from now, in the 2012-13 fiscal year, the Defence Department will get $52.5 million less than it had expected. In each of the two following years, in 2013-14 and 2014-15, its budget will be $1 billion less than planned. Nonetheless, the Defence budget will rise to $20.6 billion in 2014-15.”

**New equipment purchases announced in June 2006 and July 2007 are “re-announced” with this new pledge to spend $45-50 billion over 20 years, so we exclude them here. The July 2007 spending totals of $3.1 billion for frigate refits and $7.3 billion for Arctic ships, plus the June 2006 spending totals of $2.9 billion for supply ships, $1.2 billion for military trucks, $4.7 billion for helicopters, and $8.3 billion for transport planes, to $15.2 billion and are excluded from the new amounts pledged here. We proceed with the midpoint of the given range, $47.5 billion, as our shock to spending in this quarter**

**End of security subsidy could hit air passengers; Pearson airport will lose share; Airlines, flyers may be on the hook for extra cost”

“The Tories committed in this year’s budget to deliver $296 million over the next two years to improve operations of the Canadian Air Transportation Security Authority, bringing in a new passenger assessment system and screening equipment.”

“Conservatives won’t commit defence strategy to paper; 20-year plan for military to be based on ‘vision’ outlined in Harper, MacKay speeches”

“The plan also reiterates previous equipment purchases totalling $30 billion and made in 2006 and 2007. Of those, the military has received C-17 transport aircraft and used Leopard tanks. It has also signed a contract for the delivery of C-130J transport planes.”

“The Tories committed in this year’s budget to deliver $296 million over the next two years to improve operations of the Canadian Air Transportation Security Authority, bringing in a new passenger assessment system and screening equipment.”

“Defence spending slows”

“First, we take into account the $2.5 billion in cuts announced for the years 2012-13, 2013-14, 2014-15. However, growth of 2% per year on top of smaller initial budget will lead to a much larger defence spending cut than the headline amount of $2.5 billion. We calculate this amount below**
Starting with a budget of $20.6 billion in 2014-15, as quoted in the news article, and proceeding annually with 2% nominal increases in spending leads to total spending over the period from 2015-16 to 2031-32 of $432.5 billion. When compared to the February 2008 spending projections of $453.7 billion over the same period, this is a decrease in defence spending of $12.0 billion over the 17 years from 2015-16 to 2031-32. We account for these cuts in addition to the $2.5 billion mentioned above.

5/25/10 – National Post
"Air cargo security to get $96M boost; Five-Year Plan; Firmer screening 'from computer chips to flowers'"

"The federal government yesterday unveiled a $96-million plan aimed at improving the security of Canadian air cargo, citing the potential for terrorist attacks within the commercial cargo system. The new measures, to be phased in over five years, include additional screening technologies and more stringent security checks for companies that screen cargo."

5/26/10 – Vancouver Sun
"Summit security cost to reach almost $1 billion; Money would be better spent paying down the deficit and holding a video conference instead, Canadian Taxpayers Federation says"

"Security costs for the G8 and G20 summits, which are being billed as the biggest security events in Canadian history, are expected to increase five-fold over original estimates and reach almost $1 billion. A spokeiswoman for Public Safety Minister Vic Toews acknowledged Tuesday that the federal government has budgeted up to $930 million -- a dramatic increase over the $179 million set aside in the March budget."

10/23/10 – National Post
"Wired battlefield; Online world is redefining perceptions of security"

"Early this month, Canada’s Public Safety Minister Vic Toews unveiled a new five-year, $90-million program to develop a new cyber security strategy to protect Canadians from cyber threats. The government intends to focus on protecting its own computer systems, partnering with industry to strengthen security and to conduct general education programs in cyber-security."

11/6/10 – Ottawa Citizen
"Report pegs final tally for G8, G20 at $858M; Summit pricetag lower than expected, but a boondoggle nonetheless, Grits say"

"Taxpayers are on the hook for almost $858 million to cover the costs of the G8 and G20 summits -- a figure that is about 25 per cent lower than originally estimated, the government said Friday."

"The bulk of the total -- at $676 million -- went to security costs for the G8 and G20, in Toronto and the Ontario resort community of Huntsville, respectively."

4/29/11 – Ottawa Citizen
"DND’s $1-billion spending gaffe; Military must return unspent funding to Treasury"

"The Department of National Defence will need to return a significant amount of funds from its budget to government coffers after it couldn’t spend the money, according to documents obtained by the Citizen. Sources say that DND wasn’t able to spend more than $1.5 billion of its $21-billion budget for the fiscal year 2010-11. But DND will be able to keep some of that, having received approval from the government to carry forward $444 million into the next fiscal year, according to documents leaked to the Citizen."

6/7/11 – Ottawa Citizen
"Tight budget counts on PS to find $11B in savings; Ottawa’s economy likely to feel the pinch as Harper government seeks to balance the books, union warns"

"Safety and security: $21 million over five years to upgrade baggage scanning equipment at airports"
3/30/12 – The Globe and Mail

“Deep defence spending cuts signal a Harper reversal; Yet-to-be-specified budget trims will have ‘significant impact’ on Canada’s ability to deploy and conduct missions”

“The regular increases in defence spending that Stephen Harper promised to lift the Canadian military from a decade of neglect are over. For the first time, his government is not just slowing growth in military budgets but scaling them back with years of cuts.”

“The cuts to the annual budget will get deeper in each of the next three years, starting with a $327-million reduction in the coming year and reaching a $1.1-billion reduction by 2014-15.”

“**For more precise details regarding the amounts of the scheduled cuts, we consult the official budget publication below**

3/29/12 -- Canada budget plan 2012, page 213

Table 5.1: Planned Reductions in Departmental Spending 2012-13: $326.8 million; 2013-14: $706.1 million; 2014-15: $1,119.8 million

3/30/12 – Ottawa Citizen

“Soldiers emerge untouched; DND, diplomats to feel pinch; Budget will cut $377M from Canada’s spending for international aid”

“As expected, National Defence is facing the largest cuts of all departments in terms of sheer numbers, at more than $1.1 billion by 2014-15. This is on top of the $1.1 billion the government already had planned to slash from the department’s $21-billion budget this coming fiscal year.”

“**This passage confirms that these cuts are in addition to those highlighted previously in March 2010**

4/2/12 – Vancouver Sun

“MacKay expects cuts to defence budget will be short-lived; He says it will continue to grow year-by-year”

“Some have looked at the defence cuts as a case of the glass being half-empty and a sign that the Harper government was backing away from its fairly robust stance on security and defence spending. MacKay’s perspective was that the glass was half-full and would rise again. The budget at National Defence is solid and I expect it will continue to grow year-by-year,” after the cuts, the minister said, explaining that an annual escalator clause of two percent, written into the Canada First Defence Strategy of 2008, remained in place.”

**While the base budgets are being reduced over the next few years, the 2% annual spending pledge remains. As we have done previously, we attempt to calculate the cumulative effect of these spending cuts relative to the previously scheduled funding amounts **

3/30/12 – Ottawa Citizen

“Federal government adds $155M to cyber-security strategy; New funding may be too late, critics say”

“The federal government poured more money Wednesday into its cyber-security strategy, but some experts said the Conservatives don’t have a good handle on how exactly to keep digital infrastructure safe from ever-evolving threats. The $155 million in spending, spread over five years, will go to the Canadian Cyber Incident Response Centre.”

**CAN 2Q11: Apply CAD $1.056 (= 1.5 - .444) billion in immediate cuts and spread CAD $21 million over 5 years**

**CAN 2Q12: Apply CAD $326.8 million in immediate cuts, CAD $706.1 million in cuts for 2013-14, and CAD $1.1198 billion in cuts for 2014-15; spread CAD $22.858 billion in cuts over the 17 years from 2015-16 to 2031-32**
"DND main target for $4.9B in cuts; Government to slash discretionary spending over next year"

The federal government plans to slash $4.9 billion in discretionary spending in the next year, with the Department of National Defence bearing the brunt of cuts, while departments involved in the Conservatives’ law and order agenda are spared.

"Defense: The budget will be slashed by $1.8 billion... It was already known that National Defence was facing cuts of between $1.1 billion and $2.5 billion by 2014-15, but these latest government figures indicate the belt-tightening may be even tougher than expected"*

*The cuts announced in 2010 and 2012 for the fiscal year 2013-14 amounted to $1.7 billion; these are accounted for above. We include an additional $100 million on top of this in accordance with this news release. We must also consider the effect of this additional $100 million cut over the life of the Canada First defence strategy (to 2031-32)**

**The March 2010 defence spending estimate of $20.6 billion in 2014-15, which was adjusted downward by $1.1198 billion in 2012, is further adjusted downward by $100M. We apply 2% nominal increases each year on top of this figure beginning in 2015-16 and extend it to fiscal year 2031-32. Compared to the March 2012 spending projections of $397.6 billion over the same period, this is a decrease in defense spending of $2.0 billion over the 17 years from 2015-16 to 2031-32.**

**These cuts apply to departments outside defense, so we include them separately**

"Programs related to safety face cuts; Long-awaited accounting of Ottawa’s spending plans to erase deficit shows cuts in aviation, marine, rail security; food monitoring"

"Programs aimed at keeping Canadians safe are facing spending cuts as part of the Conservative government’s push to erase the deficit, according to a long awaited accounting of Ottawa’s spending plans."

"At Transport, several programs related to safety are facing cuts. A comparison of the 2013-14 and 2012-13 main estimates shows: aviation safety spending will drop from $231.7 million to $214.7 million (7.3 per cent); marine safety drops from $61.8 million to $57.8 million (6.5 per cent); aviation security drops from $46.6 million to $33.8 million (27.5 per cent) and marine security drops from $20.7 million to $14.9 million (28 per cent)."

"programs related to safety face cuts; long-awaited accounting of Ottawa’s spending plans to erase deficit shows cuts in aviation, marine, rail security; food monitoring"

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"These cuts apply to departments outside defense, so we include them separately**

"Can 1Q13: Apply CAD $1.00 million in immediate cuts and spread CAD $2.041 billion in cuts over the 17 years from 2015-16 to 2031-32; apply CAD $39.6 (= 17.0 + 4.0 + 12.8 + 5.8) million in immediate cuts"

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**Although the 2013 budget announcement followed these new articles by nearly one month, no mention of additional changes to current or future defense spending were present in the 2013 budget plan**
To assist with our construction of the defense news variable, we have occasionally used translations of French newspaper articles. The translations from French to English were automatically done by the Google Chrome web browser. We expect (but are unable to verify) that the translations are accurate, but there is certainly some small probability that we have misinterpreted what the articles intended to communicate.

8/1/01 – Financial Times
“Chirac and Jospin agree French defence spending plan”
ProQuest document ID 249156667

“France’s President Jacques Chirac and Lionel Jospin, the premier, have approved a new six-year programme of military procurement for 2003-2008 with average annual outlays of FFr87.5bn (€8.2bn).”

**6 years of funding at an average of FFr87.5 billion = FFr525 billion in total spending. Convert this amount to euros at the fixed rate of 1 euro = 6.55957FFr; total spending is EUR 80.04 billion. Convert to USD at the 8/1/01 exchange rate of 1 EUR = .8793 USD to arrive at total spending of $70.38 billion**

FRA 3Q01: Spread EUR 80.04 billion / USD 70.38 billion over 6 years beginning in 2003

10/14/01 – The Washington Post
“Europe Examines Its Biological Warfare Readiness; Experts Cite Failure to Plan Ahead, Share Information and Adopt Uniform Standards Across Borders”
ProQuest document ID 409222422

“France has unveiled a $57 million plan, called Botox, that includes making a military decontamination center available for civilian use. Health Minister Bernard Kouchner said that more “means of individual protection,” such as gas masks, would be made available in a crisis.”

**Convert this USD amount to euros at the 10/12/01 exchange rate of 1 EUR = .9078 USD to arrive at total spending of EUR 62.79 million**

FRA 4Q01: Treat EUR 62.79 million / USD 57 million as immediate spending

7/11/02 – Financial Times
“France’s President Jacques Chirac and Lionel Jospin, the premier, have approved a new six-year programme of military procurement for 2003-2008 with average annual outlays of FFr87.5bn (€8.2bn).”

**Convert to USD at the 7/11/02 exchange rate of 1 EUR = .9927 USD to arrive at total spending of $5.56 billion**

FRA 3Q02: Spread EUR 5.6 billion / USD 5.56 billion over 5 years

9/12/02 – Le Figaro
“Defence - France wants to catch up” / “Défense - la France veut compter sur retard”

“The draft law on military programming 2003-2008, adopted yesterday by the Council of Ministers, provides for a total budget of 88.87 billion euros for equipment loans or additional 5.5 billion and includes the construction of a second aircraft carrier from 2005.”

**There were deliberations about this package continuing into October and November 2002, but the approved spending amounts did not change**

**Compare this new, higher spending package to that announced on 8/1/01 and account only for the increase above what was previously announced. In 2002 euros, the real value of the 2001 spending package of EUR 80.04 billion is EUR 82.25 billion**

FRA 4Q02: Spread EUR 6.62 (= 88.87 – 82.25) billion over 6 years

8/6/04 – Le Figaro
“700 million more for the Defense” / “700 millions de plus pour la Défense”

“Reportedly, the ceiling letter from Matignon to the Rue Saint Dominique the week - last week expected to increase about 4% of the expenses of operating and staff of this ministry. This component of the budget of the Defense should reach 18.2 billion euros in the draft 2005 budget law against 17.5 billion euros in the initial finance law of 2004. The additional appropriations will go in the police component of the orientation and programming law on the security interior (LOPSI), which provides 7,000 new jobs and an investment billion euros over the period 2003-2007.”

“If we add to these costs of operation, the additional EUR 700 million of appropriations in the military planning law… the budget of the defense excluding pensions should be close to 34 billion euros in 2005, 1.5 billion more than in 2004.”

FRA 3Q04: Treat EUR 700 million as immediate spending

10/29/08 – A P French Worldstream
“Defence: 185 billion euros over six years for the military” / “Défense: 185 milliards d'euros sur six ans pour les militaires”
The new military planning law provides for a budget of EUR 185 billion for defense over the period 2009-2014, of which 101 billion of equipment loans.

FRA 4Q08: Spread EUR 185 billion over 6 years

7/1/10 – Agence France-Presse
"Budget Decreased Defense 3.5 billion in three years" / "Baisse du budget de la Défense de 3,5 milliards en trois ans"

"The contribution of the Ministry of Defense to the reduction of public deficits will amount to 3.5 billion euros in three years, from 2011 to 2013, slightly less than 4% of its budget (excluding pensions) – was learned Thursday source close to the matter."

"The cuts should, however, be partially offset by some 2 billion euros "windfalls" selling of real estate assets and frequencies, do we have the same source, although it recognizes that " uncertainties "may still affect such a sales already reported in the past."

7/2/10 – Le Figaro
"Insight" / "Coulisses"

"Nevertheless, defense should have had more, 3.5 billion over three years if the military planning law, which planned higher spending, had been met. But this roadmap was no longer tenable given the scale of the public deficit. In addition, Defense will recover about 2 billion windfall revenues through the sale of buildings and radio frequencies."

FRA 3Q10: Spread EUR 1.5 = (3.5 – 2) billion in cuts over 3 years

11/11/11 – Agence France-Presse
"The budget of the Defense amputated additional EUR 100 million" / "Le budget de la Défense amputé de 100 millions d'euros supplémentaires"

"The budget of the Defense for 2012 will be reduced by approximately an additional EUR 100 million, as part of new savings measures announced last week by Prime Minister François Fillon, is it learned from the department. This second "movement of the plane" must be added to a first reduction of 367 million euros compared to the initial plan, adopted at the first reading of the text discussion Wednesday at the National Assembly. The breakdown of new loans reductions is currently being studied. "The objective is to avoid slowing down the performance of the planning law" Military 2009-2014, says one source said."

FRA 4Q11: Apply EUR 267 million in immediate cuts

5/24/13 – Agence France-Presse
"Hosts Holland confirms significant staffing cuts and wants to strengthen the European defense" / "Armées: Hollande confirme d'importantes coupes d'effectifs et veut renforcer l'Europe de la Défense"

"François Hollande has put into perspective the great Friday the White Paper of hosts, confirming deletions of 24,000 new jobs by 2019, and promised proposals by December to strengthen the pooling of defense in Europe."

"He confirmed the continued "to its current level" of defense spending in 2014: "31.4 billion euros in 2014, that is to say exactly the same as in 2012 and 2013" and a commitment to "179.2 billion euros for the period 2014-2019."

The military planning law (LPM, 2014-19), following the White Paper will be presented by the Cabinet in July and passed in Parliament before the end of the year.

FRA 2Q13: Spread EUR 179.2 billion over 6 years

12/10/13 – Agence France-Presse

"Parliament finally adopted on Tuesday the military planning law (LPM) 2014-2019, which sets the budgetary framework of the defense for six years."

"The law provides programming 190 billion euros in loans over the period 2014-2019, with a budget maintained at 31.4 billion euros until 2016, at 1.5% of GDP, and slightly increase then."

**EUR 179.2 billion of the EUR 190 billion was previously announced back in May, so we include only the additional amount approved by the legislature**

FRA 4Q13: Spread EUR 10.8 (= 190-179.2) billion over 6 years
As in the case of France, we use translations of foreign newspaper articles to help us construct the defense news variable for Italy. The translations are automatically done by the Google Chrome web browser, and we expect (but are unable to verify) that the translations are accurate, but there is certainly some small probability that we have misinterpreted what the articles intended to communicate.

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10/26/01 – Corriere della Sera

*Sirchia in Italy 145 reports were all false” / “Sirchia in Italia 145 segnalazioni Erano tutte false”

“As for the vaccine against smallpox, the minister confirmed to have 5 million doses available, purchased at the price of 97 billion lire. As the threat of bioterrorism has been profiled on the horizon, pharmaceutical companies have reactivated the production of vaccines fallen by the wayside. Italy would be more quick to make orders.”

**Convert 97 billion lire to EUR at the fixed exchange rate of 1 euro = 1936.27 lire to arrive at EUR 50.1 million**

11/7/01 – Corriere della Sera

*Italy, mission 150 billion per month” / “Italia, missione da 150 miliardi al mese”

“The military mission in Afghanistan will cost 150 billion a month, and pay with the money of gasoline. The tax rebate of 50 pounds on each liter of fuel expired on October 31 last year. The government did not renew the bonus. Now, without the discount, tax revenues increase and will create the necessary funds to cover the costs of participation in the conflict... the Defense estimate that you will need to bear a cost that is around a thousand billion lire in six months...”

11/7/01 – Corriere della Sera

*Financing and expenses” / “Finanziamento e spese”

“The government did not renew the tax rebate of 50 pounds on each liter of fuel expired on October 31. Now, without the discount, tax revenues increase and will create the necessary funds to cover the costs of participation in the conflict... the Defense estimate that you will need to bear a cost that is around a thousand billion lire in six months...”

**While 6 months of 150 billion lire = 900 billion lire, we proceed with the higher figure of 1,000 billion that is more frequently quoted in newspaper articles and reports. Convert this amount to euros at the same exchange rate as above to arrive at EUR 516.5 million**

**ITA 4Q03: Treat EUR 650 million as immediate spending**

3/14/04 – Corriere della Sera

*Funds halved at the Interior Ministry for the plan on safety” / “Fondi dimezzati al Vinìmìno per il piano sulla sicurezza”

“The new emergency terrorism brings to the fore the problem of the funds allocated for security. After the massacre in Madrid, Italy boosts security measures... For all speak the digits: the request made by the Ministry of Interior was 450,436 million euro, 22.5 million euro arrived. A glance at the detail you...
find that the "voices" were almost halved in some cases reduced by one third. "The funds they know the Treasury are sufficient. They go only adequately distributed."

**This emergency funding increase was a result of the Madrid train bombings on 3/11/04**

**ITA 1Q04: Treat EUR 225 million as immediate spending**

7/2/04 – Corriere della Sera

"Halved cuts in Defense" / "Dimezzati i tagli alla Difesa"

"The maxi amendment of the government and on which will be placed the trust authorizes minor cuts to the defense to 875.5 million, almost half of what was initially expected (1.8 billion). Of these, 282.5 million is the expenditure authorized for infrastructure work and investment of the Armed Forces."

**The earlier announcement of EUR 1.8 billion in defense cuts were announced at the start of July, so we include only the final amount of EUR 875.5 million in the 3Q04 figure**

**ITA 3Q04: Apply EUR 875.5 million as immediate cuts**

10/7/04 – La Stampa

"THE MANAGER OF THE TREASURY: READY FOR THE SECOND PART OF AUTUMN 'Savings and also a new revenue to cut the personal income tax' Siniscalco: A zero balance, a billion for child allowances" / "IL RESPONSABILE DEL TESORO: PRONTI PER LA SECONDA PARTE DELL'AUTUNNO 'Risparmi e anche nuove entrate per tagliare l'Irpef' Siniscalco: manovra a saldo zero, un miliardo per gli assegni famigliari"

"The ministries in 2005 will receive 1.93 billion euro less than they would have guaranteed the laws already in force. Of this figure, the greater part, 1 billion and 357 million, will be taken away from the Ministry of Defense."

10/14/04 – Corriere della Sera

"Ministry of Defence" / "Ministero della Difesa"

"The Ministry of Defense will be the hardest hit by the 2% ceiling. It will have to reduce its expenditure forecasts for 1.358 billion euro, of which 781 for purchases of goods and services and 577 million fixed investment. The Carabinieri will help 1.9 million for computer and information services."

**Net these additional increases in defense cuts against those announced back in July 2004. Take this quarter’s figure as EUR 1.3575 billion, an average of EUR 1.357 billion and EUR 1.358 billion**

12/15/04 – Corriere della Sera

"Price increases on stamps but more money to safety" / "Rincari sui bolli ma più soldi alla sicurezza"

"And with the 2005 Budget, along with recruitment of police officers and police, the money for health care, the salaries of forestry and unemployment for farm laborers, for fishing, publishing and Roma Capitale, there’s also the taxes."

**Then come new hires in the field of security: 1,324 police officers and 1,300 Carabinieri (at a cost of 32 million Euros for the next year, 56 in 2006 and 86 in subsequent years) plus 500 Fire Brigade.**

12/15/04 – La Stampa

"MANY NEW IN MAXIMUMAMENDAMENT TO MANEUVER PRESENTED YESTERDAY. ADDITIONAL HEAVIER IN REGIONS THAT THE BUDGET SFORDERANNO HEALTH increased filings, taxes a nd registration fees Check the IC on industrial warehouses. More funds for security and police forces" / "MOLTE NOVITÀ NEL MAXIMUMAMENDAMENT ALLA MANOVRA PRESENTATOIERI. ADOZIONALI PIÙ PESANTI NELLE REGIONI CHE SFORDERANNO IL BUDGET SANITARIO Aumentano bolli, tasse e imposte di registro Spunta l'Ici sui capanoni industriali. Più fondi per sicurezza e forze di polizia"

"It is expected hiring 1,324 police officers and 1,400 police for a total increase of staff of 2,724 units to be completed by the end of 2006. They will also be hired 500 firefighters. Also coming 92 million for the fight against terrorism, even international..."

**Even while defense funds were slashed in the 2005 budget, funds for police and civil defense were increased modestly. Given the conflict in the 2 news articles regarding the spending horizon of the police funding, we fold the “subsequent years” amount of EUR 82 million, which we would generally expect to be at least 2 years beyond 2006, into one single year (2007)**

**ITA 4Q05: Apply EUR 2.2 billion as immediate cuts**
THE FINANCIAL PLANS TO MAKE PAY FOR YOUR STAY UP TO 5 EURO PER HEAD IN THE BIG CITY.

MORE FUNDS FOR SAFETY

Green light for severance pay and tax on tourism

Part supplementary process was of reducing spending and increasing taxes (modestly) to reduce Italy's budget deficit to 2.8% in accordance with the Maastricht treaty that, in part, established the euro. In several reports, a goal of EUR 35 billion in savings and revenue increases was openly discussed.

With this in mind, we include the 5% increase in defense spending as a positive, unanticipated shock to government spending in the amount of 12.437 – 12.437/1.05 = EUR 592 million.

ITA 3Q07: Spread EUR 904 million over 7.5 years

ITA 4Q06: Treat EUR 699 (+ 237 – 130 + 592) million as immediate spending
“INTESA NELLA MAGGIORANZA SU 100 MILIONI IN PIÙ A CARABINIERI, POLIZIA E POMPIERI
Finanziaria, raddoppiati i fondi per la sicurezza Ma nel ‘suk’ degli altri emendamenti non c’è accord”

“A political agreement prominent center-left found him on security: will be doubled to 200 million EUR of the fund to buy new means Police, Carabinieri and Fire Brigade (including two aircraft fire), law enforcement officers are exempted from the cut overtime; will speed up the hiring of 4,500 new agents already provided for in 2008.”

**ITA 4Q07:** Treat EUR 100 million as immediate spending

7/18/08 – Corriere della Sera
“Police, anticuts protest Pd: Moratti take to the streets” / “Polizia, protesta antitagli Pd: la Moratti scenda in piazza”

“The starting point is the recent Decreto Law no. 112 issued by the government on June 25 in which, for the period 2009-2011, there will be cuts to the chapters ‘security’ and ‘defense’ for more than 3 billion euro.”

7/18/08 – La Repubblica
“Less flying and police goodbye to 40,000 agents and military - The dossier – “They give us 400 million and we remove 2,500 in three years” / “Meno volanti e commissariati addio a 40 mila agenti e militari Il dossier ‘G danno 400 milioni e ce ne togliamo 2.500 in tre anni’”

“On the issue of cuts to security is played between the majority, opposition and trade unions a war of numbers. It begins the government. Economy Minister Giulio Tremonti, said the maneuver before the House, gives 400 million to the sector safety.”

8/7/08 – La Repubblica
“La Russa disputes cuts defense ‘At risk missions abroad’ - The minister, in December the government will have to choose which jobs to delete. ‘We will sell to individuals barracks’” / “La Russa contesta i tagli alla difesa ‘A rischio le missioni all’estero’ - Il ministro: a dicembre il governo dovrà scegliere quelli operazioni eliminare. ‘Venderemo le caserme ai private’”

“Minister, no criticism of Tremonti for cuts totaling 2 billion and 612 million: 1.66 billion of current expenditure, 816 investment and 136 staff in the budget for the next three years of the defense?”

**This last article is from an interview with the Italian Defense Minister Ignazio La Russa. These 3 articles highlight the back and forth over the budget process in 2008 amidst the crumbling global economy. More than EUR 3 billion in cuts over 3 years for defense and security was reduced to EUR 2.612 billion in cuts over 3 years after protests by police and security workers**

**ITA 3Q08:** Apply EUR 2.612 billion in cuts over 3 years

12/8/09 – Corriere della Sera
“Bonus cars, computers and washing machines extending from January” / “Bonus auto, pc e lavatrici la proroga da gennaio”

“The 2010 budget is a decisive step towards final approval, while the government is already thinking about new economic support measures… Higher provisions of the new law of the budget must be brought to… peacekeeping missions (750 million) and the security sector.”

12/27/09 – La Stampa
“TERRORISMO COMMITMENT OF ITALY ‘In Kabul to save our city’ La Russa: the alarm yesterday justifies the continuation of our mission The Minister of Defense” / “TERRORISMO L’IMPEGNO DELL’ITALIA ‘A Kabul per salvare le nostre città’ La Russa: l’allarme di ieri giustifica il proseguimento della nostra missione Il ministro della Difesa”

“The failed attack on the Amsterdam-Detroit flight maybe it was a rude awakening for Western public opinion. Not so for governments that fear is always the threat of Islamic terrorism. ‘Never let down his guard. So we are in Afghanistan,’ said the Minister of Defense Ignazio La Russa… For six months of international missions has just earned 750 million euro. A lot of money.”

**There was very little new spending taking place in Italy at this time, but some creative tax policies freed up a modest amount of funds, EUR 750 million of which went to defense missions in Afghanistan**

**ITA 4Q09:** Treat EUR 750 million as immediate spending

6/18/10 – La Repubblica
“Cuts in police stations and flying so the security loses pieces - The dossier – The effects of government measures: 600 million less” / “Tagli a commissariati e volanti così la sicurezza perde pezzi - Il dossier: Gli effetti delle misure del governo: 600 milioni in meno”

“Are the bitter fruits of the operation of government that imposes cuts ‘linear’ and indistinct than 10 percent to the costs for security, in all 600 million over three years affecting Police, Carabinieri, Financial Police, Forest, Railway Police and border.”

**ITA 2Q10:** Apply EUR 600 million in cuts over 3 years

11/22/10 – Corriere della Sera
“Underlying Cameri; The jet of US attack will be assembled in Italy” / “Alla base di Cameri; l’aereo d’attacco Usa verranno assemblati in Italia”

“It is up to Italy to assemble and review periodically the [Joint Strike Fighter], the American attack aircraft that will replace the old fighter from 2015… Italy, meanwhile, has booked 131 BF to replace the Tornado, the AMX and the Harrier for the Navy aircraft carrier. The Phaco will be operational in 2014, but the whole program will be completed in 2026 at a cost of 17 billion dollars.**

**Whereas the other two entries related to the Joint Strike Fighter/F-35 program were related to setup and development costs, Italy’s purchase of 131 aircraft (for USD 17 billion = EUR 12.49 billion at 11/22/10 exchange rate of USD 1.3612 = EUR 1) is described here**

**ITA 4Q10:** Spread EUR 12.49 billion over 17 years
7/8/11 – La Repubblica
“Missions, cuts League two thousand men and 120 million Napolitano: are only hypothesis; Ok decree. The president wants no to unilateral withdrawals” / “Missioni, i tagli alla lega duemila uomini e 120 milioni Napolitano: sono solo ipotesi; Ok al decreto. Il presidente averte: no a ritiri unilaterali”

“Despite skirmishes Ewe, there is the agreement on cost cuts and soldiers engaged abroad in the second half of 2011 and the decree for the re-financing of internal missions is approved unanimously. … Notwithstanding all the missions, the total cost from the first to the second quarter down from 811 to 694 million, assaying of almost 120 million of euro,” then explains in a press conference [Defense Minister] La Russa.”

7/10/11 – Bloomberg Business
“Italy Slashes Lockheed Martin F35 Order in Defense Shake up”

“Italy will reduce its planned order for Lockheed Martin Corp. F35 fighter jets by about 40 and trim the size of the military as part of a program to reduce defense spending, Defense Minister Giampaolo Di Paola said today. Italy will purchase 90 F35s rather than the planned 131, Di Paola said in Rome before a joint defense committee of both houses of parliament.”

ITA 3Q11: Apply EUR 120 million in immediate cuts

9/30/11 – La Stampa
“CUTS TO THE MINISTRIES, THE DETAIL Development, Economics and Defence pay 5.6 billion on 7 total” / “TAGLI AI MINISTERI, IL DETTAGLIO Sviluppo, Economia e Difesa pagano 5,6 miliardi sui 7 complessivi”

“The dose to 7 billion euro of ministries has focused largely on three: the Ministry of Development, which in 2012 will see a reduction of 2.3 billion euro, Economy (2.1 bn) and the defense (1.2 bn).”

**As this release takes place on the last day of the quarter, we move this shock to the fourth quarter of 2011. Below is another excerpt confirming the amount**

10/13/11 – Corriere della Sera
“Choosing The year, 500 million for 2013 and an additional 500 for 2014

For the ministry led by [Defense Minister] Ignazio La Russa, the ‘slimming’ amounts to about one billion two hundred million. Minister: “The level of efficiency remains untouchable.”

ITA 1Q12: Apply EUR 3.2 billion in cuts over 15 years

9/7/12 – La Stampa
“The decree re draw the geography of Defense” / “I tagli ridisegnano la geografia della Difesa”

“The decree on the ‘spending review’ required the Defense further slimming: cutting 100 million this year, 500 million for 2013 and an additional 500 for 2014.”

ITA 3Q11: Treat EUR 100 million as immediate cuts, plus EUR 60 million in cuts over 2 years

9/27/13 – Corriere della Sera
“Maneuver, more expensive gasoline to the decree blocks Iva” / “Manovra, benzina più cara per il decreto blocca Iva”

“And there’s more. Another 400 million are needed for refinancing military missions abroad until the end of the year. … Before the Council of Ministers today are the costs of the defense, in which flow into those relating to the refinancing of missions abroad. According to calculations it serves around 400 million euro to ensure the continuation of operations”

**As this release takes place on the last day of the quarter, we move this shock to the fourth quarter of 2013**

ITA 4Q11: Apply 1.2 billion in immediate cuts and EUR 60 million in cuts over 2 years

ITA 3Q12: Apply EUR 100 million in immediate cuts, plus EUR 500 million in cuts for 2013 and another EUR 500 million in cuts for 2014

ITA 1Q12: Apply EUR 3.2 billion in cuts over 15 years
### ITA 4Q13: Treat EUR 400 million as immediate spending

**9/16/14 – Corriere della Sera**

"Proposals for a tax on lumber has identified 240 million. The Defense: can anticipate 40,000 redundancies; Here cuts Minister for Minister. Guido and Wolves the primacy of the diet"

"Almost everyone would be able to identify, at least on paper, the savings requested by the Prime Minister Matteo Renzi: 3% on spending, though some with more difficulty than others, starting with the defense."

**The article estimates the defense budget to be approximately EUR 20 billion annually. This 3% cut is preliminary, so we provide more details in the articles below.**

### United Kingdom

**11/26/01 – The Times**

"Forces given #120m for war - War on Terror"

"GORDON BROWN will announce tomorrow an emergency #120 million allocation for the war on terrorism and a Christmas present for 11 million pensioners, while insisting that his spending plans can survive the downturn. After meeting Geoff Hoon, the Defence Secretary, the Chancellor will use his Pre-Budget Report to give the Armed Forces #100 million, including cash for 'urgent operational requirements'. The security services, MI5 and MI6, will be given #20 million for better surveillance equipment and gadgetry to support efforts to track down terrorist funds."

**11/28/01 – The Daily Telegraph**

"News - Pre-Budget report - Police get an extra #30m Security"

"Police in England and Wales are to get an extra #30 million to help cover the costs of anti-terrorist measures required after September 11. Most of the money - #22 million - will go to the Metropolitan Police Service, which has warned of a funding crisis without financial help."

### UK 4Q01: Treat GBP 150 million in immediate spending

**10/25/01 – Corriere della Sera**

"Cuts to ministries for 2 billion of Euros. From the defense savings to 500 million"

"A small part of the necessary resources will come from cuts to ministries... The greatest sacrifice is asked the Defense, that will bring a dowry of half a billion of savings, nearly all taken from 'planning and procurement,' basically weapons."

**12/16/01 – Corriere della Sera**

"The debt rises further: 2,157 billion more guarantees for small businesses"

"Meanwhile, details emerge on the 80 amendments tabled by the government in committee budget... finally they decreased from 500 to 300 million cuts to defense."

**Throughout 2001 there was a lot of chatter in our search results about cuts to defense and defense procurement programs, many of which never materialized. We include a small negative shock to defense spending in the fourth quarter of 2014, though technically this amount was not finalized by the legislature until early January 2015.**

### UK 2Q02: Treat GBP 60 million as immediate spending

**7/16/02 – The Times**

"Defence is given biggest spending rise in 20 years"

"Defence spending has been given its biggest boost for 20 years, with an extra Pounds 3.5 billion over the next three years, a rise in real terms of 1.2 per cent on average each year... The budget will rise from Pounds 29.3 billion in 2002-03 to Pounds 32.78 billion by 2005-06."

**7/16/02 – The Guardian**

"Comprehensive spending review - Armed forces hail biggest cash boost since cold war"
“Britain’s three main security and intelligence agencies, MI5, MI6, and GCHQ, will also get significant budget increases. Their combined budget - the government refuses to reveal the separate budgets of the three agencies - will rise by over 7% annually over the next three years. It will increase from £896m this year to £1.118bn in three years.”

**Take the difference of £1.118 billion and GBP 896 million to arrive at an increase of GBP 222 million**

UK 3Q02: Spread GBP 3.722 (= 3.5 + 222) billion over 3 years

10/1/02 – The Daily Telegraph
"MoD orders £13bn carriers and jets – The choice of aircraft and ships appeared to be compromises"

"BRITAIN is to spend £13 billion on two new aircraft carriers, the largest warships it has ever had, and the aircraft to fly off them, Geoff Hoon, the Defence Secretary, told the Labour party conference yesterday. But the choice of both aircraft and carrier appeared to be compromises forced on the Government by the need to ensure that the Navy has a proven fighter aircraft to provide air cover for the fleet at sea by 2012."

"The Royal Navy announced earlier this year that it was scrapping its 29 Sea Harriers in 2006 leaving the fleet without any air cover until the introduction of the JSF in 2012."

"These purchases were previously announced in July 1998 as part of the Strategic Defence Review white paper/report prepared by the Ministry of Defence. Below is a news article from shortly after the report's release**

7/30/98 – The Guardian
"Spending on strategy Navy offers £9bn lifetime"

"OUR British shipyards have been offered a lifetime by the Royal Navy’s plans to build and equip two new aircraft carriers at a cost of more than £9bn, the Ministry of Defence revealed yesterday. The two carriers, costing £2.2bn to build and each carrying 50 fixed-wing aircraft costing a total of up to £7bn, are a key element of the new rapid reaction forces heralded by this month’s Strategic Defence Review. They are just part of multibillion pound contracts for the Navy, Army and Royal Air Force to be placed in the next two or three years by the MoD’s procurement executive, headed by Sir Robert Walmsley."

"We will net the amounts announced in 1998 against the new, higher amounts totalling GBP 13 billion that were disclosed in October 2002. “New” amounts entered as shocks in this quarter will be GBP 700 million (= 2.9 billion – 2.2 billion) for the aircraft carriers plus GBP 3 billion (= 10 billion – 7 billion) for the aircraft. The spending horizon given for the aircraft is 10 years; we assume this applies to the ships as well given the lack of specific information**

11/28/02 – The Times
"Extra £1bn in reserve for war on Iraq - Cost of conflict"

"GORDON BROWN has set aside £1 billion from Government reserves to help to pay for deploying British troops to fight a war with Iraq. In the most dramatic signal of Britain’s preparations for war, the Chancellor told the Commons that he was setting aside an extra £1 billion to meet Britain’s international defence responsibilities.”

UK 4Q02: Treat GBP 1 billion as immediate spending and spread GBP 3.7 billion over 10 years

4/10/03 – The Times
"A white-knuckle ride for recovery - Budget 2003"

"Knowing that his Budget would be overshadowed by events in Baghdad, [Chancellor] Brown began by confirming that he had set aside £3 billion for the cost of the military conflict. He paid tribute to the Armed Forces for their ‘zeal, bravery and resilience’ in the conflict and he said the nation owed ‘a debt of gratitude to the strong leadership in a difficult time’ of the Prime Minister.”

4/10/03 – Financial Times
"Additional Pounds 330m earmarked to combat terrorism"

"The increased threat of terrorist attacks in Britain was underlined yesterday when an extra Pounds 330m was put aside to help counter the risk of attacks using chemical agents and other weapons of mass destruction."

"The government has also guaranteed a separate line of funding of Pounds 47m for 2003-04... for the Metropolitan police. That will pay for almost 700 extra officers tasked with special counter-terrorism duties in London.”

UK 2Q03: Treat GBP 3.047 (= 3 + 0.47) billion as immediate spending and spread GBP 3.30 million over 3 years

11/28/03 – The Times
"We’ve run out of cash, say defence chiefs"

"THE Ministry of Defence has given a warning that it can no longer meet the basic running costs for Britain’s Armed Forces after losing a spending battle with the Treasury."

"The Treasury accepts that the MoD faces a financial dilemma and has agreed an extra Pounds 400 million spending this year.”

12/11/03 – The Times
"Extra Pounds 800m mainly for MoD; Iraq; Pre-budget report"

"The Ministry of Defence will get the lion’s share of an extra Pounds 800 million allocated for the campaign in Iraq and the war on terror.”
"The money for Iraq, Afghanistan and other operations related to the war on terror is being kept separate and is funded out of the reserves. In his statement yesterday Gordon Brown said an extra Pounds 500 million was being made available this year, and Pounds 300 million next year, raising the overall figure for Iraq and the war on terror from Pounds 5.5 billion to Pounds 6.3 billion."

"The MoD is short of about Pounds 1 billion this financial year to meet basic running costs and has been negotiating with the Treasury for more cash. The Treasury allowed the ministry to spend an additional Pounds 400 million. But Treasury officials said yesterday that no further amount had been authorised, leaving the MoD with a deficit of about Pounds 600 million."

**This last article indicates that the GBP 800 million for the Iraq War and the war on terror is separate from the GBP 400 million given to the Ministry of Defence for "basic running costs" and non-exceptional expenses. Thus, we include them separately in our shock for this quarter**

**We include the GBP 3.7B in defence spending as detailed above but do not net that amount of the GBP 1B for defense modernization from the GBP 400 million given to the Ministry of Defence for "basic running costs" and cuts in 'back office' and support functions.**

**This excerpt from the Chancellor's pre-budget report address to Parliament highlights additional spending on defense and civil defense**

**Note:** The GBP 800 million for the Iraq War and the war on terror is separate from the GBP 400 million given to the Ministry of Defence for "basic running costs" and non-exceptional expenses. Thus, we include them separately in our shock for this quarter.

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**Note:** This excerpt from the Chancellor's pre-budget report address to Parliament highlights additional spending on defense and civil defense.
The government said it needed to make a decision now to replace the four existing nuclear-powered Vanguard class submarines because it would take 17 years to design, build and commission new submarines in order to have the first in operation by 2024. Some outside experts have questioned this order to have the first in operation by 2024. Some outside experts have questioned this decision, saying Britain could defer the decision for four or more years. The cost of the submarines, expected to be built in Britain, was estimated at between Pounds 15bn and Pounds 20bn at current prices. The costs would be incurred mainly between 2012 and 2027, and would be the equivalent of about 3 per cent of the defence budget.

The security and intelligence services were allotted another Pounds 135 million in immediate spending to meet the costs of military operations, including Iraq.

The cost of Britain's military operations in Iraq and Afghanistan since 2003 is set to exceed Pounds 5 billion by next year after Gordon Brown announced a further Pounds 800 million for the two campaigns.

The White Paper proposes the replacement of the Trident submarine fleet with new nuclear-powered submarines to run from about 2025 to 2055.

The Defence White Paper says upgrading the Trident submarine fleet at a cost of Pounds 15bn to Pounds 20bn is 'cheaper' than other options for maintaining Britain's nuclear weapon system. However, senior defence sources at the MoD confirmed that the running costs of the replacement for the Trident system would add more than Pounds 1.5bn a year – up to 5 per cent of the defence budget – raising the total cost to more than Pounds 65bn over 30 years.

"The government said it needed to make a decision now to replace the four existing nuclear-powered Vanguard class submarines because it would take 17 years to design, build and commission new submarines in order to have the first in operation by 2024. Some outside experts have questioned this order to have the first in operation by 2024. Some outside experts have questioned this decision, saying Britain could defer the decision for four or more years. The cost of the submarines, expected to be built in Britain, was estimated at between Pounds 15bn and Pounds 20bn at current prices. The costs would be incurred mainly between 2012 and 2027, and would be the equivalent of about 3 per cent of the defence budget."

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UK 4Q05: Apply GBP 715 (= 580 + 135) million in immediate spending

"The cost of Britain's military operations in Iraq and Afghanistan since 2003 is set to exceed Pounds 5 billion by next year after Gordon Brown announced a further Pounds 800 million for the two campaigns."

UK 1Q06: Apply GBP 800 million in immediate spending

12/7/06 – The Daily Telegraph
"Extra spending for security services"

"COUNTERterrorist agencies received a cash boost from the Chancellor to help recruit more staff and buy new equipment. MI5, MI6, the anti-terror police and GCHQ will get an extra Pounds 84m next year."

UK 4Q06: Apply GBP 84 million in immediate spending

3/2/07 – The Times
"Counter-terrorism spending up; Security; Summaries; Budget 2007"

"The Budget gave security and intelligence services Pounds 86.4 million extra to fund the rising number of counterterrorist operations. Treasury sources said that the sum, to be shared between MI5, MI6, GCHQ, the signals intelligence base, and Scotland Yard's counter-terrorist section, was in addition to the Pounds 84 million allocated in the December Pre-Budget Report."

3/2/07 – Financial Times
"Defence faces squeeze next year SECURITY"

"It announced a Pounds 400m addition to special reserves to cover costs of military operations in Iraq and Afghanistan next year, and officials said a further increase could be announced during the year. In 2006-07, operations in Iraq were estimated to have cost Pounds 1bn and in Afghanistan Pounds 770m."

UK 1Q07: Apply GBP 486.4 (= 400 + 86.4) million as immediate spending; spread GBP 20 billion over 15 years from 2012-13 to 2026-27 and spread GBP 45 billion over 30 years from 2025-26 to 2054-55

7/26/07 – The Times
"Go-ahead for Pounds 4bn aircraft carriers"

"The long-awaited decision to go ahead with the two carriers, announced in the Commons by Des Browne, the Defence Secretary, followed negotiations with the Treasury on defence spending for the
next three years. The settlement reached, as part of the Government’s comprehensive spending review, will result in the MoD’s budget rising by Pounds 7.7 billion over the next three years, the equivalent of a real-term, above-inflation increase of 1.5 per cent in each of the three years.”

**UK 3Q07: Spread GBP 7.7 billion over 3 years from 2008-09 to 2010-11**

10/10/07 – The Times

“Pounds 4bn more for military deployment; Autumn Budget”

“Another Pounds 400 million has been allocated by the Treasury for operations in Iraq and Afghanistan for next year, taking the total spent so far on these two campaigns to Pounds 6.6 billion since 2001. The extra funds will not be enough to ease the problems that will arise over expensive new equipment procurements, most notably Pounds 3.9 billion for two aircraft carriers.”

10/10/07 – The Times

“Fight against terrorism to have own funding as extra Pounds 1bn is promised; Autumn Budget”

“An additional Pounds 1 billion is to be spent on national security and counter-terrorism over the next three years, with the creation of a single anti-terror budget. The total of Pounds 3.5 billion by 2010-11 will be triple the amount provided at the time of the September 11 attacks.”

**UK 4Q07: Apply GBP 400 million in immediate funding and spread GBP 1 billion over 3 years**

3/18/08 – The Independent

“MoD to pay £13bn to replace RAF refuelling planes”

“The Ministry of Defence yesterday awarded a £13bn contract to a consortium led by EADS to supply and maintain a new fleet of mid-air refuelling tankers to the Royal Air Force.”

“Under the contract terms, the MoD has agreed to pay the consortium £13bn over 27 years for the new fleet of planes, as well as their upkeep, training of personnel, ground services and other infrastructure.”

“Since this announcement takes place in the final week of the quarter, we include this spending shock in the second quarter of 2008”**

**UK 2Q08: Spread GBP 13 billion over 27 years**

7/4/08 – The Guardian

“Pounds 4bn MoD deal for giant aircraft carriers fuels concerns over defence spending: Construction of warships will secure 5,600 jobs; Military experts say deal could hit troops’ budget”

“The government yesterday signed contracts for two aircraft carriers, the biggest ships ever built for the navy, in a move which raised new fears about the pressures on Britain’s defence budget, for the army in particular. The contracts, worth nearly pounds 4bn for BAE Systems and VTGroup, were welcomed by ministers.”

7/4/08 – The Times

“Pounds 4bn budget-busting carrier deal defended by ministers”

“The press release issued for the occasion referred to the ‘Pounds 3 billion’ contract, but Lady Taylor acknowledged later that the total cost, taking into account inflation estimates and other risk factors, was actually Pounds 3.9 billion. The two carriers, to be named HMS Queen Elizabeth and HMS Prince of Wales, will come into service in 2014 and 2016 respectively.”

**UK 2Q09: Supplies GBP 4.0 billion in immediate spending**

6/29/09 – The Times

“Thinner blue line raises fear of crime wave; Police face deep cuts to save £480 million”

“Police forces must cut spending by £480 million this year, prompting fears that officer numbers may fall when increasing unemployment could bring a surge in crime, The Times has learnt.”

“The estimate of £480 million of cuts comes from the Association of Police Authorities. Bob Jones, its chairman, said that the police service had a good record on savings but was being asked to find much deeper cuts.”

“**This article is from the final week of the quarter, so we include this shock in the third quarter of 2009**”**

**UK 3Q09: Apply GBP 480 million in immediate cuts**

12/10/09 – The Times

“Armed Forces face outbacks amid threat to jobs at MoD”

“Cuts in the defence budget were threatened by the Chancellor yesterday when he excluded the Armed Forces from his list of top-priority plans.”

“However, he pledged a further £2.5 billion from Treasury contingency reserves to pay for the war in Afghanistan next year, which will increase the overall bill since 2001 to £8 billion. By the end of 2009-10 more than £14 billion of funding from the reserves will have been spent on resourcing the cost of operations in Iraq and Afghanistan. This is in addition to the defence budget.”

**UK 4Q09: Apply GBP 2.5 billion in immediate spending**

2/1/10 – The Times
"Brown goes into battle with billions for defence; Closer links with France key to Forces review"

“The Prime Minister will use the launch of a Green Paper on the future of the Armed Forces to promise a new generation of warships and fast jets over the coming decade. He will also guarantee an extra £1.5 billion for the war in Afghanistan, and promise to safeguard defence spending from any cuts next year.”

**This amount is a bit preliminary, but we confirm it later on in the quarter** *

3/25/10 – The Daily Telegraph

“Extra £4bn for Afghan war”

“More than £4 billion of funding for operations in Afghanistan was announced by Alistair Darling. He said more than £4 billion was being allocated from next year’s Treasury Reserve to pay for the campaign in Afghanistan.”

**We assume that this figure includes the £2.5 billion from last December and the rumored GBP 1.5 billion from February. We include in 1Q10 only this "new" GBP 1.5 billion. While this announcement is close to the end of the first quarter, we do not move it to the second quarter because of the rumors from February.**

UK 1Q10: Apply GBP 1.5 billion in immediate spending

10/15/10 – The Guardian

“MoD forced to pay extra pounds 2.7bn for unwanted Typhoon jets”

“More than pounds 3bn was spent last year on aircraft the RAF did not want and on delays in building two carrier carriers, parliament’s independent watchdog reveals today. The MoD will get 16 more Typhoons than it asked for, because the Ministry of Defence would have had to pay for them anyway due to its contract with its joint manufacturer, the Eurofighter consortium of British, German, Italian and Spanish aerospace firms. The MoD decided that to buy the planes, at a cost of pounds 2.7bn, was the "best value for money in the circumstances", says the National Audit Office. The RAF will now get 160 Typhoons; though this is less than the 232 initially ordered during the cold war, it is 16 more than the RAF later agreed it could manage with.”

10/16/10 – The Guardian

“Fox claims victory as Cameron orders that defence is spared from deep cuts: MoD budget falls by 8% but Treasury sought 10% Army numbers will stay largely unchanged”

“The MoD’s annual pounds 37bn budget will be cut by 8% between 2011-2015. It will face an effective cut of a further 9.5% as it deals with a pounds 38bn ‘overspend’ over the next 10 years in its procurement budget inherited from Labour. A saving of pounds 750m will be made in the budget of the Trident nuclear deterrent.”

**The defence budget for salaries, etc is separate from the equipment/procurement budget, so we include the savings from delaying the Trident replacement separately from the 8% savings. 8% of GBP 37 billion is approximately GBP 2.96 billion.**

10/20/10 – The Times

“Defence industry: Calling off battle stations”

“But not all the changes will be negative for the industry. For example, the Government will press ahead with two new aircraft carriers at a cost of £5.2 billion and will spend a further £750 million to install an unplanned catapult system — work that, no doubt, BAE will be eyeing eagerly.”

**Perhaps a coincidence, but this increase in funding exactly matches the cut from delaying the Trident replacement. We record neither, as the net change is zero**

10/20/10 – The Daily Telegraph

“Security services given millions to fight cyber wars”

“THE security services are to be given extra funds to cope with the threat of Mumbai-style terrorist attacks and cyber terrorism, the defence review says. An increased spending commitment from the Government includes an extra £650 million to cope with the threat of cyber wars launched by foreign states seeking to shut down Britain’s power and communication networks.”

“THE £650 million is to be spent over the next four years on a "transformative" National Cyber Security Programme aimed at tackling the risks involved in a modern digital economy.”

12/10/10 – The Daily Telegraph

“The £3.6bn Nimrods junked without a single flight”

“The minister said: ‘I have considered a range of options for the disposal of the Nimrod MRA4 fleet and concluded that the most cost-effective option is for the nine aircraft to be disposed of, following recovery of equipment and systems that can be used elsewhere. We estimate that about £2 billion will be saved over the next 10 years by not bringing the aircraft into service.’”

UK 4Q10: Apply GBP 2.96 billion in savings over 4 years from 2011-12 to 2014-15; apply GBP 2.7 billion in immediate spending; apply GBP 650 million in new spending over 4 years from 2011-15; spread GBP 2 billion in cuts over 10 years from 2011-12 to 2020-21

4/8/11 – The Daily Telegraph

“Cameron rethinks defence cuts; RAF Tornados and Royal Navy frigates could escape scrapyard as Libya conflict raises questions about our fighting force Public anger helps MoD win battle with Treasury.”

“DAVID CAMERON is reconsidering the Coalition’s defence cuts in the light of the conflict in Libya, The Daily Telegraph has learnt... In the first sign of compromise on defence cuts, Mr Cameron has ordered the Treasury to give the Ministry of Defence a reprieve on its overspent 2011–12 budget. The £800 million climbdown will spare the Armed Forces further cuts this year.”

UK 2Q11: Apply GBP 800 million in immediate spending

6/24/11 – The Daily Telegraph
**Fight to oust Gaddafi will cost £260m for six months**

MINISTERS have budgeted for a six-month war in Libya costing more than a quarter of a billion pounds, it emerged yesterday... Dr Liam Fox, the Defence Secretary, told MPs that the cost was made up of £120 million in fuel and other operating costs for aircraft, warships and submarines. Another £140 million will be required to replace the missiles and bombs that have been used in raids on Col Gaddafi's forces and installations."

**Since this announcement takes place in the final week of the quarter, we include this spending shock in the third quarter of 2013**

UK 3Q11: Apply GBP 260 million in immediate spending

5/16/12 – The Guardian
"Defence cuts help MoD win war against ‘woeful budget indiscipline’"

"The MoD has up to £160bn to spend on equipment over the next 10 years. The money will be spent on programmes such as the two aircraft carriers, 14 Chinook helicopters, Type 45 destroyers and Type 26 frigates.

"The main projects to which the MoD has committed funding:
- Fourteen Chinook helicopters, extending the life of Apache helicopters and upgrade of Pumas.
- Armoured fighting vehicles worth about £4.5bn over 10 years, and a £1bn upgrade of the Warrior Armoured Fighting Vehicle.
- Two Queen Elizabeth class aircraft carriers, the remainder of the Type 45 destroyers and the new Type 26 frigates; the Astute class nuclear submarines.
- Investment in Wildcat helicopters and the Merlin helicopter upgrade programme.
- The Voyager air-to-air refueller and troop transporter, the A400M air transporter and the Air Seeker surveillance aircraft.
- An additional C17 aircraft.
- Continued investment in Typhoon and Joint Strike Fighters.
- £7bn invested in complex weapons, such as smart missiles and torpedos."

5/15/12 – The Daily Telegraph
"Defence budget is back in the black, but cuts will continue"

"In addition to the £1.52bn, another £8bn has been left unallocated and can be spent on new equipment chosen by commanders. Unmanned aircraft, communications systems and cyber-warfare kit are all high on the Service chiefs’ agenda."

"Within his budget, Mr Hammond said he had been able to set aside a £4 billion contingency fund, “the first time” the MoD has had such surplus."

**This GBP 160 billion is not new funding. It is simply a re-packaging of the existing capital projects after the cuts and reorganization that occurred in 2010-11 in response to the Strategic Defence Review. We exclude the majority of this amount but include the GBP 4 billion contingency fund and the unallocated GBP 8 billion as a positive spending shock**

UK 2Q12: Spread GBP 12 billion over 10 years

12/6/12 – The Times
"Cuts in short term could cause pain in long term"

"George Osborne announced a £2.45 million reduction in the MoD resource budget next year, to be followed by a £4.9 million cut the year after. These cuts of 1 per cent and 2 per cent, respectively, are in line with the belt-tightening imposed on most government departments."

UK 4Q12: Apply GBP 245 million in immediate cuts and GBP 490 million in cuts for 2014-15

6/27/13 – The Daily Telegraph
"Defence budget helps MoD win war against ‘woeful budget indiscipline’"

"Defence cuts help MoD win war against ‘woeful budget indiscipline’ as the number of police officers could fall as a result of the Spending Review after it emerged that consular functionalities will be cut by a further £269 million."

**Since these announcements take place in the final week of the quarter, we apply these shocks to the third quarter of 2013**

7/10/13 – Financial Times
New warning to UK on threat from cyber spies

"The Treasury has announced that it will spend another £210m on cyber security in 2015-16. But parliament's intelligence and security committee is urging the government to consider another step-change in expenditure, given the scale of the risk."

UK 3Q13: Apply GBP 1,144 billion (= 0.875 + 0.269) in cuts for 2014-15; apply GBP 71 million in new spending for 2014-15; apply GBP 210 million in new spending for 2015-16

United States: additions/modifications to Ramey defense news narrative

7/26/02 – Washington Post
"House Votes Billions for Intelligence; Panel Says Anti-Terror Fight Creates 'Gaps' in U.S. Coverage"

"The House has approved a multibillion-dollar increase in intelligence spending at the same time its intelligence committee determined that gaps have developed in critical national security areas because so much emphasis is being given to the global war on terrorism. The House late Wednesday passed the fiscal 2003 intelligence authorization bill containing an estimated $35 billion to fund spending next year for operations at the CIA, National Security Agency and other parts of the federal government's intelligence community.

**This $35B intelligence bill was sent to the Senate in July and signed into law in November. This action is not recorded in Ramey's defense news narrative, so we include it here. No discounting is applied since the spending is for fiscal year 2003 (ending 9/30/03)**

USA 4Q02: Apply $35 billion in immediate spending

11/2/05 – The Wall Street Journal
"Bush Proposes $7.1 Billion Outlay to Fight Pandemic-Flu Threat"

"President Bush proposed spending $7.1 billion over three years to prepare for the threat of pandemic influenza, with most of the money directed at increasing domestic vaccine production and stockpiles."

12/20/05 – The Wall Street Journal
"House Clears Deficit-Cut Bill, Pentagon Budget"

"The 212-206 House vote... which carries with it... funds for a White House-backed initiative to prepare the nation for potential pandemics such as avian flu."

"Avian influenza: $3.79 billion in funding, plus liability protection for U.S. firms making vaccines to fight threatened pandemics."

**Funding for influenza vaccines is not recorded in Ramey's defense news series. We include the actual amount spent (as opposed to the proposal by President Bush) of $3.79 billion**

USA 4Q05: Apply $3.79 billion in immediate spending

6/16/06 – The New York Times
"Deal Reached on Spending Bill for Iraq, Storm Relief"

"House and Senate negotiators reached agreement last night on a $94.5 billion package to pay for Iraq war and hurricane recovery costs, after shading numerous extraneous provisions that the Senate had wanted to stuff into the bill."
"The package squeezed in a few other priority items, including $500 million in agricultural aid – cut from nearly $4 billion in the Senate version – along with the $1.2 billion in border security funding and $2.3 billion in avian flu prevention that Bush had additionally requested."

**Ramey’s series accounts for the increase in military spending that this legislation authorizes, but does not include any items related to influenza responses or border security. We include both in addition to her figures.**

USA 2Q06: Apply $3.5 billion in immediate spending

8/13/10 – Washington Post

*Senate passes $600 million bill to beef up border security*

"In a special session Thursday, the Senate passed a $600 million bill to put more agents and equipment along the Mexican border. The voice vote in a nearly empty chamber sends the legislation to President Obama, who planned to sign it into law Friday."

"The border security measure would fund the hiring of 1,000 new Border Patrol agents to be deployed at critical areas along the border, 250 more Immigration and Customs Enforcement agents, and 250 more Customs and Border Protection officers."

**This item is not included in Ramey’s series.**

USA 3Q10: Apply $600 million in immediate spending

1/16/14 – Washington Post

*Parsing the House’s $1.1 trillion spending bill*

"The House on Wednesday passed a massive $1.1 trillion spending bill that would fund federal agencies through the rest of the fiscal year and end the threat of more government shutdowns."

"The Department of Homeland Security will see a $336 million cut in funding, with most of the reductions at the Transportation Security Administration."

"The measure includes $85.2 billion for military operations in Afghanistan, a $2 billion cut from fiscal 2013 due in part to ongoing troop reductions."

"The agreement includes $10.6 billion for Customs and Border Protection, about $220 million more than the previous fiscal year."

**This bill was signed into law as HR 83.**

USA 4Q14: Treat $65.3 billion as immediate spending

12/10/14 – The Washington Post

*Congressional leaders agree on $1.01 trillion spending bill*

"Congressional leaders unveiled a massive $1.01 trillion spending bill Tuesday night that will keep most of the federal government funded through September."

"An additional $64 billion would be set aside for overseas military operations, including the fight against the Islamic State and to assist European countries facing Russian aggression."

12/4/14 – The Washington Post

*Nonmilitary provisions snag defense bill*

"The bill would empower the Obama administration to spend $1.3 billion on a new ‘counterterrorism partnership fund.’ The program, which Obama unveiled in May, would seek to combat extremist groups, including affiliates of al-Qaeda, by strengthening foreign militaries rather than sending U.S. soldiers to fight overseas."

**This bill was signed into law as HR 83.**

USA 4Q14: Treat $65.3 billion as immediate spending