



Ipsos Poll Conducted for Reuters

Presidential and Congressional Approval 04.09.13

These are findings from an Ipsos poll conducted for Thomson Reuters from April 5 - April 9, 2013. For the survey, a sample of 1,457 Americans ages 18+ were interviewed online. The precision of the Reuters/Ipsos online polls is measured using a [credibility interval](#). In this case, the poll has a credibility interval of plus or minus 2.9 percentage points. For more information about credibility intervals, please see the appendix.

The data were weighted to the U.S. current population data by gender, age, education, and ethnicity. Statistical margins of error are not applicable to online polls. All sample surveys and polls may be subject to other sources of error, including, but not limited to coverage error and measurement error. Figures marked by an asterisk (*) indicate a percentage value of greater than zero but less than one half of one per cent. Where figures do not sum to 100, this is due to the effects of rounding.

PRESIDENTIAL AND CONGRESSIONAL APPROVAL

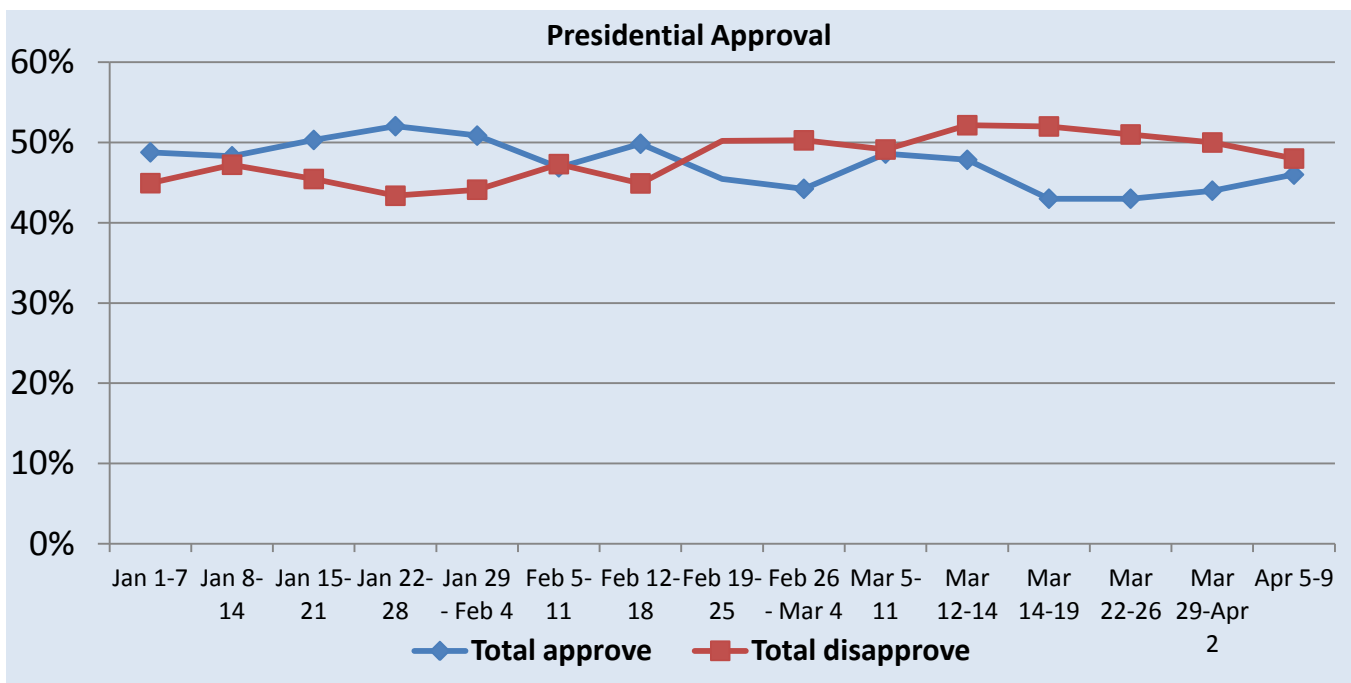
Q1. Generally speaking, would you say things in this country are heading in the right direction, or are they off on the wrong track?

Right direction	28%
Wrong track	57%
Don't know	15%

Q2. Overall, do you approve or disapprove about the way Barack Obama is handling his job as President?

Q2a. Is that strongly (approve/disapprove) or somewhat (approve/disapprove)? (Asked of those who selected "approve" or "disapprove") Q2b. If you had to choose, do you lean more towards approve or disapprove? (Asked of those who selected "don't know")

Strongly approve	22%
Somewhat approve	19%
Lean towards approve	5%
Lean towards disapprove	4%
Somewhat disapprove	13%
Strongly disapprove	32%
Not sure	6%
Total approve	46%
Total disapprove	48%



Q3. In your opinion, which political party has a better plan, policy or approach to each of the following?

	<u>Democratic Party</u>	<u>Republican Party</u>	<u>Independents</u>	<u>Other</u>	<u>None</u>	<u>Don't know</u>
Healthcare	35%	21%	5%	1%	18%	21%
The war on terror	27%	24%	5%	2%	17%	25%
Iran	24%	20%	4%	1%	18%	33%
The US Economy	30%	24%	6%	1%	19%	20%
Immigration	32%	20%	4%	2%	18%	23%
Social Security	31%	20%	5%	2%	19%	23%
Medicare	33%	20%	5%	1%	18%	23%
Taxes	31%	23%	6%	1%	18%	21%
Gay marriage	41%	12%	4%	2%	16%	24%
Jobs and employment	31%	24%	5%	1%	16%	22%
The federal government deficit	26%	24%	4%	1%	21%	23%
Supporting small businesses	32%	27%	5%	1%	12%	23%
Education	31%	19%	5%	2%	19%	24%
Foreign policy	28%	22%	5%	2%	15%	28%
Women's rights	40%	14%	6%	2%	15%	23%
The environment	36%	15%	7%	3%	15%	25%
Israel	23%	23%	4%	2%	17%	32%

How to Calculate Bayesian Credibility Intervals

The calculation of credibility intervals assumes that Y has a binomial distribution conditioned on the parameter θ , i.e., $Y|\theta \sim \text{Bin}(n, \theta)$, where n is the size of our sample. In this setting, Y counts the number of “yes”, or “1”, observed in the sample, so that the sample mean (\bar{y}) is a natural estimate of the true population proportion θ . This model is often called the likelihood function, and it is a standard concept in both the Bayesian and the Classical framework. The Bayesian ¹ statistics combines both the prior distribution and the likelihood function to create a posterior distribution. The posterior distribution represents our opinion about which are the plausible values for θ adjusted after observing the sample data. In reality, the posterior distribution is one’s knowledge base updated using the latest survey information. For the prior and likelihood functions specified here, the posterior distribution is also a beta distribution ($\pi(\theta|y) \sim \beta(y+a, n-y+b)$), but with updated hyper-parameters.

Our credibility interval for ϑ is based on this posterior distribution. As mentioned above, these intervals represent our belief about which are the most plausible values for ϑ given our updated knowledge base. There are different ways to calculate these intervals based on . Since we want only one measure of precision for all variables in the survey, analogous to what is done within the Classical framework, we will compute the largest possible credibility interval for any observed sample. The worst case occurs when we assume that $a=1$ and $b=1$ and . Using a simple approximation of the posterior by the normal distribution, the 95% credibility interval is given by, approximately:

$$\bar{y} \pm \frac{1}{\sqrt{n}}$$

For this poll, the Bayesian Credibility Interval was adjusted using standard weighting design effect $1+L=1.3$ to account for complex weighting²

Examples of credibility intervals for different base sizes are below. Ipsos does not publish data for base sizes (sample sizes) below 100.

Sample size	Credibility intervals
2,000	2.5
1,500	2.9
1,000	3.5
750	4.1
500	5.0
350	6.0
200	7.9
100	11.2

¹ *Bayesian Data Analysis, Second Edition, Andrew Gelman, John B. Carlin, Hal S. Stern, Donald B. Rubin, Chapman & Hall/CRC | ISBN: 158488388X | 2003*

² *Kish, L. (1992). Weighting for unequal Pi. Journal of Official, Statistics, 8, 2, 183200.*