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Interview dates: Sept 12-17, 2012
Base: 737 registered voters (RV)
Base for Voting Intention: 591 Likely Voters (LV)

**Ipsos Poll conducted for Reuters
DAILY ELECTION TRACKING 09.17.12**

These are findings from an Ipsos poll conducted for Thomson Reuters from Sept 12-17, 2012. For the survey, a sample of 737 American registered voters (age 18 and over) was 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 4.1 percentage points for all respondents. 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 a per cent. Where figures do not sum to 100, this is due to the effects of rounding.*

DAILY ELECTION TRACKER

Q1. If the 2012 Presidential Election were being held today and the candidates were [ROTATE] Barack Obama for president and Joe Biden for vice president, the Democrats, and [INSERT CANDIDATE BELOW AND ROTATE LIST] Mitt Romney for president and Paul Ryan for vice president, the Republicans [END ROTATE], for whom would you vote?

	<u>All LIKELY Voters (LV)</u>	<u>All Registered Voters (RV)</u>	<u>Democrats (RV)</u>	<u>Republicans (RV)</u>	<u>Independents (RV)</u>
Barack Obama for president and Joe Biden for vice president, the Democrats	48%	46%	82%	8%	34%
Mitt Romney for president and Paul Ryan for vice president, the Republicans	43%	41%	8%	84%	40%
Wouldn't vote	1%	4%	2%	4%	11%
None / Other	3%	3%	3%	2%	3%
Don't know / Refused	5%	7%	6%	3%	12%

Q2. In your opinion, which candidate for President has a better plan, policy or approach to each of the following?

		<u>All Registered Voters (RV)</u>	<u>Democrats (RV)</u>	<u>Republicans (RV)</u>	<u>Independents (RV)</u>
Healthcare	Barack Obama, Democrat	42%	74%	12%	25%
	Mitt Romney, Republican	30%	6%	62%	28%
	None	14%	11%	12%	34%
	Don't know	14%	9%	15%	13%
The war on terror	Barack Obama, Democrat	40%	67%	14%	28%
	Mitt Romney, Republican	26%	5%	53%	23%
	None	15%	13%	15%	29%
	Don't know	19%	15%	18%	20%
The US Economy	Barack Obama, Democrat	37%	65%	11%	21%
	Mitt Romney, Republican	34%	8%	68%	36%
	None	15%	14%	12%	31%
	Don't know	14%	13%	8%	13%
Immigration	Barack Obama, Democrat	31%	55%	10%	17%
	Mitt Romney, Republican	28%	6%	57%	25%
	None	19%	17%	14%	40%
	Don't know	22%	21%	19%	18%



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		<u>All Registered Voters (RV)</u>	<u>Democrats (RV)</u>	<u>Republicans (RV)</u>	<u>Independents (RV)</u>
Social Security	Barack Obama, Democrat	41%	67%	16%	27%
	Mitt Romney, Republican	28%	5%	56%	29%
	None	15%	13%	14%	27%
	Don't know	17%	15%	14%	17%
Medicare	Barack Obama, Democrat	43%	72%	16%	25%
	Mitt Romney, Republican	27%	5%	57%	18%
	None	15%	11%	16%	35%
	Don't know	15%	12%	11%	22%
Taxes	Barack Obama, Democrat	43%	74%	12%	31%
	Mitt Romney, Republican	30%	7%	64%	21%
	None	12%	9%	11%	28%
	Don't know	14%	10%	13%	20%
Gay marriage	Barack Obama, Democrat	42%	66%	17%	36%
	Mitt Romney, Republican	23%	6%	50%	7%
	None	17%	15%	14%	35%
	Don't know	19%	14%	19%	22%
Jobs and employment	Barack Obama, Democrat	40%	70%	12%	23%
	Mitt Romney, Republican	36%	8%	72%	35%
	None	12%	11%	9%	31%
	Don't know	12%	11%	7%	12%
The federal government deficit	Barack Obama, Democrat	29%	51%	10%	14%
	Mitt Romney, Republican	34%	10%	68%	26%
	None	20%	21%	14%	40%
	Don't know	16%	17%	8%	20%

PARTY ID (REGISTERED VOTERS)

Strong Democrat	18%
Moderate Democrat	22%
Lean Democrat	7%
Lean Republican	10%
Moderate Republican	12%
Strong Republican	16%
Independent	11%
None of these	2%
DK	2%

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 ($\bar{y} = Y/n$) 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 Bayesian¹ 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 $\pi(\theta/y)$. 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 $y = n/2$. 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.