

Ipsos Poll **Core Political Data**

April 20, 2022

Ipsos Core Political Data

These are findings from an Ipsos poll conducted April 18-19, 2022. A sample of 1,005 Americans ages 18+ were interviewed online for this survey.

This included 459 Democrats, 360 Republicans, and 133 independents

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 the following percentage points:

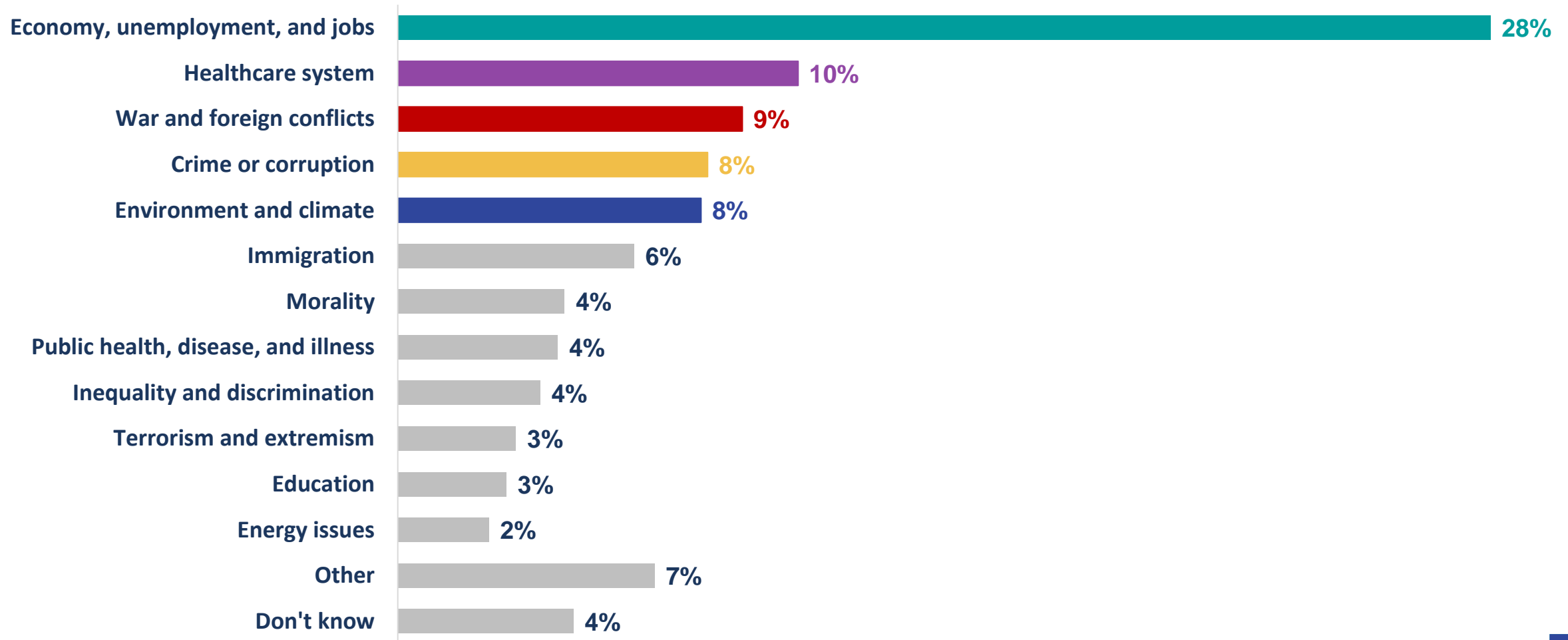
3.8 for All Adults, 5.6 for Democrats, 6.3 for Republicans, and 10.4 for independents

The data from this survey was weighted to the U.S. current population data using Gender, Age, Education, Ethnicity, and Region

- ❖ 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 because of rounding

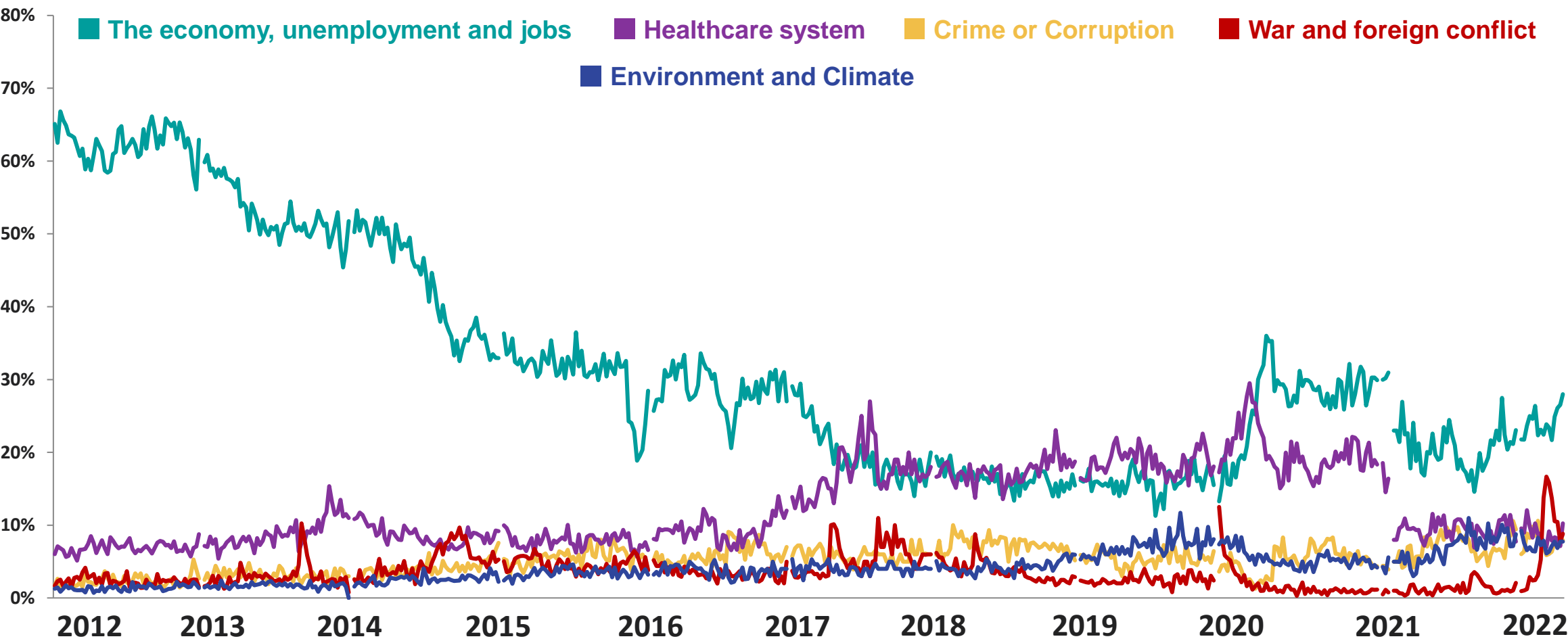
Most Important Problem Facing America

In your opinion, what is the most important problem facing the U.S. today?



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*Prior to February 2021, "Economy, generally" and "Unemployment/lack of jobs" were asked separately, results on chart display the sum of both issues through that date. Have since been combined to create "Economy, unemployment, and jobs". Other changes include "system" being added to "healthcare", and "Inequality and discrimination" and "Public health, disease, and illness" were added as new issues.

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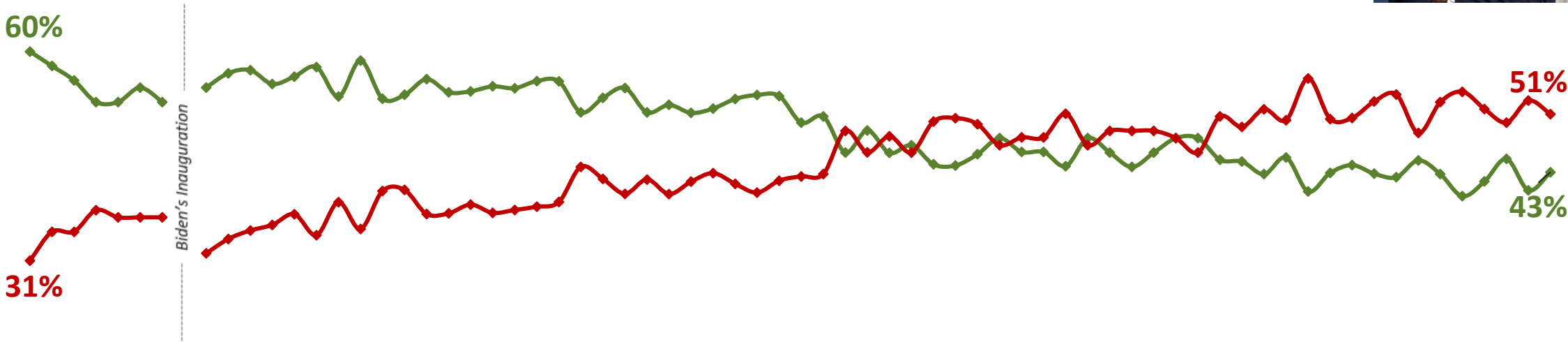
	All Americans	Democrats	Republicans	Independents
Economy, unemployment, and jobs	28%	20%	33%	36%
War and foreign conflicts	9%	10%	8%	6%
Immigration	6%	2%	13%	2%
Terrorism and extremism	3%	3%	3%	3%
Healthcare system	10%	12%	6%	15%
Public health, disease, and illness	4%	7%	2%	2%
Energy issues	2%	3%	2%	1%
Morality	4%	2%	7%	7%
Education	3%	3%	3%	3%
Crime or corruption	8%	11%	7%	5%
Environment and climate	8%	14%	3%	5%
Inequality and discrimination	4%	6%	1%	3%
Other	7%	6%	8%	4%
Don't know	4%	3%	2%	8%

Joe Biden's Weekly Job Approval

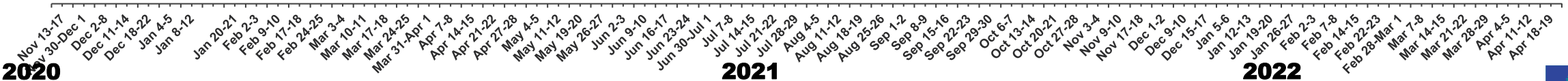
Overall, do you approve or disapprove of the way Joe Biden is handling his job as president? (previously 'president-elect')



Total Approve

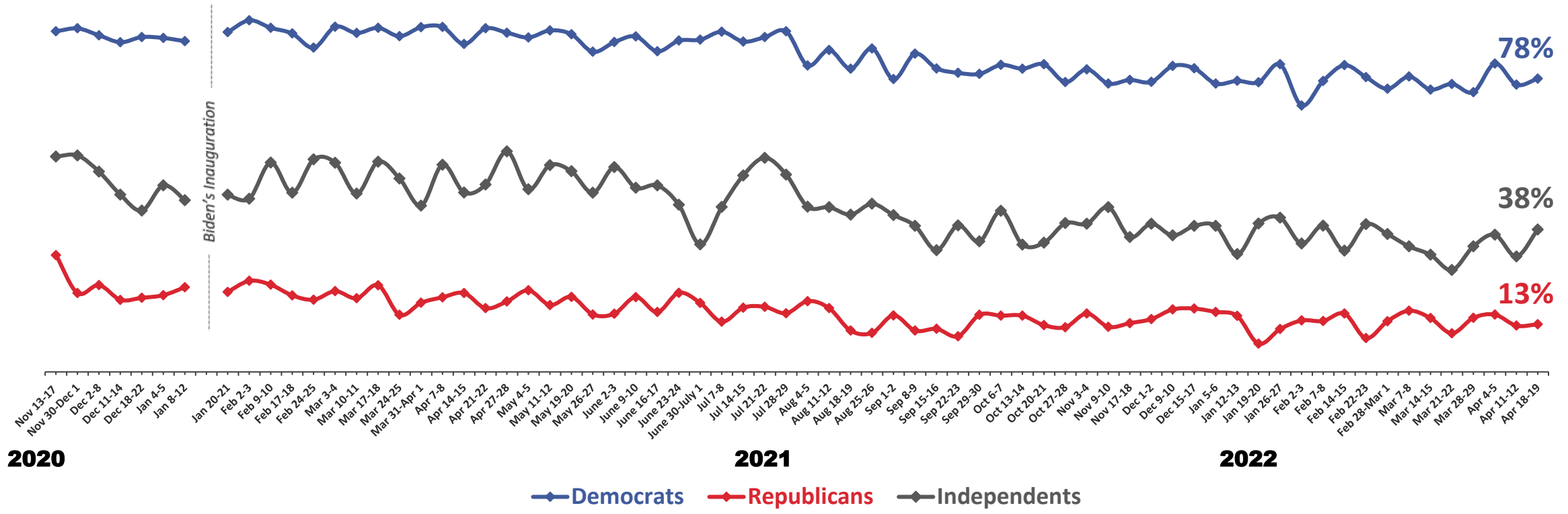


Total Disapprove



Joe Biden's Weekly Job Approval by Partisanship

Overall, do you approve or disapprove of the way Joe Biden is handling his job as president? (previously 'president-elect')



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 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 ($\pi(\frac{\theta}{y}) \sim \beta(y+a, n-y+b)$), 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 $\pi(\frac{\theta}{y})$. 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 $1+L=1.5$ to account for complex weighting²

Examples of credibility intervals for different base sizes are below:

SAMPLE SIZE	CREDIBILITY INTERVALS
2,000	2.7
500	5.4
100	12.0

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.



ABOUT IPSOS

Ipsos ranks third in the global research industry. With a strong presence in 87 countries, Ipsos employs more than 16,000 people and has the ability to conduct research programs in more than 100 countries. Founded in France in 1975, Ipsos is controlled and managed by research professionals. They have built a solid Group around a multi-specialist positioning – Media and advertising research; Marketing research; Client and employee relationship management; Opinion & social research; Mobile, Online, Offline data collection and delivery.

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ISIN code FR0000073298, Reuters ISOS.PA, Bloomberg IPS:FP

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We believe that our work is important. Security, simplicity, speed and substance applies to everything we do.

Through specialisation, we offer our clients a unique depth of knowledge and expertise. Learning from different experiences gives us perspective and inspires us to boldly call things into question, to be creative.

By nurturing a culture of collaboration and curiosity, we attract the highest calibre of people who have the ability and desire to influence and shape the future.

“GAME CHANGERS” – our tagline – summarises our ambition.