



U.S. Election Model Update

Mark Zandi, Chief Economist Bernard Yaros, Assistant Director

Agenda

- 1. Who Will Be the Next President?
- 2. Which State Will Determine the Presidency?
- 3. U.S. Congressional Races
- 4. Wildcards

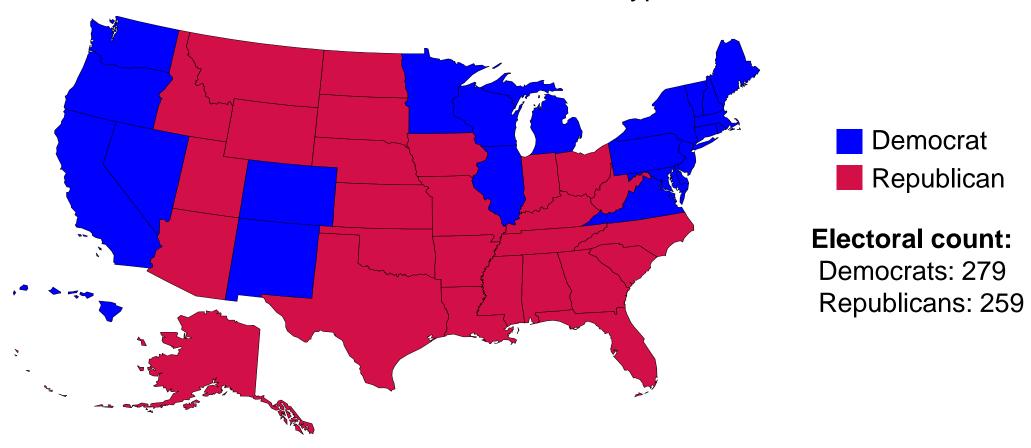
MOODY'S ANALYTICS

1

Who Will Be the Next President?

Biden Will Win a Nailbiter

How states will vote if nonincumbent turnout is typical

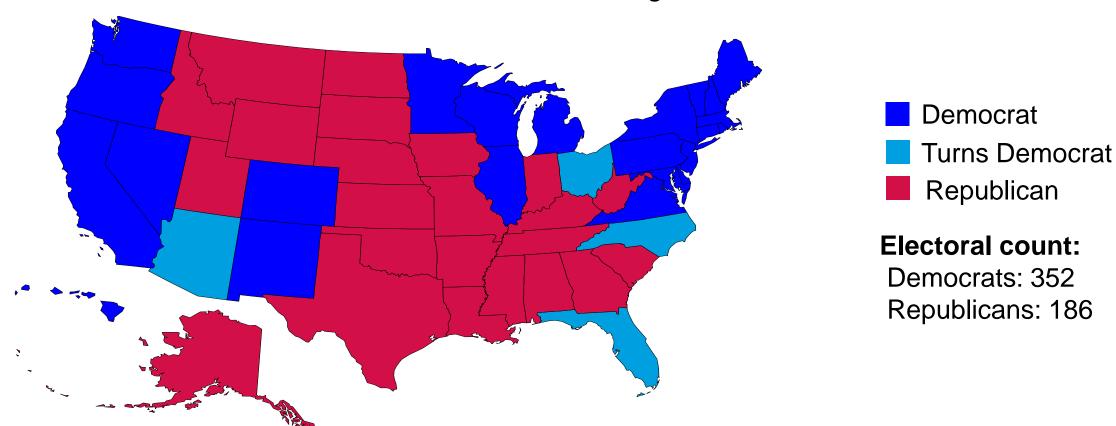


Source: Moody's Analytics

Note: Results reflect Oct 2020 forecast

How a Biden Blowout Would Look Like

How states will vote if nonincumbent turnout is high

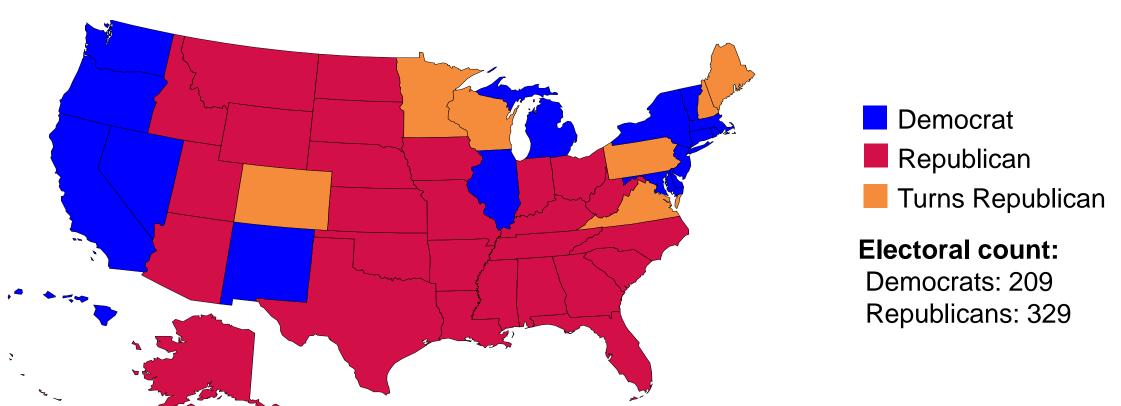


Source: Moody's Analytics Note: Results reflect Oct 2020 forecast

5

Trump Can Still Win if Nonincumbent Turnout Is Low

How states will vote if nonincumbent turnout is low



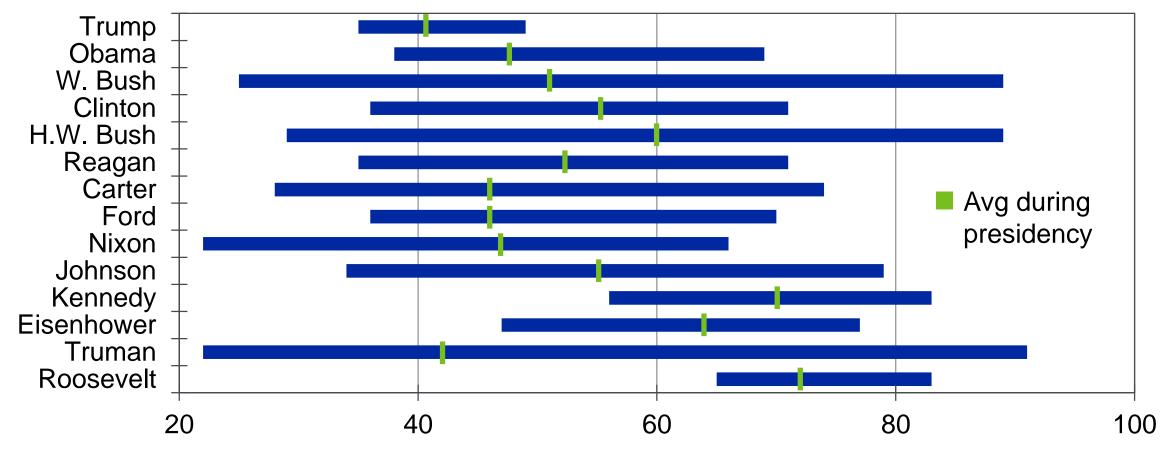
Source: Moody's Analytics

Note: Results reflect Oct 2020 forecast

MOODY'S ANALYTICS October 2020

President Trump's Approval Is Low but Stable

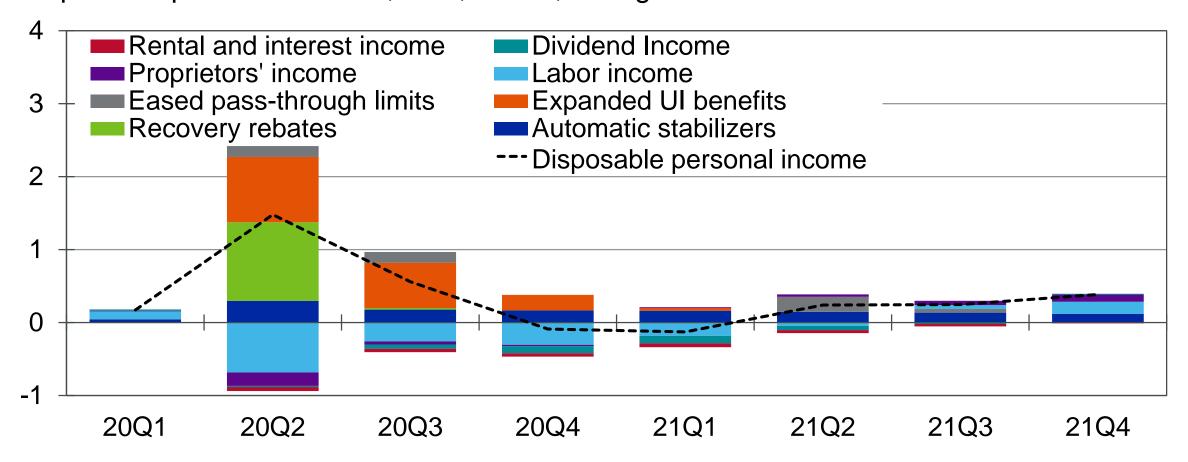
Historical range of approval ratings for U.S. presidents, %



Sources: Gallup, Moody's Analytics

Voters Head to Polls With Aggregate Incomes Mostly Intact

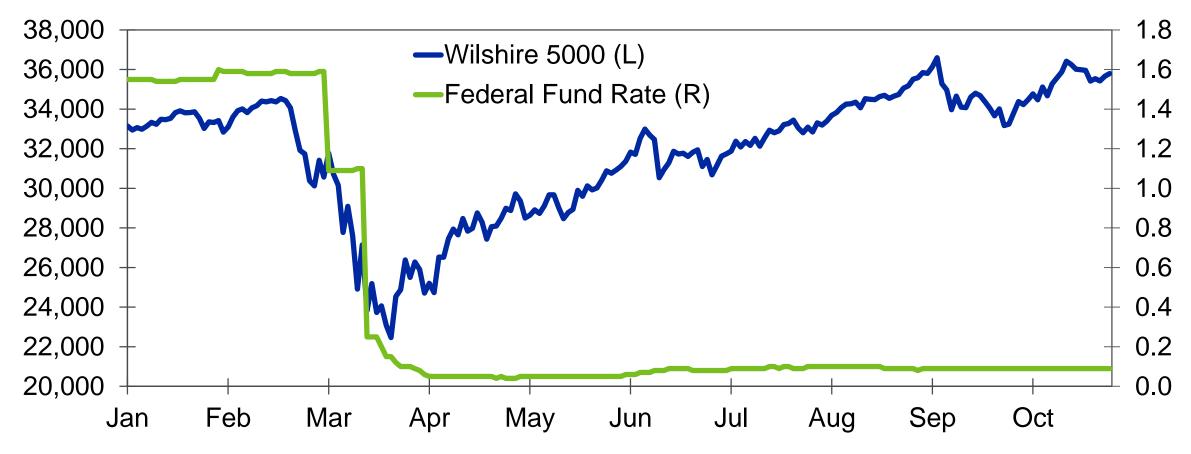
Disposable personal income, \$ tril, SAAR, change from 2019Q4



Sources: BEA, CBO, JCT, Moody's Analytics

MOODY'S ANALYTICS

Older Voters Are Paying Close Attention to Stock Prices

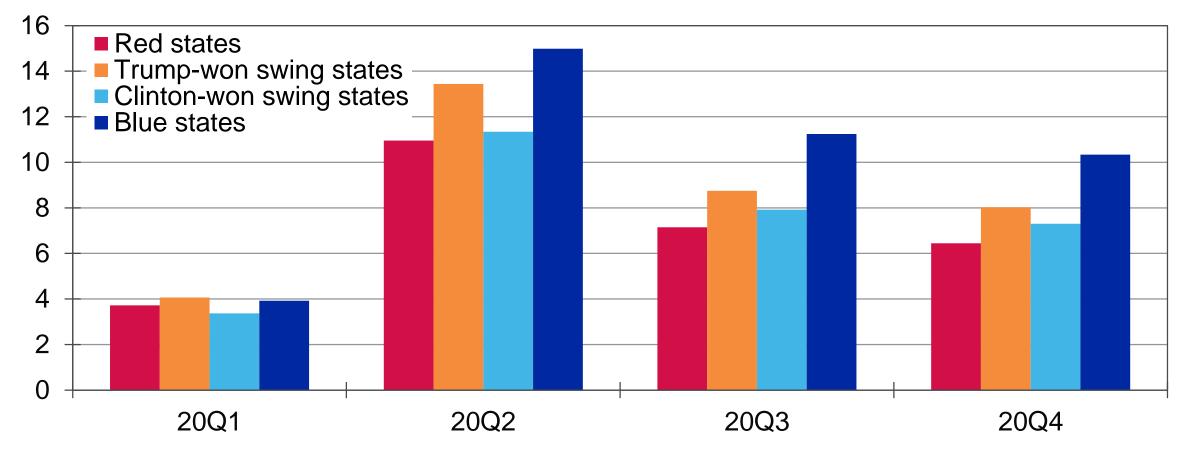


Sources: Federal Reserve, SIX Financial, Moody's Analytics

MOODY'S ANALYTICS

Unemployment Crisis Is Still Severe...

Unemployment rate, %, SA



Sources: BLS, Moody's Analytics

Note: 20Q3 and 20Q4 values reflect Oct 2020 forecast

...And Will Cast a Long Shadow on the 2020 Election

Presidential elections in which incumbent ran for re-election within two yrs of a recession

| Election Yr | Incumbent | Recession | Unemployment Rate, % | Outcome |
|--------------------|------------------|------------------------------|----------------------|---------|
| 1912 | William Taft | January 1910 to January 1912 | 5.2 | Loss |
| 1924 | Calvin Coolidge | May 1923 to July 1924 | 5.5 | Win |
| 1932 | Herbert Hoover | August 1929 to March 1933 | 23.6 | Loss |
| 1976 | Gerald Ford | November 1973 to March 1975 | 7.7 | Loss |
| 1980 | Jimmy Carter | January 1980 to July 1980 | 7.2 | Loss |
| 1992 | George H.W. Bush | July 1990 to March 1991 | 7.5 | Loss |
| 2020 | Donald Trump | March to April 2020 | 8.5 | ? |

Sources: BLS, Census Bureau, NBER, Moody's Analytics

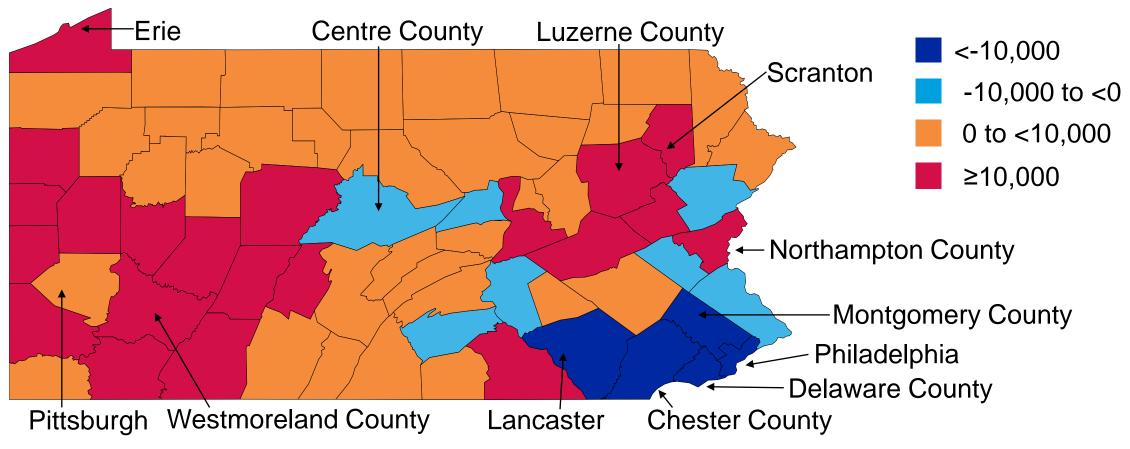
Note: Unemployment rate is annual avg

2

Which State Will Determine the Presidency?

Major Shifts in Pennsylvania's Political Geography

of votes Trump received more/less (+/-) than avg Republican from 1988 to 2012

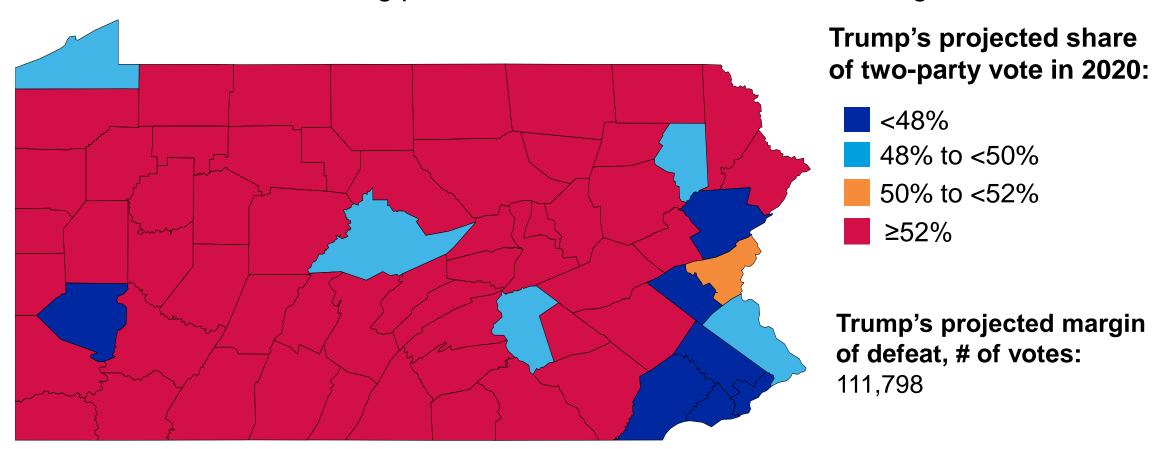


Sources: Pennsylvania Department of State, Moody's Analytics

MOODY'S ANALYTICS October 2020

Biden Is Favored to Win Back the Keystone State

How counties will vote during pandemic if nonincumbent turnout is avg



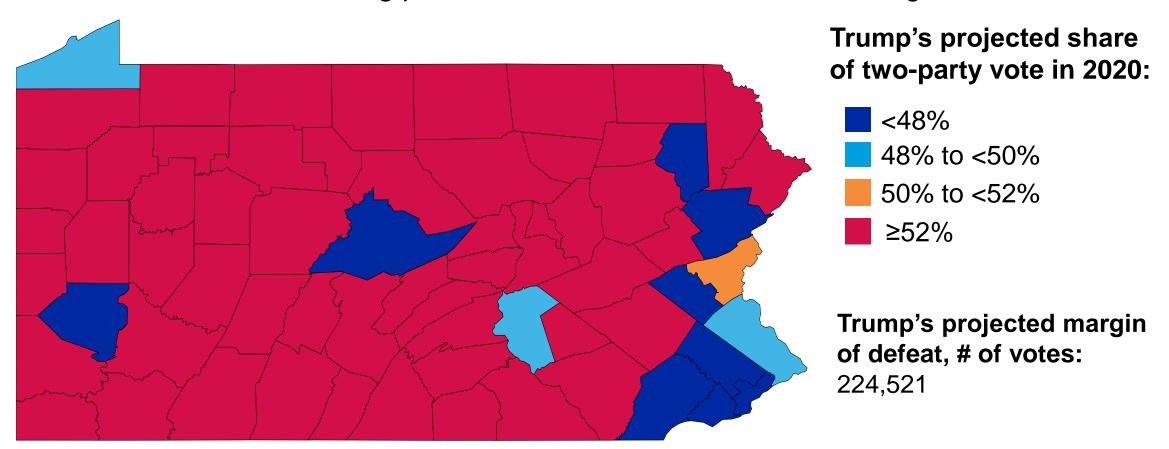
Source: Moody's Analytics

Note: Results reflect Sep 2020 forecast

14

How a Biden Blowout Would Look Like in Pennsylvania

How counties will vote during pandemic if nonincumbent turnout is high



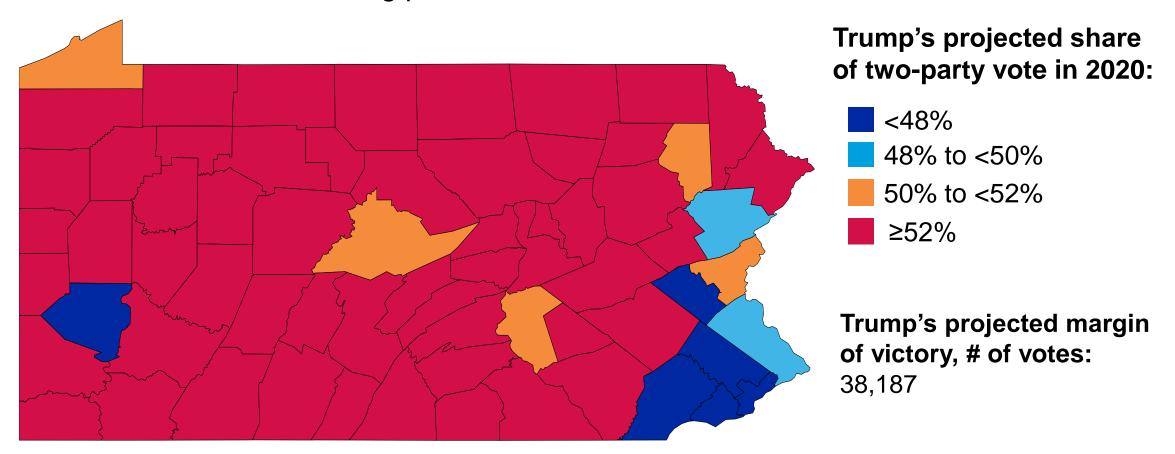
Source: Moody's Analytics

Note: Results reflect Sep 2020 forecast

15

Trump Can Still Win If Nonincumbent Turnout Is Low

How counties will vote during pandemic if nonincumbent turnout is low



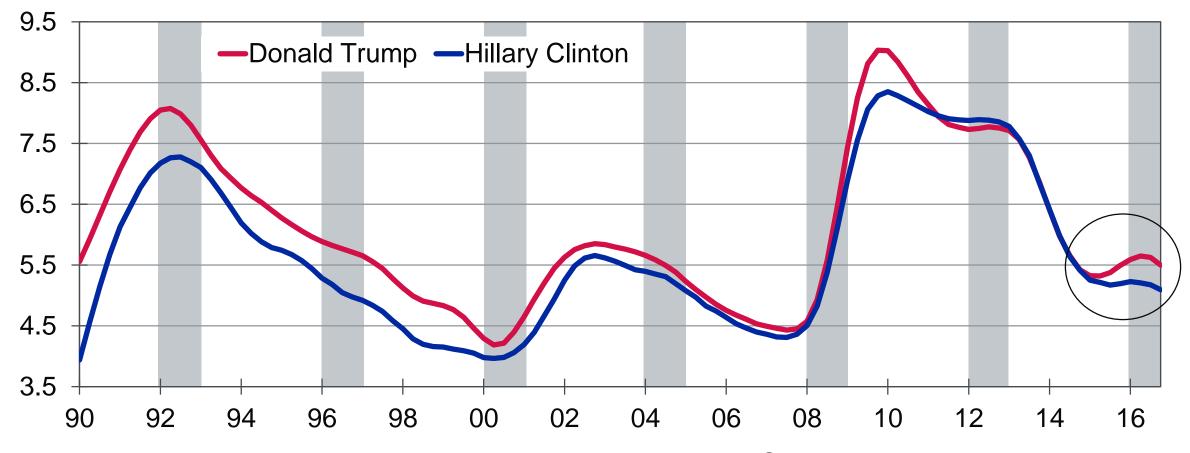
Source: Moody's Analytics

Note: Results reflect Sep 2020 forecast

16

The Economy Still Matters to Pennsylvanian Voters

Unemployment rate, %, in Pennsylvania counties won by...

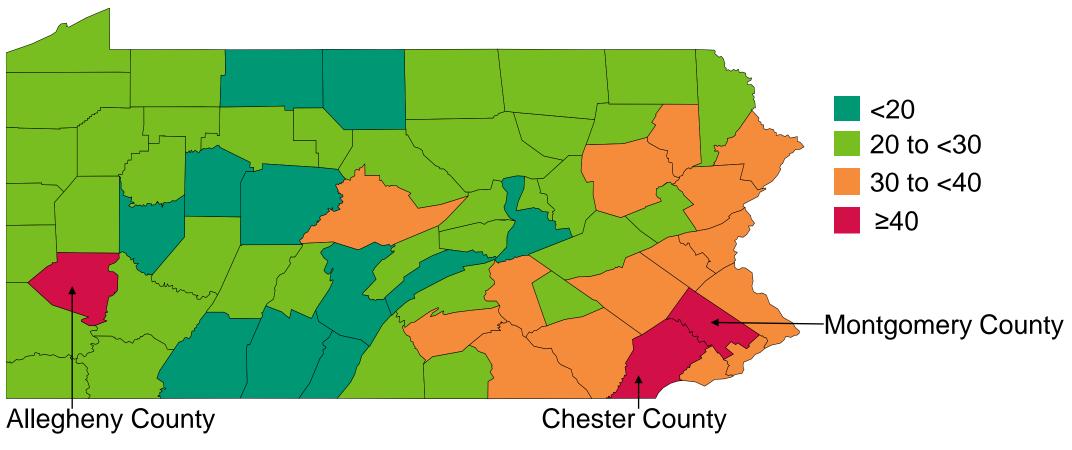


Sources: BLS, Moody's Analytics

Gray bars: presidential election yrs

Democrats Are Vulnerable to 'Naked' Ballot Rejections

Mail ballots requested, % of registered voters



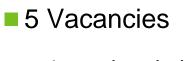
Sources: U.S. Elections Project, Moody's Analytics

MOODY'S ANALYTICS October 2020

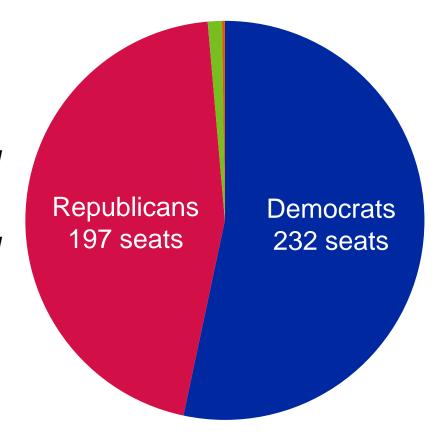
3

U.S. Congressional Races

Party Breakdown of 116th U.S. House of Representatives



- 4 previously held by Republicans
- 1 previously held by Democrats
- 1 Libertarian



Key Points:

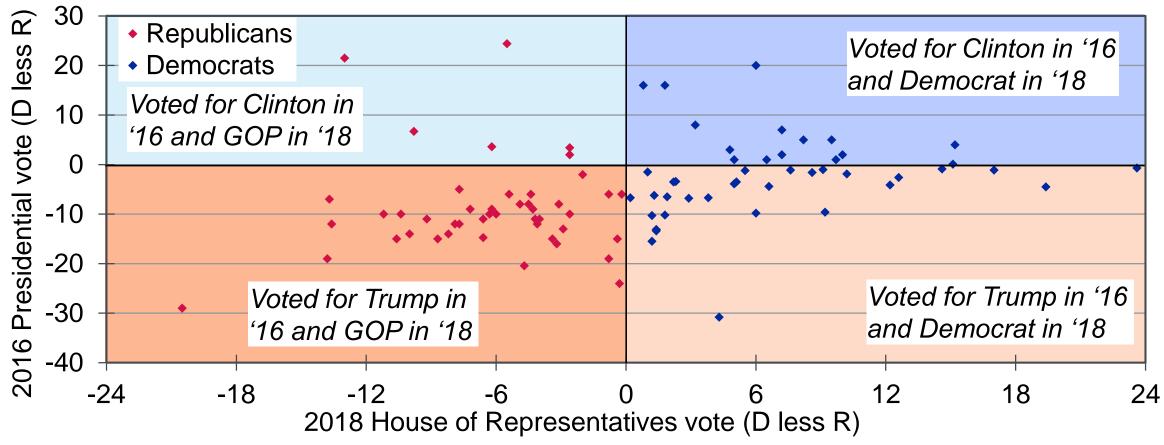
- » Every two yrs, all 435 House seats are up for grabs
- » 218 seats required for a majority
- Republicans need a net gain of at least 17 seats to retake majority

20

Sources: Clerk of the House, Moody's Analytics

Good News #1 for GOP: 30 Democrats in Trump Country

Competitive House districts held by...



Sources: University of Virginia Center for Politics, Moody's Analytics

MOODY'S ANALYTICS October 2020

Good News #2 for GOP: Geographic Distribution

Democratic share less Republican share, ppt

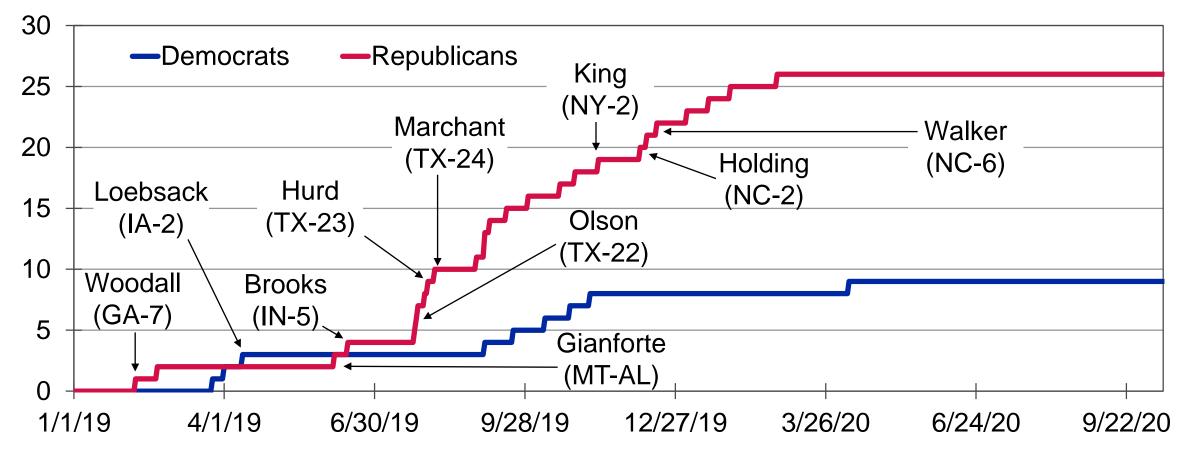


Sources: Brookings, Clerk of the House, Moody's Analytics

MOODY'S ANALYTICS October 2020

Bad News #1 for GOP: Fewer Incumbents on the Ballot

Cumulative # of House representatives announcing they will not seek reelection in 2020



Sources: Ballotpedia, University of Virginia Center for Politics, Moody's Analytics

MOODY'S ANALYTICS October 2020

Bad News #2 for GOP: History

All postwar presidential election years

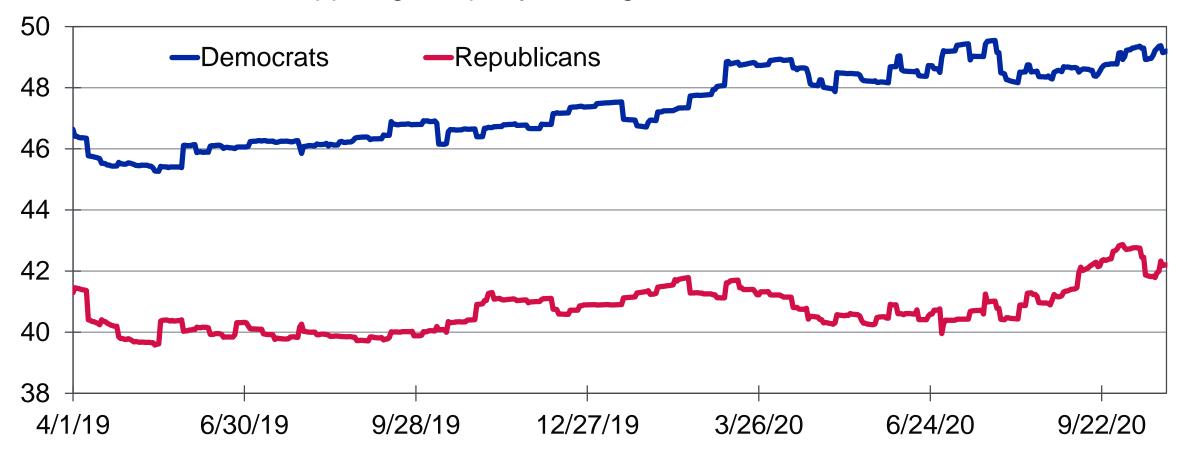
| | Net House gain/loss (+/-) for incumbent president's party | Did House Majority Flip? | Incumbent President's Party | | Net House gain/loss (+/-) for incumbent president's party | Did House Majority Flip? | Incumbent President's Party |
|------|---|-----------------------------|--------------------------------|------|---|-----------------------------|--------------------------------|
| 1948 | 75 | Yes | Democrat | 1984 | 14 | No | Republican |
| 1952 | -22 | Yes | Democrat | 1988 | -2 | No | Republican |
| 1956 | -2 | No | Republican | 1992 | 10 | No | Republican |
| 1960 | 22 | No | Republican | 1996 | 3 | No | Democrat |
| 1964 | 37 | No | Democrat | 2000 | 1 | No | Democrat |
| 1968 | -5 | No | Democrat | 2004 | 3 | No | Republican |
| 1972 | 12 | No | Republican | 2008 | -21 | No | Republican |
| 1976 | -1 | No | Republican | 2012 | 8 | No | Democrat |
| 1980 | -34 | No | Democrat | 2016 | 6 | No | Democrat |
| | | 5.8 | | | | | |

Sources: U.S. House of Representatives, Moody's Analytics

MOODY'S ANALYTICS October 2020

Bad News #3 for GOP: Congressional Generic Ballot

% of voters who will support given party in congressional elections

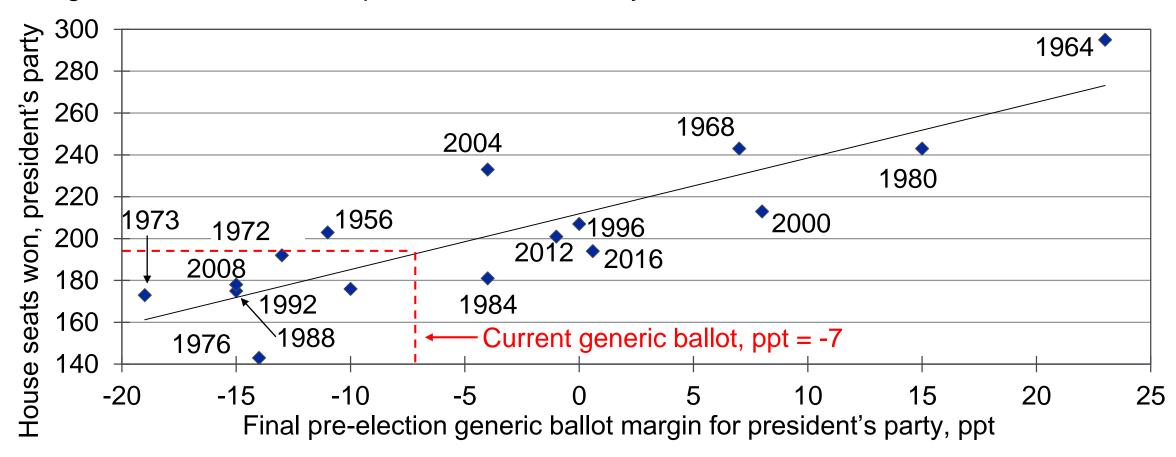


Sources: FiveThirtyEight, Moody's Analytics

MOODY'S ANALYTICS October 2020

Republicans Risk Sinking Further into House Minority

Congressional elections in presidential election years

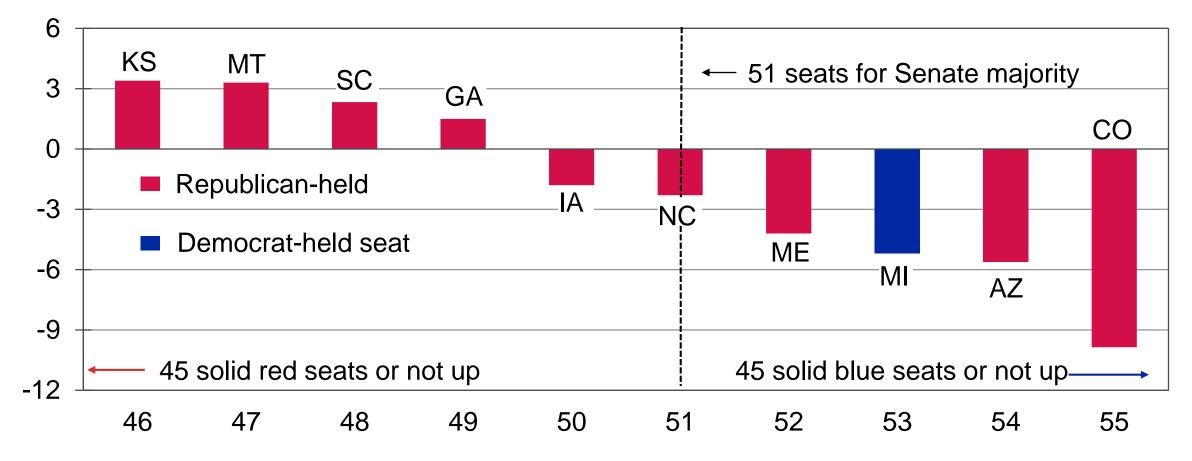


Sources: Clerk of the House, FiveThirtyEight, Gallup, Moody's Analytics

MOODY'S ANALYTICS October 2020

Senate Majority Hangs in the Balance

Republican's support in head-to-head polls less Democrat's, ppt



Sources: RealClearPolitics, Moody's Analytics

Note: Reflect avg of polls in past 30 days wherever RCP avg N/A

27

4

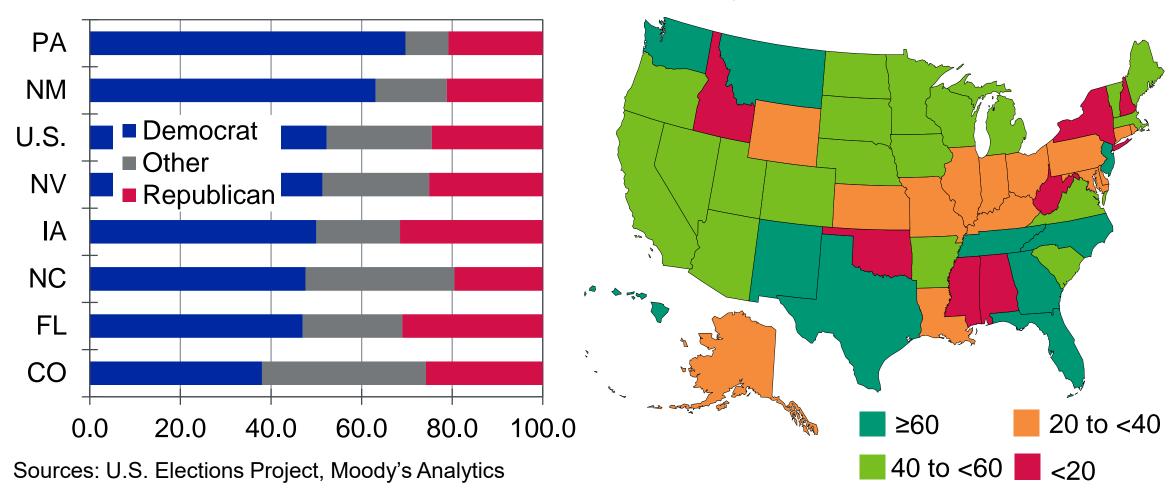
Wildcards

Wildcard #1: Early Voting

% of mail ballots returned by party

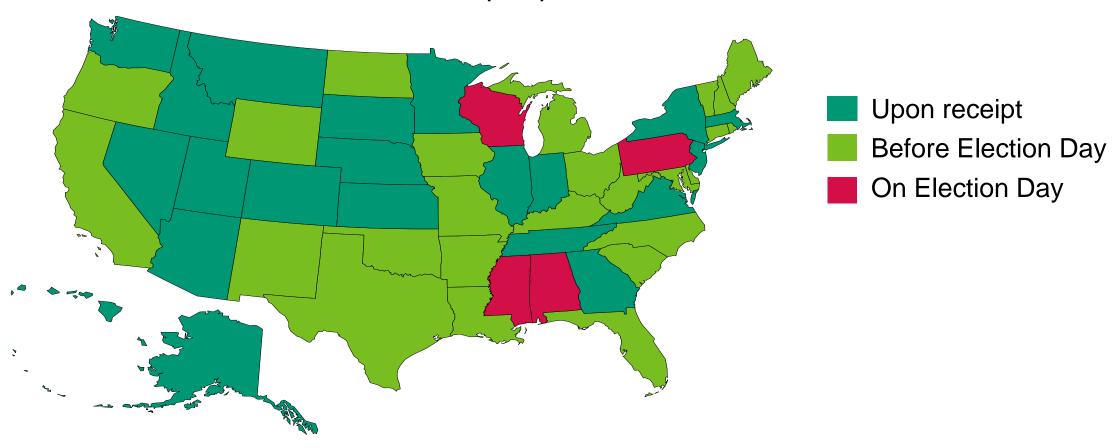
Early voting, % of 2016 turnout, as of Oct 26

29



If Pennsylvania Is the Decider, Buckle In

When mail and absentee ballots are pre-processed

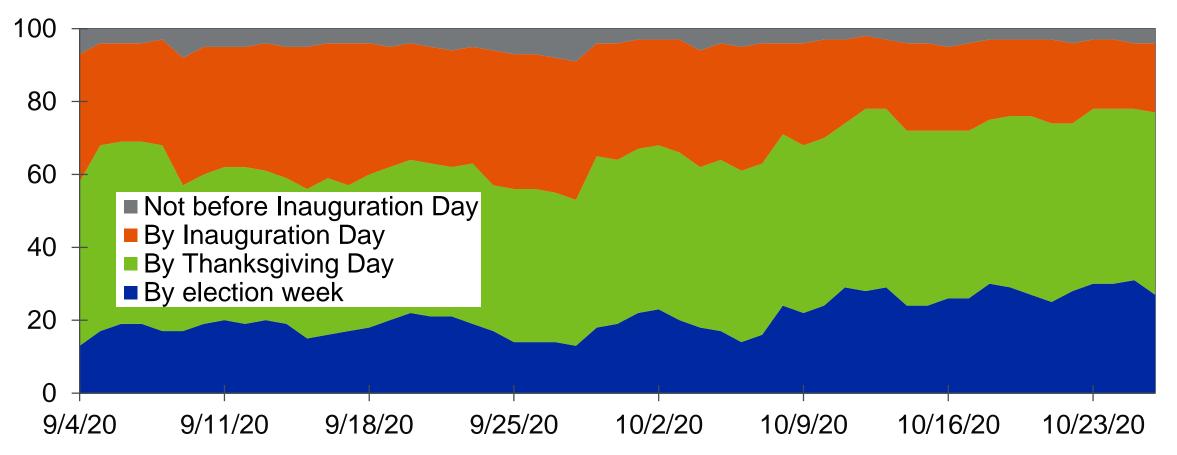


Source: New York Times, Moody's Analytics

MOODY'S ANALYTICS October 2020

Election Night Could Morph into Election Month

Probability, %, a major party's presidential campaign concedes defeat in the 2020 election

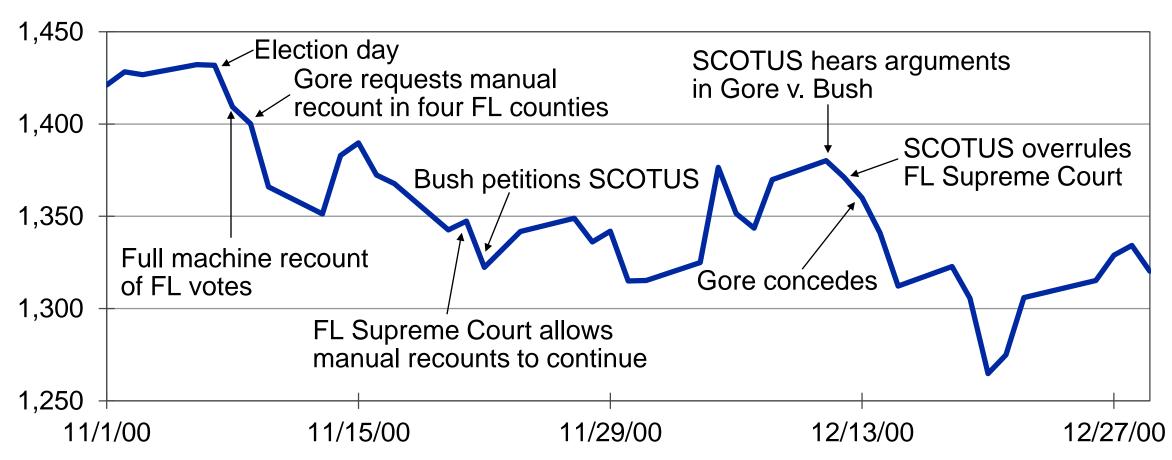


Sources: The Good Judgement Project, Moody's Analytics

MOODY'S ANALYTICS October 2020

Election Disputes Could Be Messier Than Gore v. Bush

S&P 500 Index

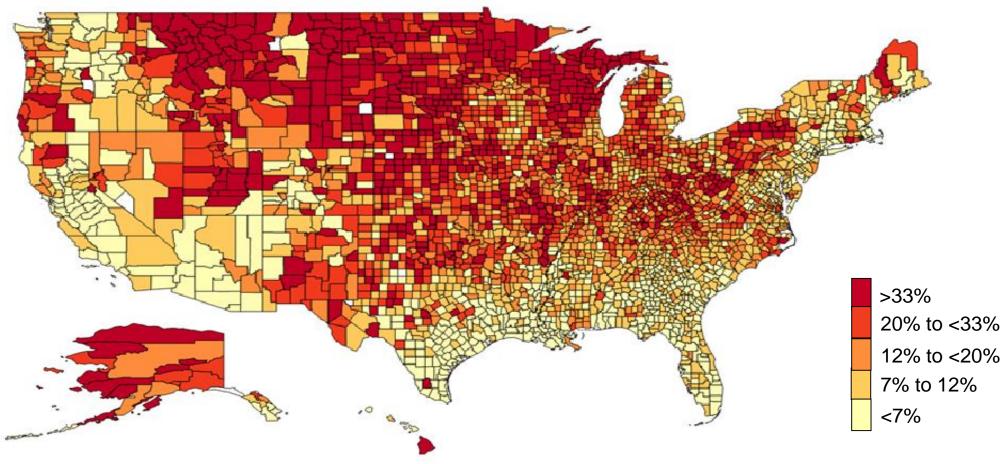


Sources: S&P Dow Jones Indices LLC, Moody's Analytics

MOODY'S ANALYTICS October 2020

Wildcard #2: COVID-19

14-day change in confirmed COVID-19 infections, %

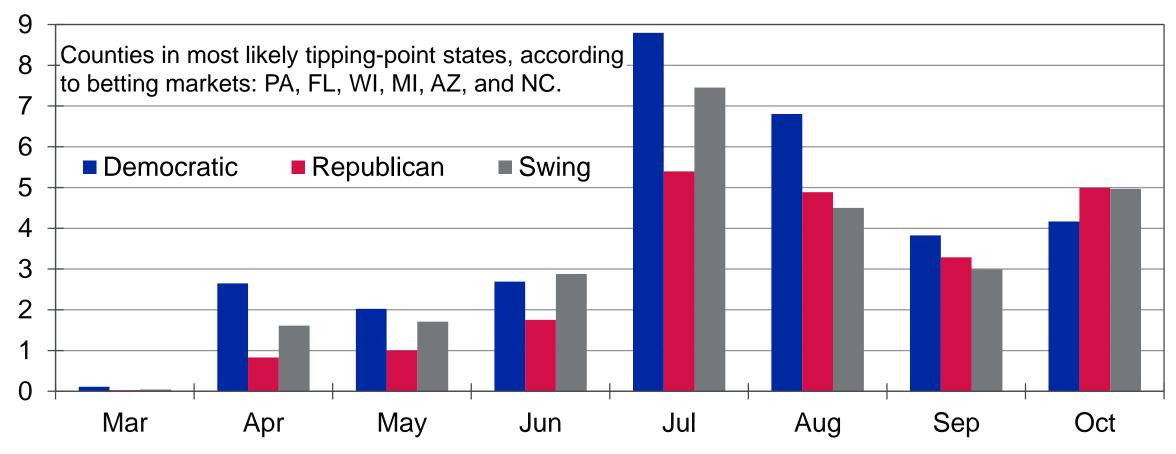


Sources: CDC, Moody's Analytics

MOODY'S ANALYTICS October 2020

Pandemic Could Hurt GOP Turnout in Must-Win States

New monthly COVID-19 cases per 1,000 residents, thru 23rd of each month

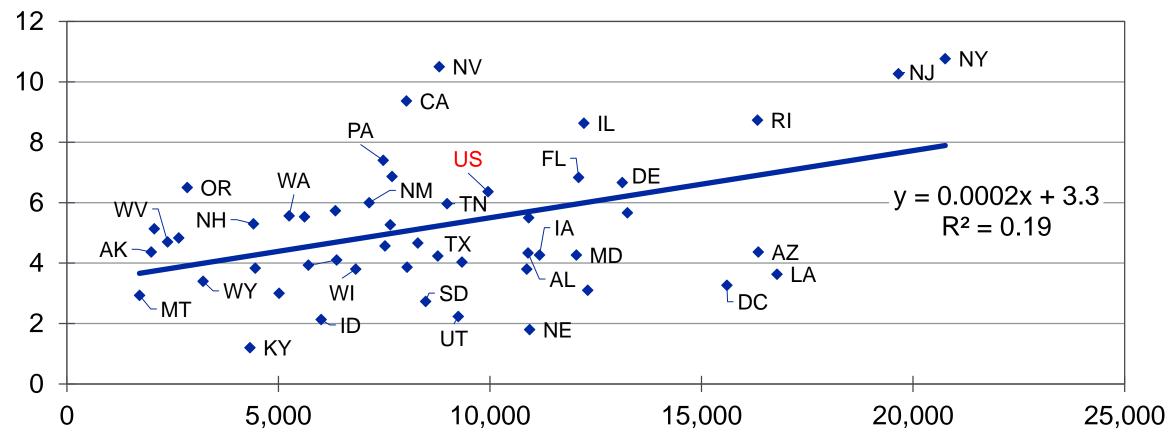


Sources: MIT Election Lab, Johns Hopkins University, PredictIt, Moody's Analytics

MOODY'S ANALYTICS October 2020

More Infections...Weaker Economy

Y-axis: Change in unemployment rate, 3 mo ended Aug 2020 to 2019Q4



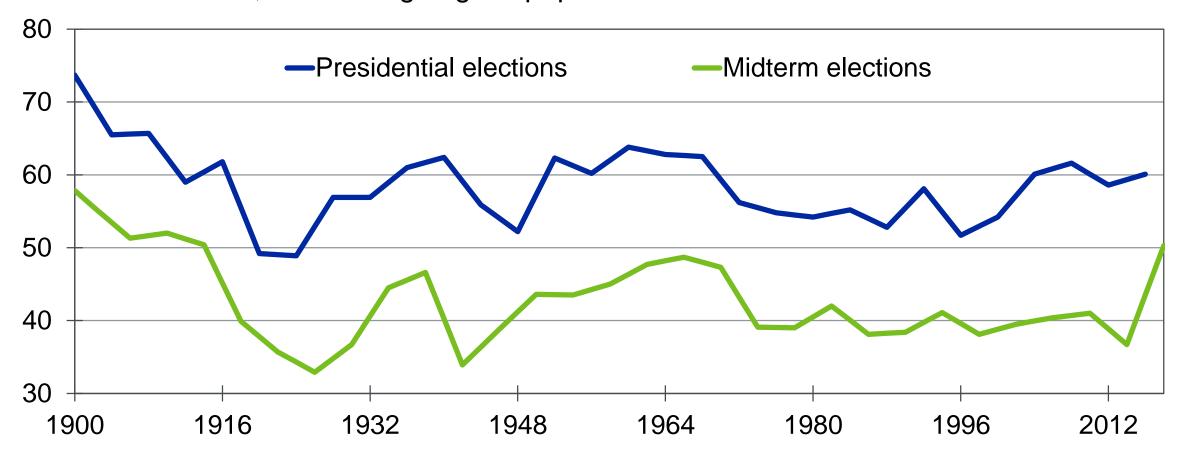
Sources: CDC, BLS, Moody's Analytics

X-axis: Infections per mil inhabitants in Jul

MOODY'S ANALYTICS

Wildcard #3: Voter Turnout

U.S. voter turnout, % of voting-eligible population

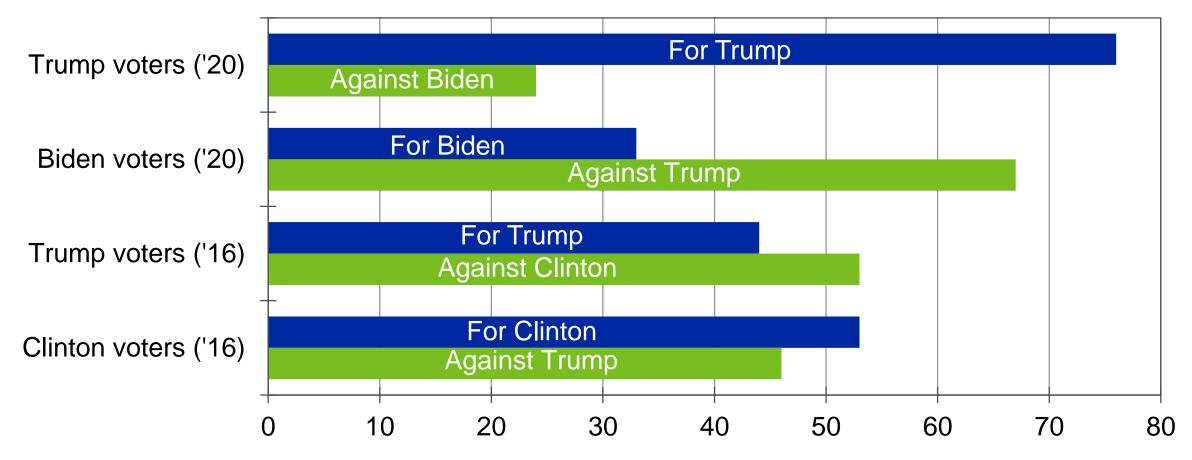


Sources: U.S. Elections Project, Moody's Analytics

MOODY'S ANALYTICS October 2020

Enthusiasm for Candidate Versus Negative Partisanship

% of voters who say their choice is more a vote...



Sources: Pew Research Center, Moody's Analytics

Q&A

help@economy.com

Moody's **ANALYTICS**

Better Faster **Decisions**

Contact Us: Economics & Business Analytics Offices

West Chester, EBA-HQ

+1.610.235.5299

121 North Walnut Street. Suite 500 West Chester PA 19380

New York, Corporate-HQ

+1.212.553.1653

7 World Trade Center, 14th Floor 250 Greenwich Street New York, NY 10007 USA

London

+44.20.7772.5454

One Canada Square **Canary Wharf** London E14 5FA **United Kingdom**

Toronto 416.681.2133

200 Wellington Street West, 15th Floor Toronto ON M5V 3C7 Canada

Prague

+420.22.422.2929

Washingtonova 17 110 00 Prague 1 Czech Republic

Sydney

+61.2.9270.8111

Level 10 1 O'Connell Street Sydney, NSW, 2000 Australia

Singapore

+65.6511.4400

6 Shenton Way #14-08 OUE Downtown 2 Singapore 068809

Shanghai +86.21.6101.0172

Unit 2306, Citigroup Tower 33 Huayuanshiqiao Road Pudong New Area, 200120

China

© 2020 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S INVESTORS SERVICE, INC. AND/OR ITS CREDIT RATINGS AFFILIATES ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED BY MOODY'S (COLLECTIVELY, "PUBLICATIONS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S INVESTORS SERVICE DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S INVESTORS SERVICE CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY, CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES, MOODY'S CREDIT RATINGS. ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS. ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES, MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR, MOODY'S ISSUES ITS CREDIT RATINGS. ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES ITS PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL. WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER. BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process or in preparing its Publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING, ASSESSMENT, OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it fees ranging from \$1,000 to approximately \$2,700,000. MCO and Moody's investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moodys.com under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 336969 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.

Additional terms for Japan only: Moody's Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY125,000 to approximately JPY250,000,000.

MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.