Washington Meets Wall Street

A Closer Examination of the Presidential Cycle Puzzle

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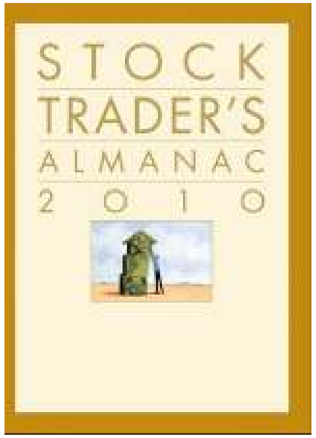
The presidential cycle effect

U.S. stock market returns are higher during the second half than during the first half of the presidential cycle.

- The anomaly first appeared in the Stock Trader's almanac of Hirsch in 1967.

  "*In an effort to gain reelection, presidents tend to take care of most of their more painful initiatives in the first half of their term and 'prime the pump' in the second half so the electorate is most prosperous when they enter the voting booths.*" (The Almanac Investor)

- It has returned in every annual edition ever since.



Academic interest

- Huang (1985): trading strategies based on the cycle outperform a buy-and-hold strategy.
- Foerster and Schmitz (1997): the second year of the cycle produces significantly lower returns.
- Booth and Booth (2003): the presidential cycle pattern is not explained by business cycle variables.

Findings implicitly motivated by notion of political control of the economy.

- The Political Business Cycle (PBC): the administration has an incentive to stimulate the economy prior to elections, which results in deflationary policies thereafter. Efforts should enhance chances of re-election.
- See Nordhaus (1975), MacRae (1977) and Rogoff (1990).

Contribution to the literature

- First study to systematically check alternative explanations:
  - Business cycle fluctuations
  - Time-varying risk
  - Expected versus unexpected returns
  - Investor sentiment

- 8 empirically testable hypotheses related to the financial and political dimensions of the Presidential Election Cycle (PEC):

– Money supply	- Federal debt / GDP
– Unexpected inflation	- Partisanship of the president
– Income tax levels	- Party affiliation of congress
– Real federal spending	- Re-eligibility of the president

- Most recent data (including 2004-2008).
- Analysis of the corporate bond market and the stock market.
- Methodology: host of robustness checks and bootstrapped critical values.

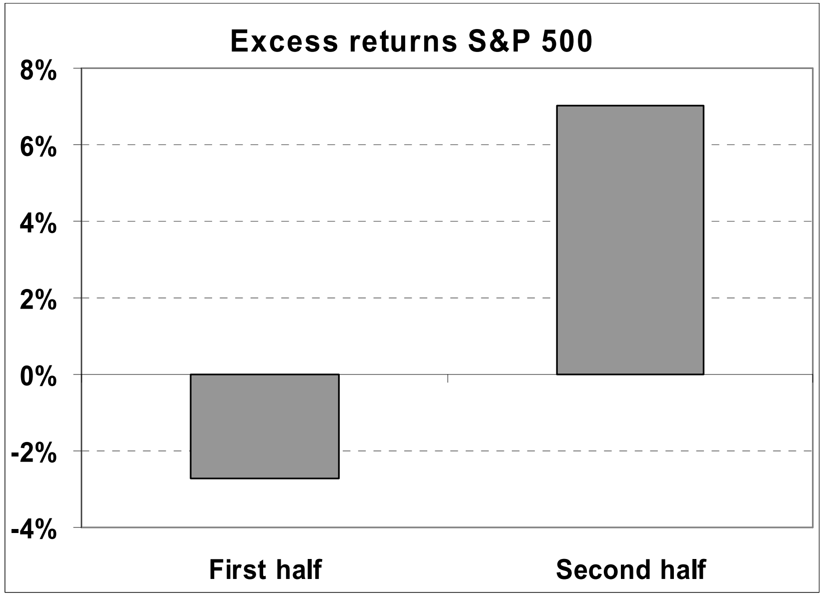
Econometric framework

$$r_t = \beta_1 YR_{1t} + \beta_2 YR_{2t} + \beta_3 YR_{3t} + \beta_4 YR_{4t} + \gamma' X_t + \varepsilon_t$$

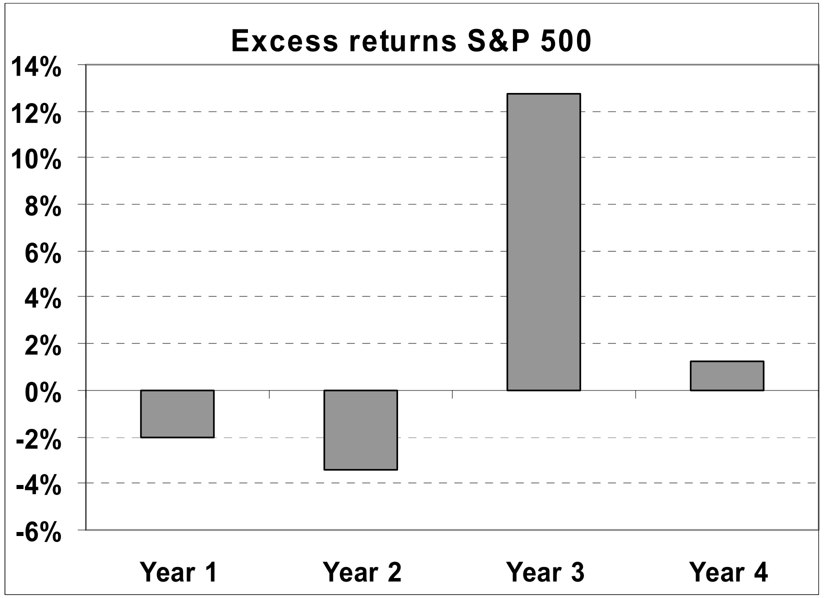
$\boldsymbol{r_t}$	return on the stock market (excess or real)
$\boldsymbol{YR_{it}}$	dummy variables for each year of the cycle
$\boldsymbol{X_t}$	control variables (various sets for each hypothesis)

- Bootstrap procedure to generate critical values for the Newey-West t-values and Wald F-tests of equality.
- Take the most conservative p-value of the two.
- Econometric framework is comparable to Santa-Clara and Valkanov on the partisan puzzle (JF, 2003), but controls are different.

Main findings (1948-2008)



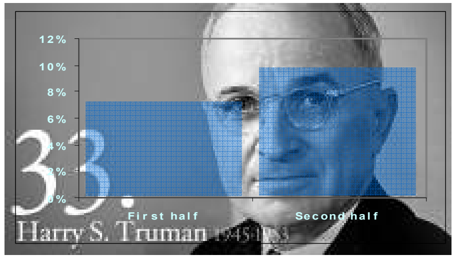
Equality p-value: 0.03

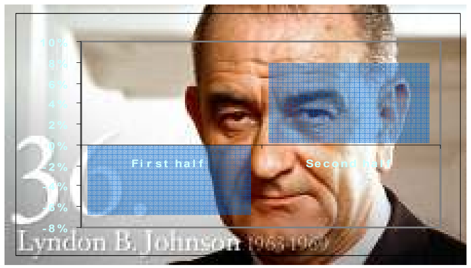


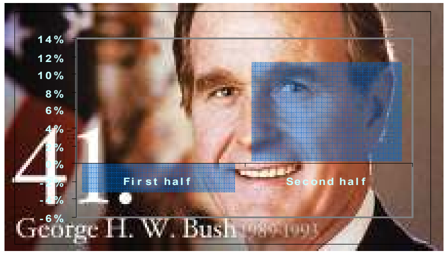
Equality p-value: 0.01

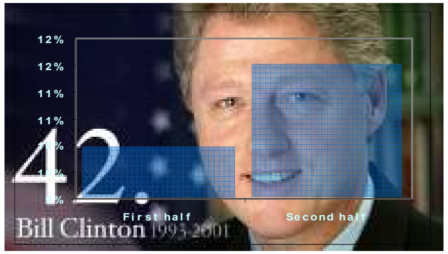
- Choice of the sample period: federal government's goal to control the economy since the Full Employment Act of 1946.
- However, results are similar from 1932:11 (when controls are available).

Is the presidential cycle effect robust?

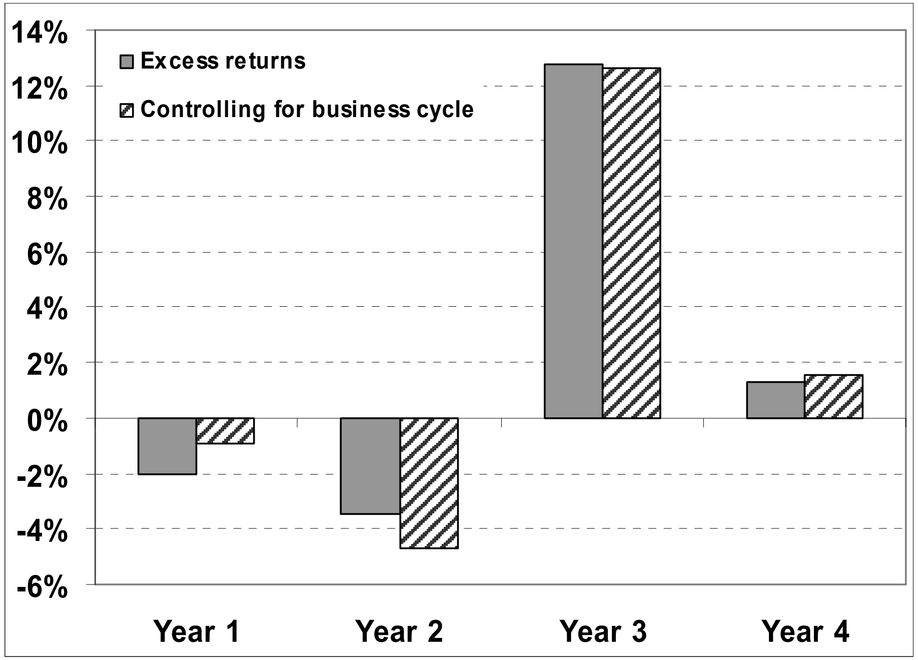








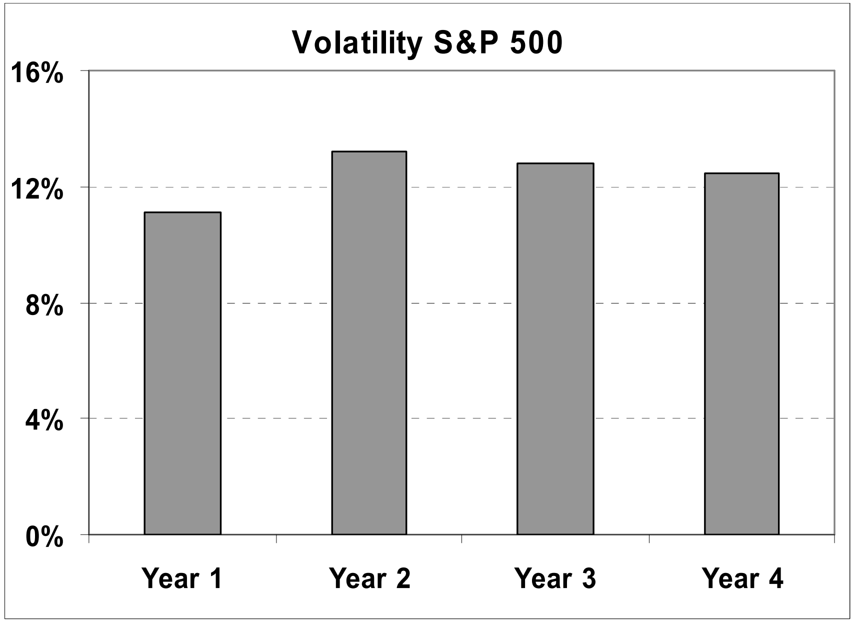
Is it a compensation for business cycle risk?



Equality p-value: 0.01

- We control for the dividend yield, the term spread, the default spread, and the relative interest rate.
- Controlling for business cycle variables does not affect the conclusion.
- Consistent with the conclusions of Booth and Booth (2003).

Is it a compensation for higher risk?

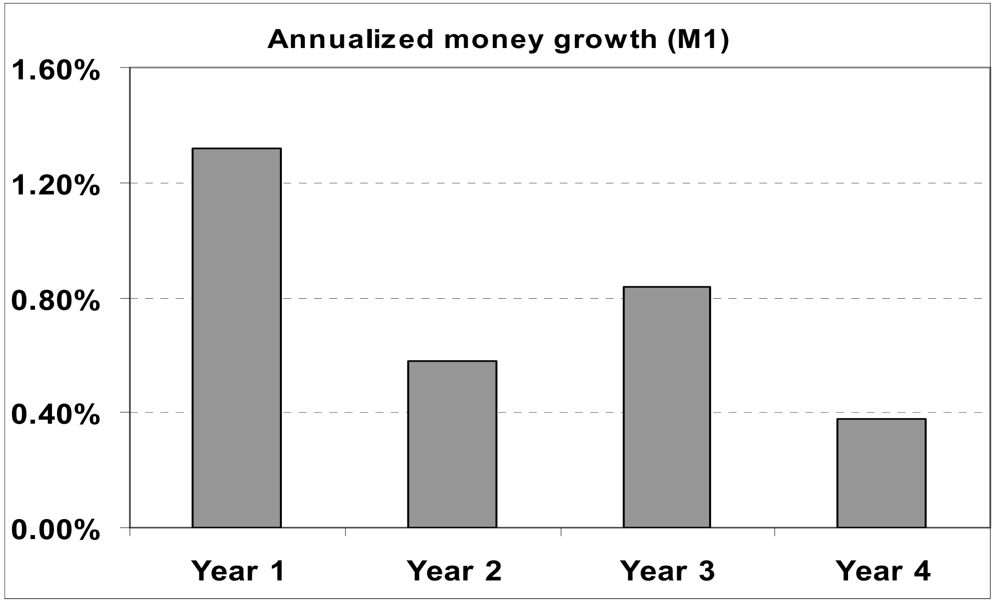


Equality p-value: 0.13

- Stock market volatility is lower (rather than higher) in the year three than in year two.
- First half versus second half equality p-value: 0.52.

PEC: Is it reflected in the growth of money supply?

- Do incumbent presidents accelerate the money supply prior to elections?

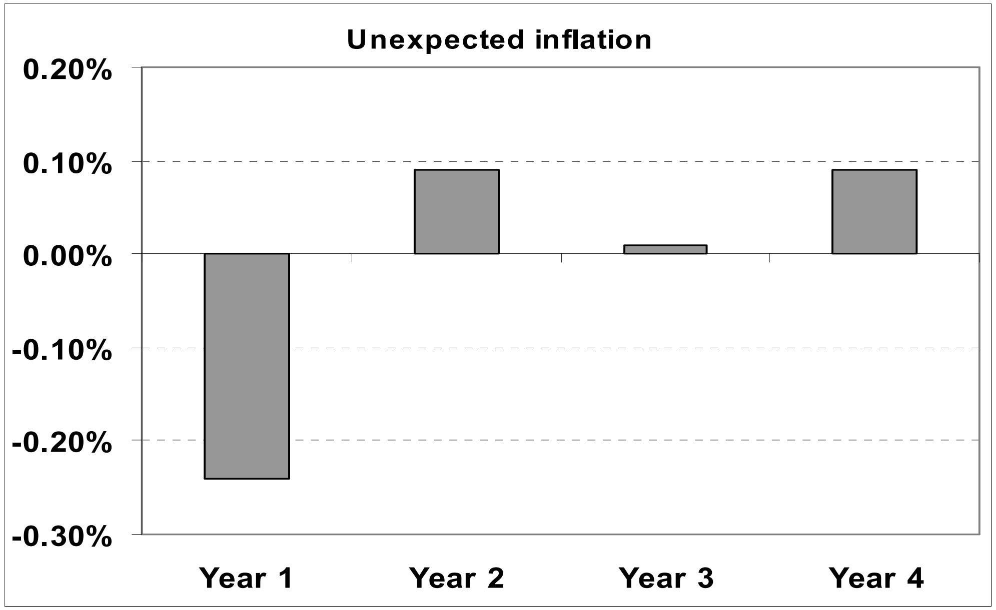


Equality p-value: 0.86

- Growth of money supply is highest in year one, inconsistent with the PEC.

PEC: Is it reflected in unexpected inflation?

- Do incumbent presidents stimulate the economy by creating unexpected inflation (as a result of spending)?

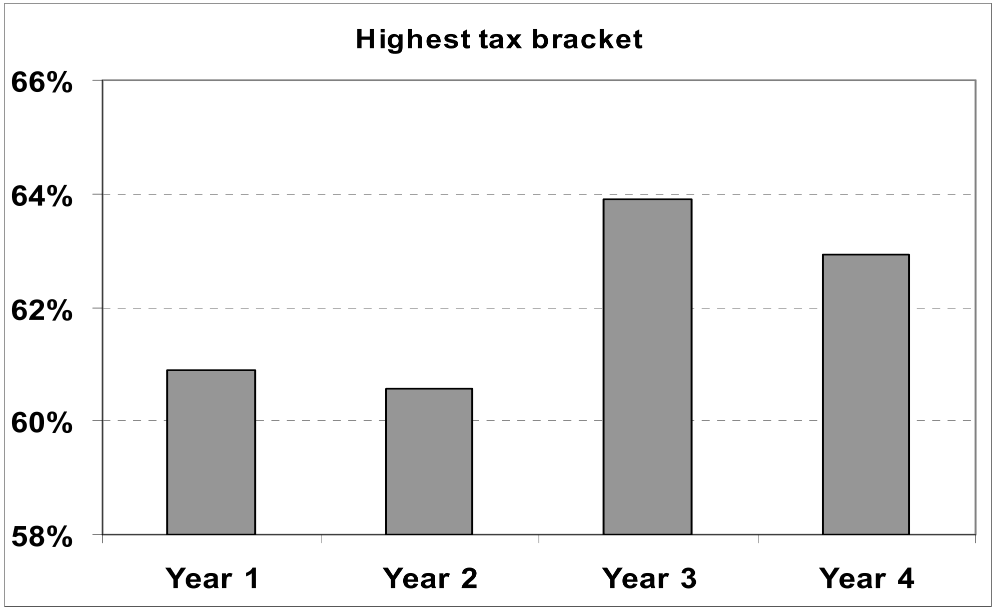


Equality p-value: 0.68

- Negative unexpected inflation in year one is consistent with PEC, but differences are not significant.

PEC: Is it reflected in income tax levels?

- Do incumbent presidents lower income tax levels prior to elections?

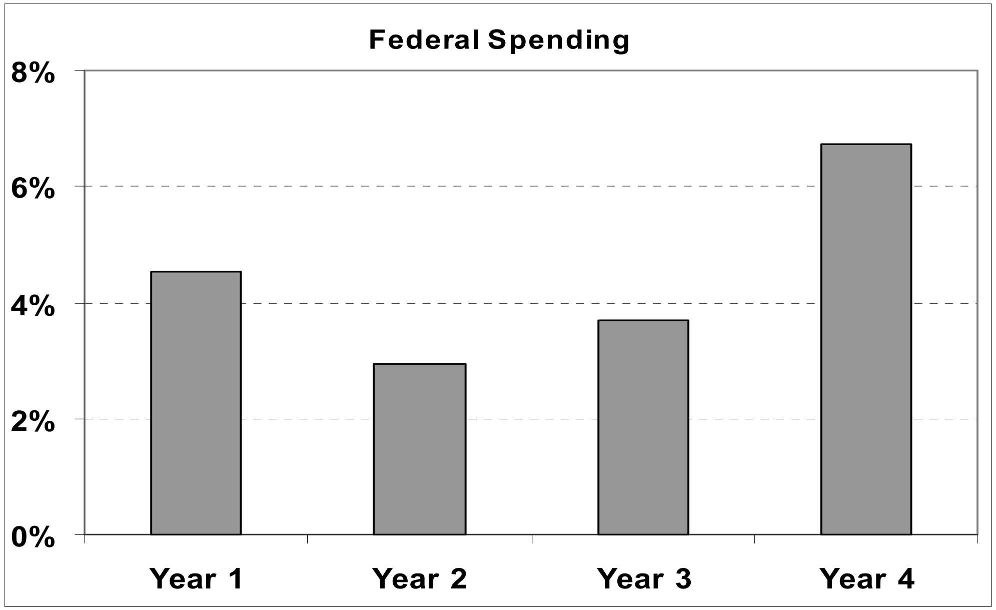


Equality p-value: 0.78

- Tax levels are actually *higher* in year three and four than in other years.

PEC: Is it reflected in federal spending?

- Do incumbent presidents accelerate federal spending prior to elections?

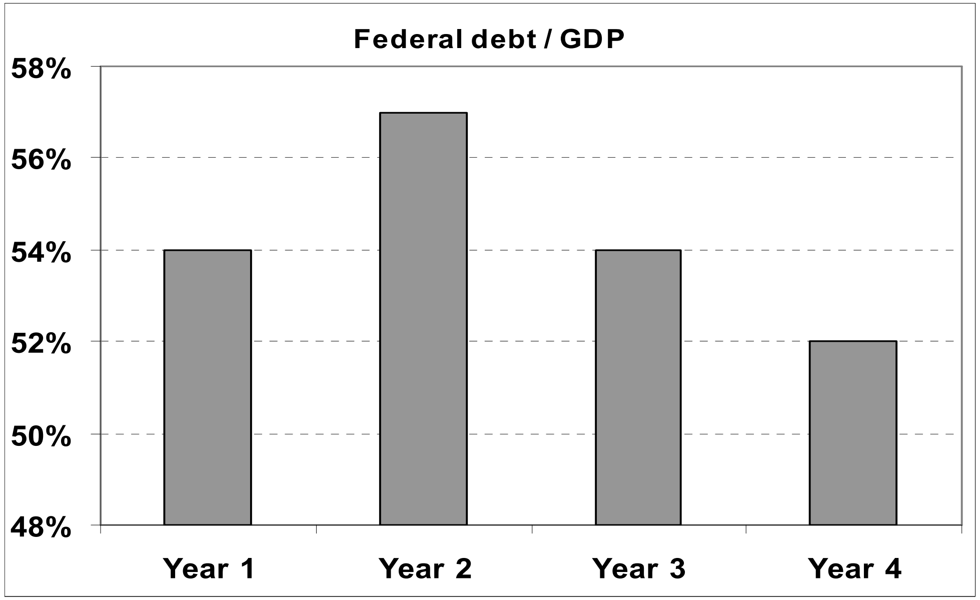


Equality p-value: 0.76

- Spending in increases in year four, but differences are not significant.

PEC: Is it reflected in federal debt?

- Does federal debt accelerate as a result of increased spending and decreased tax income prior to elections?

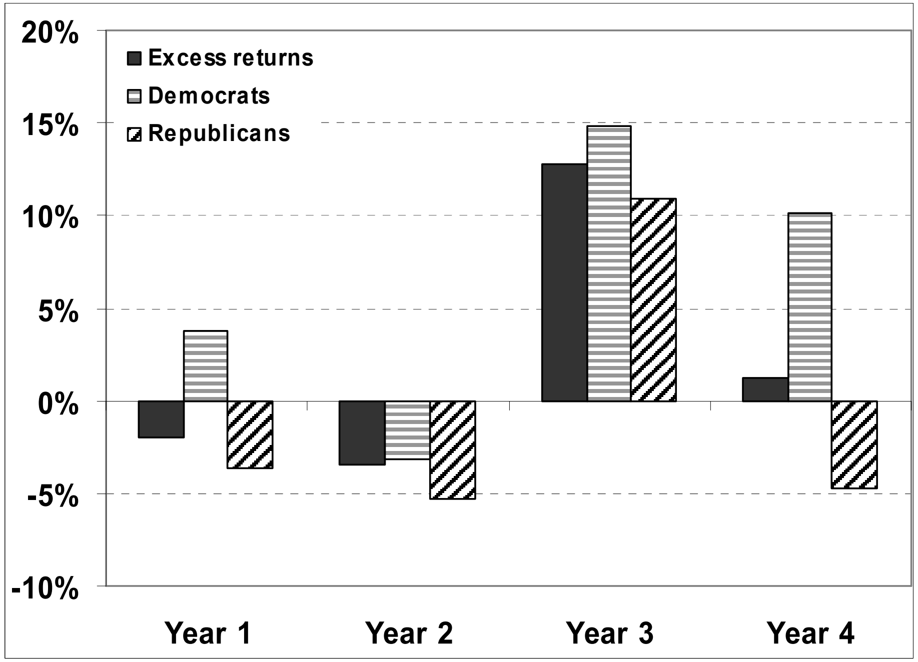


Equality p-value: 0.34

- Federal debt is actually higher in year two, but differences are not significant. Same holds for budget / GDP.

PEC: Does partisanship have an impact?

- Incumbent presidents have the same incentives under the PEC, regardless of their party affiliation.

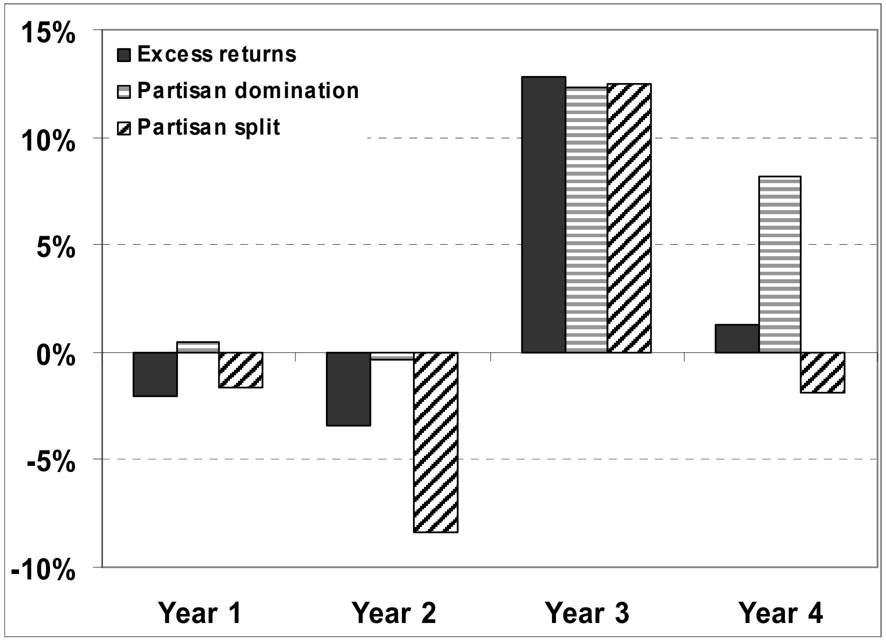


Equality p-value D (R): 0.12 (0.07)

- Returns higher under Democrats (confirming Santa-Clara and Valkanov, 2003), but the PEC operates on top of the partisan puzzle.

PEC: Does partisan domination or split matter?

- Is the impact on the economy stronger if the president and the majority of Congress share the same party affiliation?

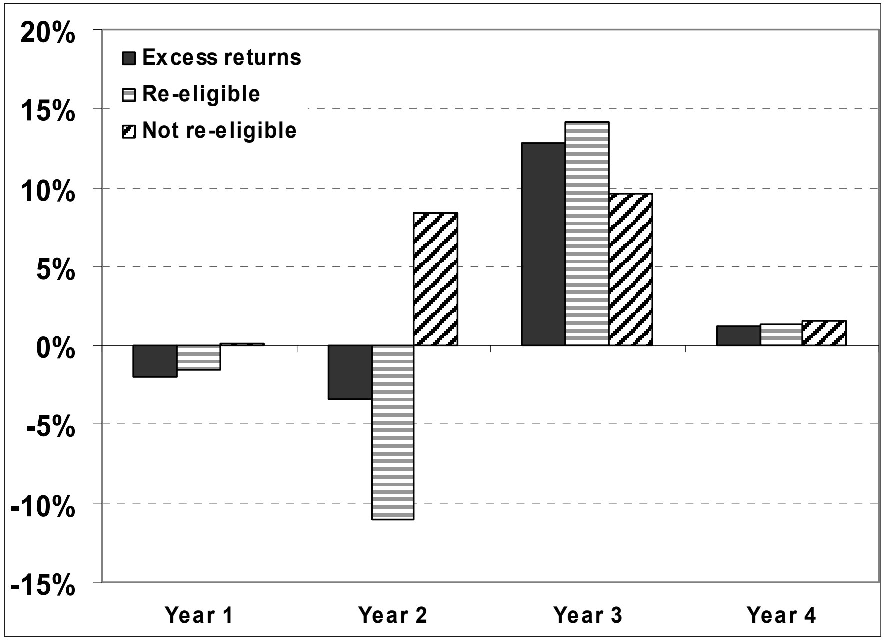


Equality p-value PD (PS): 0.17 (0.02)

- Inconsistent with the PEC, returns are higher during the second half of the cycle for both partisan domination and partisan split.

PEC: Does re-eligibility matter?

- Is the impact on the economy stronger if the president is re-eligible?

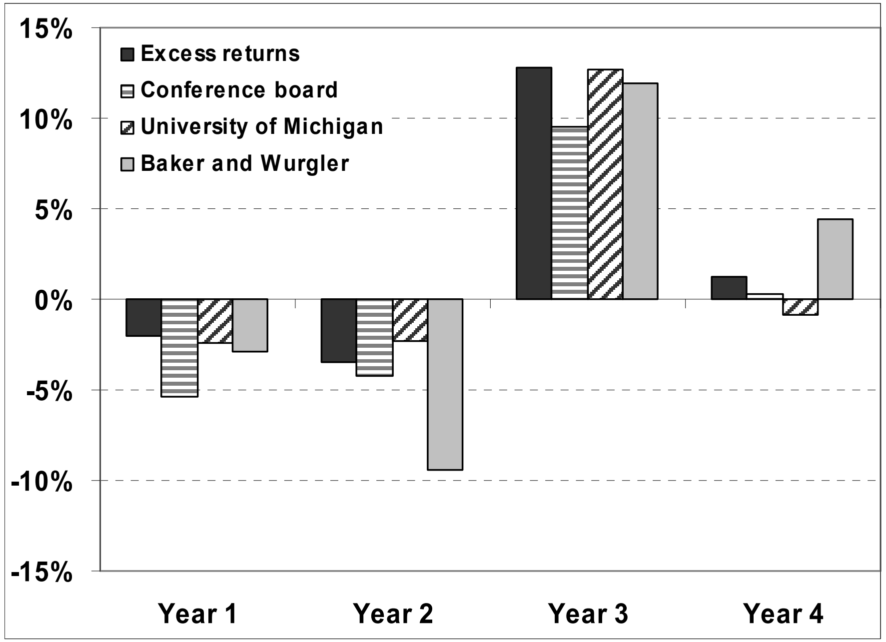


Equality p-value RE (NRE): 0.00 (0.57)

- Consistent with the PEC: if presidents are not re-eligible, the presidential cycle effect disappears.

Is it reflected in consumer and investor sentiment?

- After having considered all rational explanations, is there a relation with sentiment?



Equality p-value CB (UM) [BW]: 0.08 (0.01) [0.01]

- Controlling for sentiment and business cycle variables does not affect the presidential cycle effect.

Conclusion

- The presidential election cycle effect in the U.S. stock market:
  A strong empirical phenomenon, both statistically and economically.
- Little empirical support for the PEC hypothesis (perhaps except some of the politically-inspired propositions).
- Neither do the business cycle, time-varying risk or sentiment provide an explanation.
- Maybe just data mining? Maybe, but the first publication of the anomaly was in 1967. Our sample is largely after 1967.

What we are left with seems to be a true puzzle.

Future up-dates and more research: www.EvertVrugt.com