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Sentiment, Electoral Uncertainty and
Stock Returns

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Abstract

We study the effect of a huge sports sentiment shock, unrelated to economic conditions or government actions, on stock market outcomes. After Brazil's 7-1 humiliating defeat to Germany in the 2014 World Cup, which is likely to be one of the largest sports sentiment shocks ever, the stock market went up. We provide evidence of two opposing effects on stock prices. One is the usual negative effect due to the investor sentiment channel documented in the literature. This effect was, however, overwhelmed by the arguably rational response of investors to voters' sentiment. In particular, the 7-1 defeat was perceived by stock market participants as a political shock affecting the upcoming close presidential election. To decompose these two effects, we devise an empirical strategy that allows us to compute the component of daily returns associated with political news.

Keywords: sentiment; stock returns; electoral uncertainty; voting behavior; event study; soccer.

JEL Classification: G12; G14; G18; C58; D72.

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1 Introduction

In this paper, we study the effect of a huge sentiment shock, unrelated to economic conditions or government actions, on stock market outcomes. After Brazil's humiliating 7-1 defeat to Germany in the semi-final of the 2014 World Cup played at home, which is likely to be one of the largest sports sentiment shocks ever, Brazilians were deeply frustrated and perplexed. We provide evidence that the usual negative effect on stock returns, due to the behavioral response of investors, can be overwhelmed by their arguably rational response to voters' sentiment near an uncertain election. In particular, this sentiment shock was perceived by financial market participants to lead to a substantial punishment against the incumbent candidate at the polls three months later, benefiting disproportionately firms that were perceived to be hurt by the incumbent's policies. A long-short portfolio strategy aiming to profit from political developments against the incumbent posted a 6.4 percent excess return after the 7-1 defeat, while the overall market was up by 1.7 percent. According to this metric, the 7-1 match corresponds to the third largest political shock against the incumbent (and sixth overall) during the election period. Once we factor out external and political factors, market prices decreased by 1.4 percent, which was the 8th largest decline during the same period, in line with the well-documented investors' sentiment channel.

Our empirical strategy allows us to extract daily political news from the cross-section of stock returns by exploiting heterogeneity in political sensitiveness across firms. Unlike the common approach in the literature, we do not use a pre-determined measure of political sensitivity. Instead, we innovate by using clearly discernible political shocks to measure the degree of political exposure of firms. We assume that, on days after close elections, in which candidates have divergent economic platforms, most of the stock price movements are driven by the resolution of political uncertainty. More precisely, after controlling for aggregate factors, we assume that the bulk of the cross-sectional variation of stock abnormal returns during these days is mainly due to political news. Hence, such cross-sectional variation represents *per se* a measure of the degree of political sensitivity, which can be used backwards to compute our political factor (i.e. the return

of the aforementioned anti-incumbent portfolio) during the electoral run.¹ We find this measure preferable whenever it is hard to conceive a single objective measure of political sensitivity that can fully account for the multi-dimensional aspect of government intervention. In Brazil, for instance, during the incumbent’s mandate, firm-specific policies, such as credit subsidies, temporary tax cuts and price controls, played a prominent role. Hence, during the 2014 electoral run, political shocks against the incumbent candidate, President Rousseff, affected stock returns asymmetrically and significantly.²

We apply this strategy to a detailed analysis of the 7-1 event, which represents a perfect case of a massive negative sentiment shock due to a sports event near to a close election.³ Indeed, right after the World Cup, the whole country was immersed in the closest and most unpredictable presidential election in recent Brazilian democratic history. Each of three major candidates was leading the voting intention polls at some point. Since each candidate represented a different prospect for the economy, financial markets were highly volatile due to weekly – and perhaps daily – political shocks.⁴

Since elections in Brazil are held in a two-round system, we exploit two clearly discernible political shocks to construct the political factor. The first clearly discernible political shock was the first-round vote, which revealed that the difference between Dilma Rousseff (the incumbent and front-runner) and Aécio Neves (the runner-up) was far smaller than predicted by the polls. The second clearly discernible political shock was the resolution of uncertainty after the second-round vote that confirmed Rousseff’s victory by a small margin. Our political factor indicates that, out of 159 dates (or possible political events) during the electoral cycle, the 7-1 defeat to Germany was among those perceived to have

¹Notice that this approach can be applied to extract the political content of any event that occurs around close elections, whenever candidates have divergent economic platforms and firms have different degrees of political sensitivity. In work in progress, we apply this approach to the 2016 US presidential election. Preliminary results suggest that the most politically intense events correspond to trading days around FBI director James Comey’s testimony to the Senate and to specific trading days during the primaries.

²Carvalho and Guimaraes [2016], for instance, use stock options and stock prices data to show that President Rousseff’s reelection had a negative and asymmetric impact on the value of several companies.

³Since 1994, general elections in Brazil are held in October every four years, a few months after the World Cup. However, these elections were not close: 1994 and 1998 were decided in the first round, whereas 2002, 2006 and 2010 were decided in the second round by a large margin (the winner had always more than 12p.p. advantage).

⁴In the appendix, we provide a brief description of the main events during the 2014 presidential election in Brazil through the lens of our political factor.

high political impact.⁵ In the appendix we provide a discussion on possible links between soccer and politics and compile anecdotal evidence suggesting how these links operated in practice after the 7-1 match. This discussion may shed light on why financial market participants rationally interpreted the sentiment shock triggered by the 7-1 defeat as a political shock.

This paper provides additional evidence that sports outcomes affect stock returns. Edmans et al. [2007], for instance, find that, due to investor mood effects, the stock market in a given country declines after the elimination of its national team from the World Cup.⁶ Ehrmann and Jansen [2016] show that this underpricing effect materializes as the game unfolds. In addition, Kaplanski and Levy [2010] document a negative aggregate effect stemming from these losses in the US stock market during the World Cup period.⁷ An immediate extrapolation of these results would imply a decline in the stock market index after the 7-1 event. Indeed, although the stock market index net of external factors increased by 1.7 percent, once we further factor out our political factor from this index, the result is a decrease by 1.4 percent. Hence, this difference is driven by a significant rally of the politically sensitive firms that were perceived to be hurt by policies of the incumbent candidate.

In order to justify the use of stock market data to claim that the 7-1 match was perceived to have political impact, we rely on two well-established empirical facts. First, the ups and downs of close elections affect current economic outcomes and, thus, trades in the stock exchange. Indeed, Snowberg et al. [2007] show that on the 2004 election day in the US, financial markets anticipated higher equity prices, interest rates and oil prices as well as an appreciated exchange rate under George Bush presidency than John Kerry. Julio and Yook [2012], for instance, use a panel of countries to argue that close elections

⁵A similar empirical strategy is formalized by Fulford and Schwartzman [2016], who argue that the U.S. presidential election in 1896 represented a positive shock to commitment to the gold standard. To that end, they exploit the cross-sectional impact of this shock on bank leverage across U.S. states to recover a latent factor driving commitment around this period.

⁶More generally, there is a larger literature on how sentiment affects stock returns. See Baker and Wurgler [2007] for a survey.

⁷Other papers in this literature on sports and asset pricing include Ashton et al. [2003], Palomino et al. [2009], Chang et al. [2012] and Ehrmann and Jansen [2017]. See also Dohmen et al. [2006], who conduct telephone surveys in German during the 2006 World Cup. They find that unexpectedly good performance of the German national team is associated with better economic perceptions and expectations.

are associated with less corporate investment during the election year due to uncertainty regarding the possible prospects for the economy. More generally, a growing literature has studied the effects of political uncertainty on financial outcomes. See, for example, Pástor and Veronesi [2012], Boutchkova et al. [2012], Pástor and Veronesi [2013], Brogaard and Detzel [2015], Gulen and Ion [2015], Kelly et al. [2016] and Bird et al. [2017].⁸

Second, political developments affect the pattern of stock returns in the cross section. Indeed, Fisman [2001] documents smaller returns for politically connected Indonesian firms after an adverse rumor about president Suharto's health. After this seminal paper, similar results associating political connection and stock returns were documented in other contexts.⁹ The cross-sectional pattern of stock returns after a political shock may also be explained by reasons other than political connections. Knight [2007], for instance, shows that stock returns of firms favored under Bush (Gore) platform are positively associated with the probability of a Bush (Gore) victory during the 2000 campaign in the US. Similarly, Belo et al. [2013] show that US firms with high exposure to government spending have higher (lower) stock returns during Democratic (Republican) presidencies. Finally, Akey and Lewellen [2016] emphasize that firms' different degrees of policy sensitivity could be a confounding factor for political connectedness.¹⁰ In contrast with the bulk of this literature, rather than using a pre-determined measure of political sensitivity, we rely on financial markets to construct one.

Finally, our indirect evidence on voting behavior also adds to the growing body of evidence showing that voters react to events unrelated to politicians' actions. Incumbents, for instance, are punished at the polls for natural disasters (Achen and Bartels [2004]), external economic shocks (Wolfers [2007], Leigh [2009], Campello and Zucco [2016]), sports outcomes (Healy et al. [2010], Corbi [2017]) and lottery outcomes (Bagues and Esteve-Volart [2016]). Altogether, these findings can be interpreted as evidence that voters'

⁸Pástor and Veronesi [2013], for instance, emphasize that political uncertainty commands a larger risk premium and makes stocks more volatile whenever economic conditions are weaker. Hence, as Brazil was entering an economic crisis in 2014, when its growth was only 0.1% whereas inflation was 6.4%, asset prices were arguably more sensitive to political uncertainty during this period (see the comparative evolution of the VIX Indexes for Brazil and emerging countries shown in Appendix A).

⁹An incomplete list includes Johnson and Mitton [2003], Faccio [2006], Ferguson and Voth [2008], Cooper et al. [2010] and Akey [2015].

¹⁰Other papers that study the impact of political factors on stock returns include Kim et al. [2012], Cohen et al. [2013] and Addoum and Kumar [2016].

mood leads them to make mistakes, although for most cases other possible explanations cannot be ruled out.¹¹ Closely related is Healy et al. [2010] who document that wins by the home team in local college football games in the US favor the incumbent. Similarly, Corbi [2017] finds that losses, but not wins, in local Brazilian soccer games also hurt the incumbent. The authors attribute these results to mood effects.

The paper is organized as follows. Section 2 develops the empirical. Section 3 reports the results. Section 4 performs sensitivity analyses. Finally, Section 5 provides a discussion of the results.

2 Empirical Strategy

In this paper, part of the argument is that the sentiment shock triggered by Brazil's 7-1 humiliating defeat to Germany was perceived by financial market participants as a political shock against the incumbent, which affected individual stock returns substantially and asymmetrically. We innovate by using two clearly discernible political shocks to measure the degree of political exposure of firms. Under the assumption that, after controlling for aggregate factors, the bulk of the cross-sectional variation of abnormal returns after these shocks was mainly due to political factors, such abnormal returns represent *per se* a measure of the degree of political sensitivity. Hence, we can study whether specific events affected disproportionately individual stock returns of politically sensitive firms.

In contrast, the common approach in the literature is to consider a pre-determined measure of political sensitivity. We find our alternative measure of political sensitivity preferable for the following reason. In her first mandate, President Rousseff carried out policies that included large amount of credit subsidies (and other benefits such as temporary tax cuts) to some firms as well as high degree of government intervention in specific firms. Mainly through subsidized credit directed by the BNDES (Portuguese acronym for *Na-*

¹¹Bagues and Esteve-Volart [2016], for example, argue that rich people may have stronger preferences for the status quo and, thus, lottery prizes or positive external economic shocks may simply shift preferences in favor of incumbents. In addition, Ashworth et al. [2017] argue that exogenous shocks, such as natural disasters, give an opportunity for voters to learn new information about the quality of the government, e.g. emergency preparedness.

tional Development Bank), the government fostered the so-called national champions in allegedly strategic sectors. These politically connected firms included the oil and gas company *OGX* (ticker OGXP3 at Bovespa – the São Paulo Stock Exchange), the telecommunication company *Oi* (OIBR3, OIBR4), the meat processing company *JBS* (JBSS3), among others. A political shock against the incumbent could affect these firms negatively. Also, many companies under control of the Brazilian government, such as the oil and gas company *Petrobras* (PETR3, PETR4), *Banco do Brasil* (BBAS3) bank, electric utilities company *Eletrobras* (ELET3, ELET5, ELET6), among others, suffered from government intervention such as price controls. These firms are expected to perform positively after a political shock that reduces the odds of Rousseff’s second mandate. More generally, as other candidates represent different prospects for different firms, the ups and downs during the close election of 2014 impacted firms’ asset prices asymmetrically. It is hard to conceive a single objective measure of political sensitivity that can fully account for this complex environment. We overcome this challenge by letting financial markets determine the degree of political sensitivity of each firm.¹²

Our empirical strategy requires the realization of a large political shock that drives the bulk of the cross-sectional variation in abnormal returns. We assume that, whenever candidates represent distinct prospects for different firms, the cross section of abnormal returns on the day after uncertain and close elections will be dominated by the resolution of political uncertainty. As presidents are elected in Brazil by absolute majority in a two-round system, we are able to use first- and second-round results as political shocks jointly or separately. A close inspection of Appendix B, which describes the main events in the 2014 presidential election in Brazil, reveals that the dynamics of the 2014 electoral run were highly uncertain during both rounds. For each of the three major candidates, Dilma Rousseff (the incumbent and front-runner), Aécio Neves (the runner-up) and Marina Silva (the third place), the odds of winning the election was changing every week, perhaps every day. Indeed, each of them led the voting intention polls at some point during the run.¹³

¹²Carvalho and Guimaraes [2016] claim that, among twenty stocks traded at the São Paulo Stock Exchange, PETR3, PETR4 and BBAS3 were the most negatively affected by Rousseff’s reelection. Interestingly, JBSS3 was also negatively affected, but not as much as state-controlled companies and the banking industry as whole. During Rousseff’s first mandate, the banking industry was pressured by the government to reduce interest rates to borrowers.

¹³Alternatively, one may attempt to identify a large political shock by considering the voting intention

The first-round vote – held on Sunday, October 5th – revealed that the difference between Rousseff and Neves was far smaller than predicted by the polls. On Thursday, October 2nd, Datafolha and Ibope, the main pooling institutes in Brazil, released polls showing Rousseff with 40%, Neves with nearly 21% and Silva with 24% of the votes in the first round. During the weekend, after a debate broadcasted live at Friday night, the new polls indicated Rousseff with 40%, Neves with 24% and Silva with nearly 22% of the votes. On the election day, Rousseff, Neves and Silva had 37.58%, 30.31% and 19.26%, respectively, of the votes (including null votes). These results were known by night on the election day. We interpret them as an unexpected political shock that led to an update of the odds of winning in favor of Neves. In other words, the polls underestimated the strength of Neves.

The second-round vote – held on Sunday, October 26th – was expected to be close and, thus, highly uncertain according to the previous voting intention polls. Rousseff’s victory by a small margin (3.3p.p. of the valid votes) was quantitatively in line with these polls. In this case, we interpret the uncertainty resolution as a large political shock in favor of Rousseff that was not fully priced in advance.

In what follows, we explain how we use these two political shocks to construct a measure of the political content in the cross-sectional variation of stock returns in any given day during the political campaign. First, we obtain abnormal returns for each individual stock after factoring out both domestic and international factors. Second, assuming that abnormal returns are mainly determined by the resolution of political uncertainty in the trading day after each round vote, we construct a long-short portfolio that profits whenever the market anticipates a lower probability of reelection. The return of this portfolio can also be interpreted as a measure of the political factor in stock returns.

polls at the time they were released. However, given the high sensitivity of asset prices to the 2014 electoral outcome, the information content in polls was likely to be anticipated by financial firms and, thus, stock prices should not react much after they were released. The online appendix of Fernandes and Novaes [2017], for instance, investigates how these polls affected stock prices during the second round of the presidential election. Effects, though, are not very statistically significant. Moreover, there is anecdotal evidence suggesting that these firms had daily access to private electoral polls, never released to the general public. In September 26th, for instance, the Valor Econômico, the largest newspaper specializing in business, financial and economic news, published online at 4pm an article mentioning that private polls were conducted aiming to anticipate the results of a Datafolha (one of the main pooling institutes in Brazil) poll that would be released at night. See: <http://www.valor.com.br/financas/3712464/bovespa-avanca-25-com-disparada-do-kit-eleicao-antes-do-datafolha>.

Let the excess return $r_{i,t}$ of a stock i in a given date t be $\log p_{i,t} - \log p_{i,t-1} - r_{f,t}$, where p is the adjusted closing price¹⁴ and r_f is the log risk-free rate proxied by the SELIC overnight interest rate.¹⁵ We compute abnormal returns following an approach similar to Edmans et al. [2007]. For each stock i , we consider the following equation,

$$r_{i,t} = \alpha_i + \rho_i r_{i,t-1} + \beta_i X_t + \gamma_i D_t + \epsilon_{i,t}, \quad (1)$$

where X_t is a set of controls including: (i) the excess return associated with the Bovespa Index;¹⁶ (ii) the excess return associated with the exchange rate (R\$/U\$) depreciation;¹⁷ (iii) the excess return associated with the S&P 500 Index; and (iv) the S&P GSCI Crude Oil Excess Return Index. The idea is to factor out the variation of individual returns that is associated with the variation of those aggregate factors that were highly sensitive to political outcomes (local market returns and exchange rate variations) and external factors. We add lagged individual stock return to account for illiquidity. We also add lagged external factors to account for the fact that markets open earlier in Brazil than in the US. Due to weekends and holidays, the lag between two adjacent trading days, t and $t - 1$, ranges from one to five days. Hence, we also control for a set of calendar variables D_t that include: (i) dummy variables for Monday through Thursday; and (ii) dummy variables for lags between two adjacent dates ranging from two (except weekends) to five days. As in Edmans et al. [2007], the latter set of dummy variables aims to control for non-weekend holidays. After estimating equation (1) by OLS, we follow MacKinlay [1997] and define abnormal returns for each stock i in date t as

$$\hat{\epsilon}_{i,t} = r_{i,t} - \hat{\alpha}_i - \hat{\rho}_i r_{i,t-1} - \hat{\beta}_i X_t - \hat{\gamma}_i D_t.$$

Once we fix the dates for the aforementioned large political shocks, say date $t = s_1$ for the day after the first-round vote and $t = s_2$ for the second-round, we implicitly assume that the bulk of the cross-sectional variation of abnormal returns on those days was mainly

¹⁴All data on stock prices are from Economatica.

¹⁵SELIC is the policy rate targeted by the Central Bank of Brazil. It is an average of the interbank interest rates on overnight loans that require governments securities as guarantee.

¹⁶An index comprised of the most liquid stocks traded at the São Paulo Stock Exchange.

¹⁷The proxy for the US risk-free rate is the 1-month Treasury constant maturity rate.

due to the political shocks. Hence, these abnormal returns serve as a measure to rank the degree of political sensitivity among Brazilian firms.

Based on this rank, we construct long-short “anti-Rousseff” portfolios, in which the weight of stock i is proportional to $(\hat{\epsilon}_{i,s_1} - \hat{\epsilon}_{i,s_2})$, $(\hat{\epsilon}_{i,s_1})$ or $(-\hat{\epsilon}_{i,s_2})$ depending on whether we consider both election days or just a single one to construct weights. Since political shocks after the first-round and second-round votes were anti-Rousseff and pro-Rousseff, respectively, $\hat{\epsilon}_{i,s_1}$ should enter positively whereas $\hat{\epsilon}_{i,s_2}$ negatively as weights in an anti-Rousseff portfolio. By considering the sum of both, the role of firm-specific developments that might have affected abnormal returns in just one of these dates is mitigated.

We then use these weights to compute portfolio returns based on the abnormal returns for all other dates, $\hat{\epsilon}_{i,t}$. Of course, as abnormal returns are “net of” dummies, intercept and lagged effects, this portfolio strategy is not feasible. The advantage is that it measures more directly the effect of political shocks on asset prices. In a latter section, we show that our results are robust if we consider a feasible version of this strategy, in which we hedge local and external factors. We should also point out that weights do not need to sum to zero in our main case. This is not an issue as all returns are in excess of the risk-free rate. Nevertheless, our results barely change if we demean portfolio weights.

In the main case, the return R_t of such portfolio is given by:

$$R_t = \sum_i \left(\frac{\hat{\epsilon}_{i,s_1} - \hat{\epsilon}_{i,s_2}}{\sum_i |\hat{\epsilon}_{i,s_1} - \hat{\epsilon}_{i,s_2}|/2} \right) \times \hat{\epsilon}_{i,t},$$

where we normalize weights by $\sum_i |\hat{\epsilon}_{i,s_1} - \hat{\epsilon}_{i,s_2}|/2$. With this normalization, the portfolio will be 100 percent long and 100 percent short stocks in the case of demeaned weights. This normalization aims to make returns comparable to those of standard equity factors and of the Bovespa Index. Notice that the higher the absolute value of R_t , the stronger the political content reflected in the cross-section of abnormal returns on any particular day. We explore this below to rank trading days according to their political content.

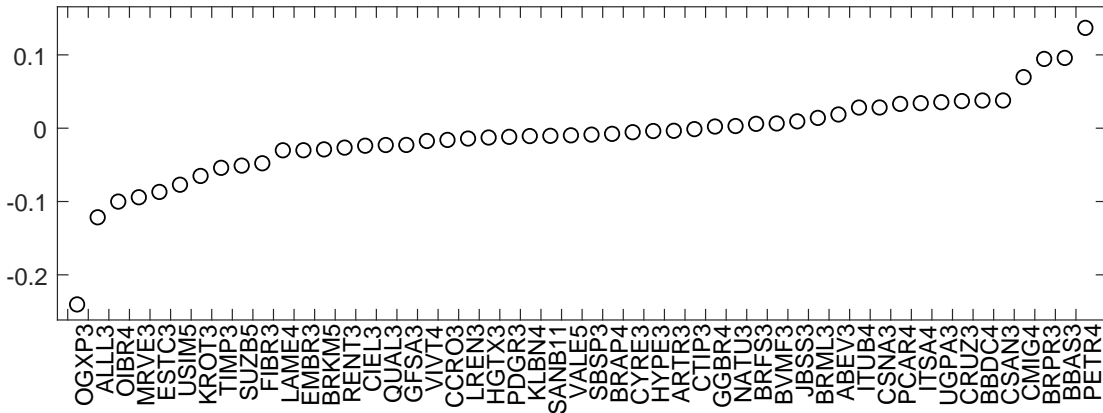
In Appendices A and B, we provide evidence that stocks turned particularly sensitive to political factors as of March 2014. This could bias the estimation of coefficients associated with local and external factors. Hence, in our benchmark analysis, we estimate the set

of regressions in (1) using daily data between March 2013 and February 2014 (pre-event estimation window), and perform our analysis between March 2014 and October 2014 (analysis window).¹⁸ We consider the set of the fifty most liquid stocks traded at the São Paulo Stock Exchange (Bovespa) in this period, which comprises nearly 65 percent of traded volume. If a firm has both common and preferred shares, we consider the most liquid one.¹⁹ In Section 4 we perform sensitivity analysis by varying the set of stocks and the pre-event estimation window. Notice that after estimating this set of regressions by OLS, we can compute the estimated cross-sectional variation of abnormal returns, $\hat{\epsilon}_{i,t}$ for all i , after March 2014, the period of interest.

Figure 1 plots the estimated normalized weights used to compute R_t in ascending order for the fifty most liquid stocks. In line with the aforementioned arguments, if someone wished to bet against the incumbent, an anti-Rousseff portfolio should buy (i.e. place positive weights on) stocks from state-owned firms, such as PETR4 or BBAS3, and short sell (i.e. place negative weights on) highly subsidized firms, such as OGXP3 or OIBR4.

Figure 1: Anti-Rousseff Portfolio Weights

The figure plots the normalized weights for each stock i , used to construct the anti-Rousseff portfolio that goes long (short) on stocks that are hurt (benefit) from president Rousseff’s reelection. For more details, see notes in Table 1 below.



¹⁸Specifically, since March 1st to March 5th encompasses a weekend and Carnival (a three-day holiday in Brazil), the analysis window runs from March 6th to October 27th, right after the second-round vote.

¹⁹The tickers, in order of liquidity, are: VALE5, PETR4, ITUB4, BBDC4, BBAS3, BVMF3, OGXP3, ITSA4, GGBR4, CIEL3, BRFS3, CCRO3, PCAR4, BRML3, USIM5, CMIG4, KROT3, PDGR3, CSNA3, ABEV3, LREN3, VIVT4, NATU3, TIMP3, UGPA3, HYPE3, CYRE3, CSAN3, EMBR3, BRPR3, HGTX3, OIBR4, SANB11, ESTC3, CTIP3, RENT3, SBSP3, SUZB5, MRVE3, FIBR3, BRAP4, GFS3, CRUZ3, JBSS3, LAME4, KLBN4, ALLL3, QUAL3, BRKM5 and ARTR3.

3 Results

In order to gauge the political content of the 7-1 event, we rank dates in the analysis window according to the absolute return of the long-short portfolio described above. Out of 159 dates (or possible political shocks), Table 1 reports the top fifteen shocks. This table also reports, for each of these dates, the return R_t of the anti-Rousseff portfolio; the Bovespa Index raw excess return; versions of the Bovespa Index excess return net of external factors and, then, net of both external and political factors;²⁰ and the ranking position of each date when weights are constructed based on a single political shock (either the first- or the second-round vote), rather than the sum of both.

²⁰We consider betas estimated within the pre-event estimation window to factor out external factors, but betas estimated in-sample to factor out the political factor.

Table 1: Top 15 Political Shocks During the 2014 Presidential Election

This table reports the fifteen better ranked trading days according to the absolute return R_t of the anti-Rousseff portfolio that goes long (short) on stocks that are hurt (benefit) from president Russeff’s reelection. We consider the set of the fifty most liquid stocks at the São Paulo Stock Exchange (Bovespa). Weights of this portfolio are constructed based on estimated abnormal returns $\hat{\epsilon}_{i,t}$ for each stock i after the first- and second-round election days, say $t = s_1$ and $t = s_2$, respectively. Abnormal returns $\hat{\epsilon}_{i,t}$ for each stock i are estimated using daily returns $r_{i,t}$ according to

$$r_{i,t} = \alpha_i + \rho_i r_{i,t-1} + \beta_i X_t + \gamma_i D_t + \epsilon_{i,t},$$

where X_t includes the excess returns associated with the Bovespa Index, exchange rate (R\$/US\$) depreciation, the S&P 500 Index (both in t and $t - 1$), the S&P Crude Oil Index (both in t and $t - 1$); D_t includes dummy variables for Monday trough Thursday and dummy variables for lags between two adjacent dates ranging from two (except weekends) and five days. The proxy for the US risk free rate is the 1-month Treasury constant maturity rate. The pre-event estimation window runs from March 2013 to February 2014. Since political shocks after the first- and second-round votes were anti-Rousseff and pro-Rousseff, respectively, the return of the anti-Rousseff portfolio in a trading day t is given by

$$R_t = \sum_i \left(\frac{\hat{\epsilon}_{i,s_1} - \hat{\epsilon}_{i,s_2}}{\sum_i |\hat{\epsilon}_{i,s_1} - \hat{\epsilon}_{i,s_2}|/2} \right) \times \hat{\epsilon}_{i,t},$$

This table also reports the Bovespa Index raw excess return, as well as versions of this index in which we factor out external factors and, then, both external and political factors. It also reports the ranking position of each date when weights are constructed based on a single date (either the first- or the second-round vote). Finally, it provides a description of the event (anti-Rousseff, pro-Rousseff or unrelated) based on the assessment of articles published online at the Valor Econômico (the largest newspaper specializing in business, financial and economic news) website (see links in Appendix C).

Rank	Date	R	Bovespa (raw)	Bovespa (wo ext)	Bovespa (wo ext/pol)	Rank (1st rnd)	Rank (2nd rnd)	Event
1	27-Oct	-10.5%	-2.8%	-2.6%	2.5%	19	1	2nd round
2	6-Oct	9.7%	4.6%	4.8%	0.2%	1	4	1st round
3	21-Oct	-8.4%	-3.5%	-5.1%	-1.0%	2	11	pro-Rousseff
4	13-Oct	8.4%	4.6%	5.9%	1.8%	4	2	anti-Rousseff
5	23-Oct	-6.6%	-3.3%	-4.3%	-1.1%	3	20	pro-Rousseff
6	10-Jul	6.4%	1.7%	1.7%	-1.4%	5	7	7-1 match
7	7-Apr	6.1%	2.0%	2.8%	-0.1%	7	5	anti-Rousseff
8	30-Sep	-5.8%	-1.0%	-0.7%	2.0%	6	12	pro-Rousseff
9	16-Oct	-5.7%	-3.4%	-3.5%	-0.7%	13	3	pro-Rousseff
10	6-Jun	5.5%	3.0%	2.6%	0.0%	8	9	anti-Rousseff
11	27-Mar	5.1%	3.4%	3.4%	0.9%	10	13	anti-Rousseff
12	18-Jul	4.9%	2.4%	1.4%	-1.0%	17	8	anti-Rousseff
13	4-Sep	-4.8%	-1.7%	-1.8%	0.5%	12	15	pro-Rousseff
14	11-Apr	4.6%	1.4%	2.0%	-0.2%	9	25	unrelated
15	24-Oct	4.3%	2.4%	1.8%	-0.3%	21	14	anti-Rousseff

Notice that the 7-1 match, which ranks 6th, was perceived to have high political impact. In fact, the anti-Rousseff portfolio yielded a 6.4 percent excess return on this date.²¹ Aside the first- and second-round votes, which were clearly discernible large political shocks, the 7-1 match corresponds to the fourth largest political shock, and the second largest against the incumbent. Moreover, even considering each portfolio constructed with weights associated with a single political shock, the 7-1 match still ranks high. Importantly, we carefully inspect print and online news in four large newspapers around the 7-1 match, between July 7th and July 11th, looking for possible political developments. We run queries in *Estadão*, *Folha de São Paulo* and *O Globo*, the largest daily newspapers in Brazil, as well as in the *Valor Econômico*, the largest newspaper specializing in business, financial and economic news. Of course, there were some political news, but we could not track any news that might have triggered a large political shock. Moreover, many analysts attributed the movements in the stock prices during this period to political spillovers from the 7-1 match.²²

We also apply the same empirical strategy to form a “7-1 portfolio” based on the cross-sectional differences in abnormal returns on the day after the match. This portfolio is highly correlated with the anti-Rousseff portfolio, with the advantage of being actually implementable. This long-short portfolio had a positive return of 9.6 percent after the first-round vote and a negative return of 5.4 percent after the second-round vote. Hence, one could have created a portfolio based on the cross-sectional differences in abnormal returns after the 7-1 match to trade political views.

The anti-Rousseff portfolio after the 7-1 match exhibited an excess return well above the overall market, which was up by 1.7 percent. Importantly, this increase was mainly driven by a significant rally of the politically sensitive firms that were perceived to be hurt by the incumbent firm-specific policies. Once we factor out the aforementioned external

²¹The 7-1 match happened on July 8th (Tuesday) at 5pm (4pm in New York). On this day, the Bovespa closed at 2:30pm rather than 5pm as usual. Moreover, July 9th was a holiday in São Paulo and the Bovespa did not open. Hence, we compute excess returns between July 8th and July 10th. Nonetheless, intraday prices of politically sensitive Brazilian ADRs traded at the NYSE on July 9th, such as those of the aforementioned oil and gas company *Petrobras* and electric utilities company *Eletrobras*, suggest that the effect of the 7-1 match materialized within the first minutes after the NYSE opened (unreported).

²²See, for example, <http://www1.folha.uol.com.br/mercado/2014/07/1483629-papeis-de-empresas-brasileiras-sobem-no-externo-apos-derrota-na-copa.shtml>.

factors and the political factor, i.e. the return of the anti-Rousseff portfolio, the Bovespa Index (net of external and political factors) fell by 1.4 percent after the 7-1 defeat. This is the 8th largest decline out of 159 trading days.²³ Since this defeat is likely to be one of the largest negative sports sentiment shock ever, this decline is in line with previous literature on sports sentiment and stock returns (e.g. Edmans et al. [2007]).²⁴

We conclude that, after a negative sentiment shock, its usual negative effect on stock returns, due to the behavioral response of investors, can be overwhelmed by a positive effect, due to the arguably rational response of investors to voters' sentiment near an uncertain election. In Appendix D we provide a discussion and anecdotal evidence on possible links between the 7-1 defeat and voting behavior. These links may explain why investors rationally interpreted the sentiment shock as a political shock.

Every day, after the Bovespa closes, the Valor Econômico newspaper publishes online its explanations for the behavior of some stocks in the Bovespa. We use these articles, for which the links are listed in Appendix C, as an attempt to support each of these fifteen dates with a political event. Interestingly, for the first trading day after the 7-1 match (July 10th), the newspaper attributed movements in the stock market to possible spillovers from the failure of the national team in the World Cup to the presidential run.

For the other fourteen highest ranked trading days, except for one unrelated case (April 11th), the explanation put forth by the newspaper makes reference to electoral dynamics. The behavior of stock returns on these days is partially attributed to the release of voting intention polls (April 7th, June 6th, July 18th, September 4th, September 30th, October 16th, October 21st, October 23rd), release of Rousseff's popularity polls (March 27th), and weekend political events (October 13th, October 24th). Notice that our empirical strategy selected political shocks that encompassed the whole electoral dynamics, ranging from March to October, although clearly concentrated during the second-round campaign

²³If we did not factor out external factors, the Bovespa Index (net of political factors) would fall by 1.2 percent, the 15th largest decline. Incidentally, the DAX Index, a stock market index consisting of the thirty major German companies trading on the Frankfurt Stock Exchange, rose 0.4 percent and 1.2 percent after the 7-1 match and the final of the World Cup, respectively. The S&P 500 Index increased nearly by 0.5 percent after both events.

²⁴Although Edmans et al. [2007] show that mood effects are stronger in small stocks, the magnitude of this decline does not change much if we consider separately two valued-weighted indexes comprising the 50 smallest-cap stocks and the 50 biggest-cap stocks (out of the 150 most liquid stocks).

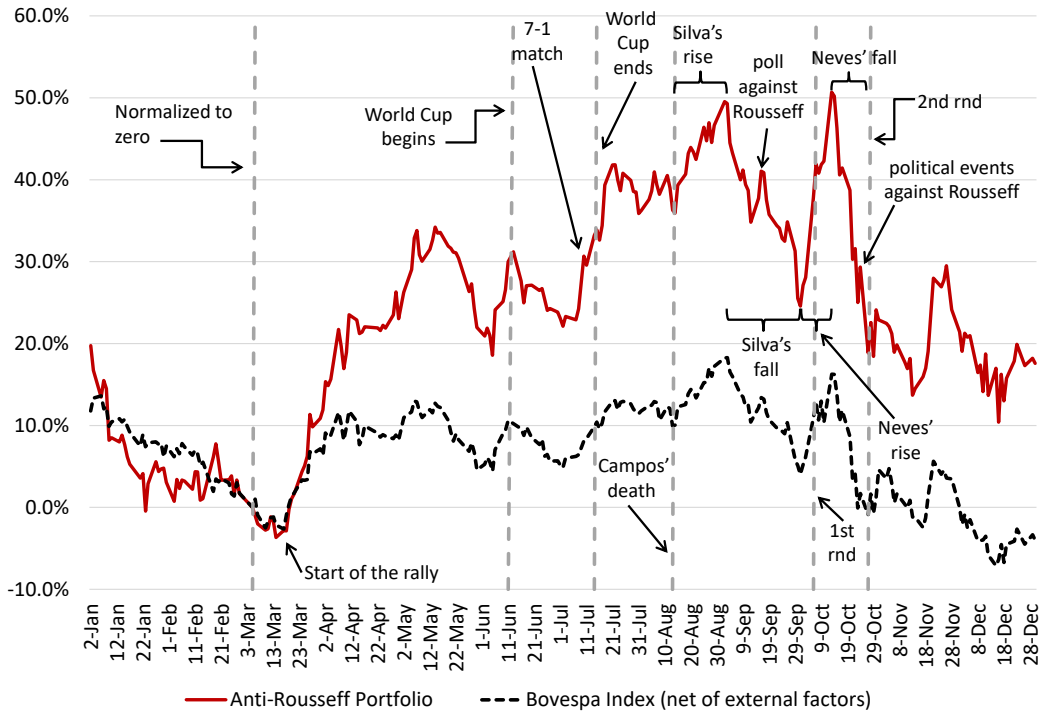
when financial markets were particularly volatile. Moreover, the sign of the anti-Rousseff portfolio return is in line with the qualitative nature of the political event, as we discuss in Appendix B. It is reassuring that our approach to measuring the political content in stock prices is backed by the newspaper’s assessments of the factors that drove them.²⁵ Furthermore, if weights were constructed based on a single political shock (either the first- or the second-round vote), rather than the sum of both, except for the only day classified as unrelated, all days rank among the top twenty-one political shocks.

Figure 2 highlights some of the main political events during the 2014 electoral run, described in detail in Appendix B. The run was the closest and most unpredictable presidential election in recent Brazilian democratic history, subject to weekly – and perhaps daily – political shocks. By plotting the evolution of cumulative excess returns associated with both the Bovespa Index (net of external factors) and the anti-Rousseff portfolio, Figure 2 shows that our political factor, R_t , accounts reasonably well for the electoral dynamics, which reinforces the interpretation that the 7-1 event was perceived to be a large political shock.

²⁵Given the highly uncertain electoral run, one may wonder how often the Valor Econômico attributed part of the movements in stock prices to the electoral dynamics. In 54 percent of the pieces (86 out of 159), part of the explanation rested on the electoral dynamics. Nonetheless, this share increased monotonically as the election approached. For instance, only 3 out of 18 pieces (17 percent) in March, when our approach selected one day, mentioned the presidential run. From April to September, the share of pieces increased monotonically from 25 percent to 76 percent. In October, all of the 19 pieces mentioned a political event.

Figure 2: Cumulative Excess Returns for Bovespa Index and Anti-Rousseff Portfolio

The figure plots the cumulative excess returns for the Bovespa Index net of external factors (i.e. both current and lagged S&P 500 Index and S&P Crude Oil Index in excess returns), as well as the cumulative excess returns of the anti-Rousseff portfolio. See notes in Table 1 for details. March 5th is the reference date, when cumulative returns are normalized to zero. The figure also marks the main political events during the 2014 presidential electoral run in Brazil, which are described in Appendix B.



We set March 5th as the reference date, when cumulative returns are normalized to zero. The beginning of the analysis window is marked by a general reassessment for the first time of Rousseff’s favoritism. Notice that both series nearly overlapped up to the end of March. After that, the cross-section of abnormal returns seem to reflect the political developments better than the stock market index.

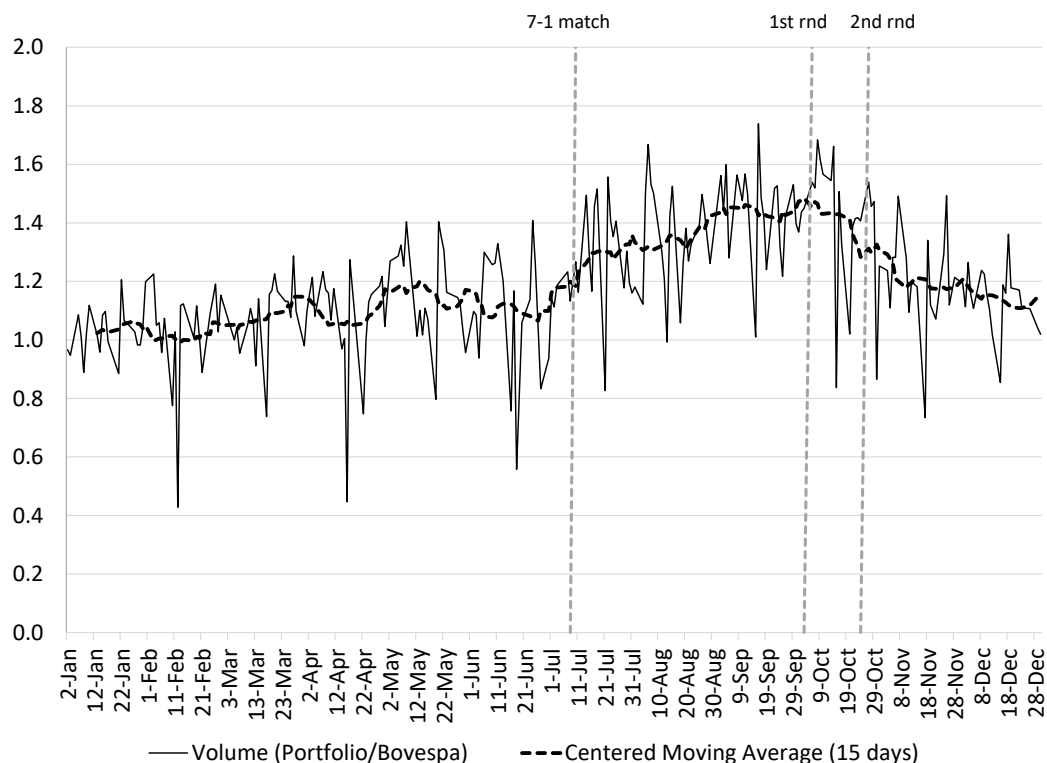
Interestingly, after a relatively calm period during the World Cup, the 7-1 match triggered one of the most intense stock market rally with the anti-Rousseff portfolio yielding an excess return of 15.1% in a few days (from July 10th to July 18th). We believe that the perception that the 7-1 match might affect the electoral outcome was reinforced in the final weekend of the World Cup, when Brazil was defeated by Netherlands in the dispute for third place, again by a wide score of 3-0, which might have amplified and prolonged

the sentiment shock triggered by the defeat to Germany. In addition, the end of the World Cup might have led to a deeper evaluation of the national team performance, and reinforced the view that the 7-1 defeat had a political impact. On Monday, July 14th, right after the final weekend of the World Cup, the anti-Rousseff portfolio yielded a return of 3.6% (the 22nd highest political shock according to our metric). In addition, perhaps caused by the 7-1 event, voting intention and popularity polls released by Datafolha on July 17th, after the Bovespa closed, portrayed a weaker incumbent. On July 18th, the anti-Rousseff portfolio yielded a return of 4.9% (the 12th highest shock).

Finally, Figure 3 plots the ratio of the weighted sum of stocks' volume that compose the anti-Rousseff portfolio to the total volume traded at the Bovespa, as well as its fifteen days centered moving average (dashed-line). Weights are the absolute values of the weights used to compute the anti-Rousseff portfolio return. We normalize this ratio to one on March 5th. The higher this measure, the more investors are trading stocks that are sensitive to political developments. In addition, this measure also reflects electoral uncertainty to the extent that it creates trading opportunities, inducing investors to construct either pro- or anti-Rousseff portfolios.

Figure 3: Ratio of “Portfolio Volume” to Bovespa Volume

The figure plots the ratio of the weighted sum of stocks’ volume that compose the anti-Rousseff portfolio to the total volume traded at the Bovespa, as well as its fifteen days centered moving average. Weights are the absolute values of the weights used to compute the anti-Rousseff portfolio return. See notes in Table 1 for details. We normalize this ratio to one on March 5th.



Up to the 7-1 match, the moving average of this measure oscillated between 1.0 and 1.2. After the stock market rally triggered by the 7-1 match, this variable increased systematically, reaching nearly 1.5 right before the first-round vote. Then, it dropped gradually during the second-round campaign to nearly 1.3. As of the end of the electoral run, it fell steadily reaching approximately 1.15 by the end of the year. If the political factor started to be relevant around March, it seemed to dominate the dynamics of the stock market only right after the 7-1 match, reinforcing our claim that this event was perceived to be a massive political shock.

4 Sensitivity Analysis

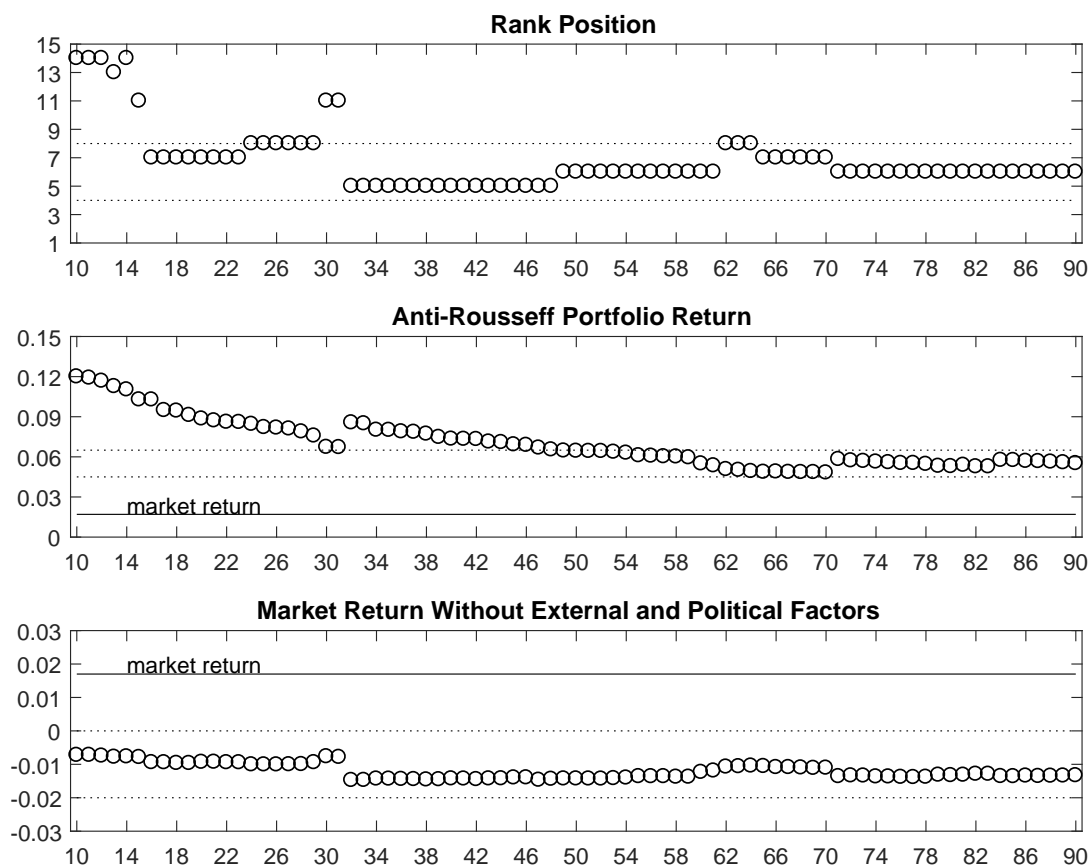
In this section, we provide several sensitivity analyses that reinforce the idea that the political content of the 7-1 event had a positive impact on stock market prices, while the direct effect of the sentiment shock on prices is negative. First, we consider different samples of stocks, ranging from the ten to the ninety most liquid stocks. Second, we address the role of influential stocks that might be subject to firm-specific developments around the first- and second-round votes. Third, we consider a different pre-event estimation window. Fourth, we consider different portfolio strategies. Finally, we discuss the political content of other World Cup matches.

4.1 Number of Stocks

In this section we recompute the weights associated with the anti-Rousseff portfolio for different pools of stocks. In particular, we vary the number of stocks from the ten to the ninety most liquid stocks. The top graph of Figure 4 plots the rank position associated with the 7-1 event, the middle graph plots the return of the anti-Rousseff portfolio, whereas the bottom graph plots the stock market return in the absence of the political and external shocks. In the horizontal axis, we vary the number of stocks considered in the analysis.

Figure 4: Varying the Number of Stocks

The top panel plots the rank position associated with the 7-1 event. The middle panel plots the anti-Rousseff portfolio excess return. The bottom plot presents overall market return in the absence of political and external shocks. The top panel also highlights the interval between the 4th and 8th position, whereas the others mark the overall market return. The middle (bottom) one also marks the region between 4.5 and 6.5 (0.0 and -2.0) percent returns. The horizontal axis varies the number of shares used to construct the anti-Rousseff portfolio from the ten to the ninety most liquid stocks. Except for the different polls of stocks, the analysis follows the description in Table 1.



Irrespective of the number of stocks used to build the anti-Rousseff portfolio, the 7-1 event always ranks high, among the top fifteen political developments (top graph). Moreover, the portfolio is always well above the market excess return of 1.7 percent (full line in the bottom graph), reaching 12.0 percent if constructed solely with the ten most liquid stocks. Finally, once a larger number of stocks is considered, the rank position is always between fifth and eighth, whereas the portfolio return is always between 4.5 and 6.5 percent. In addition, market returns in the absence of political and external shocks are always negative, mitigating the concern that some influential stocks might be driving our results. We further address this concern in the following sub-section.

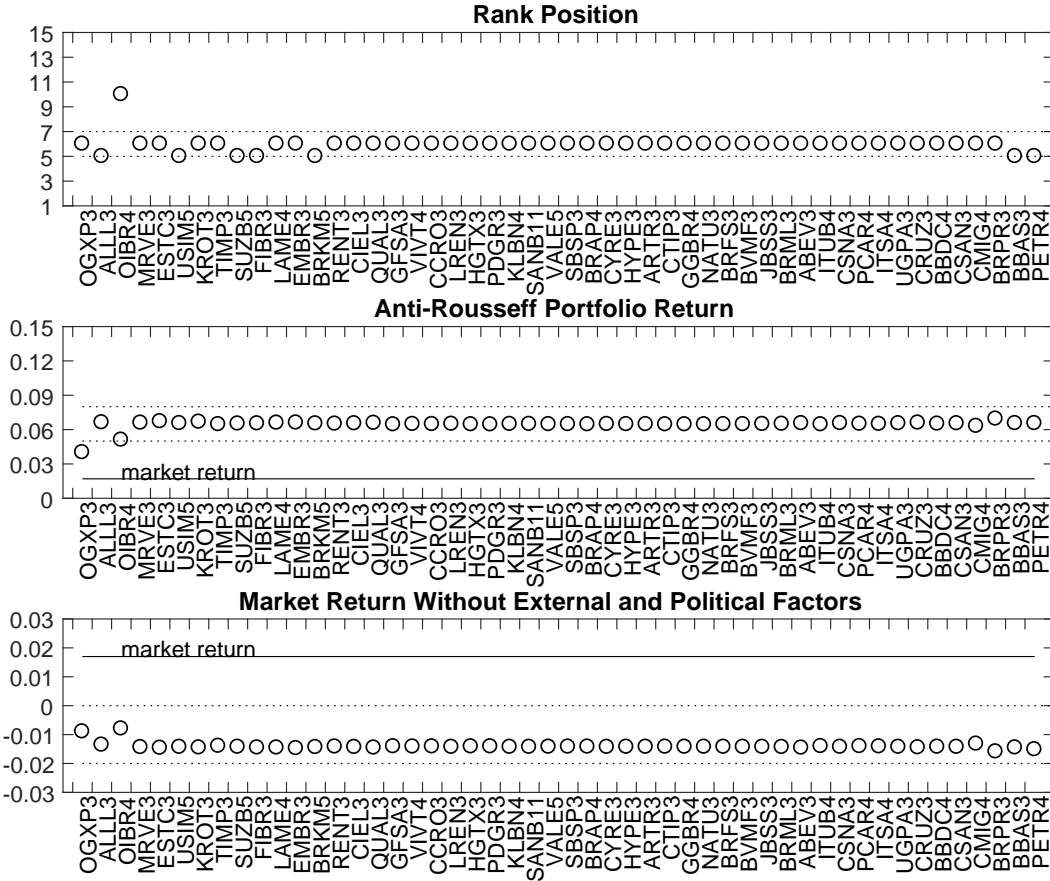
4.2 Influential Stocks

Our empirical strategy relies on the implicit assumption that the bulk of the cross-sectional variation of stock returns after election days is mainly due to political news. However, some spurious firm-specific developments unrelated to electoral dynamics may have biased our results towards finding that the 7-1 match is politically relevant. In order to address this issue, we redo the analysis above several times, each of them excluding one of the fifty firms at a time from the pool of stocks and recomputing the weights associated with the anti-Rousseff portfolio.

Results are reported in Figure 5. The top (middle) panel plots the rank position (anti-Rousseff portfolio return) after excluding one of the stocks at a time from the pool of stocks. In addition, the bottom panel shows the overall stock market performance in the absence of political and external shocks. The x-axis reports the excluded stock, which is ordered according to the weight assigned in the anti-Rousseff portfolio (see Figure 1). Dotted lines mark one position above and below the rank position of the 7-1 event once the fifty shares are considered.

Figure 5: Excluding Each Stock at a Time

The top panel plots the rank position associated with the 7-1 event, the middle panel shows the anti-Rousseff portfolio excess return, whereas the bottom one plots market returns in the absence of political and external shocks. The top panel also highlights the interval between the 5th and 7th position, the middle shows the interval between 5% and 8% and the bottom the interval between 0% and -2%. The bottom two panels also mark the overall market return. The horizontal axis varies the pools of stocks by excluding from the analysis each of the fifty most liquid stocks at a time. Shares are ordered according to the weight assigned in the anti-Rousseff portfolio. Except for the different polls of stocks, the analysis follows the description in Table 1.



We identify two influential firms, both “chosen” by the government to be the so-called national champions in allegedly strategic sectors. Namely, the aforementioned telecommunication company Oi and oil and gas company OGX . In fact, by excluding the ticker OIBR4 from the sample, the rank position falls from 6th to 10th, whereas the portfolio return reduces from 6.4 to 5.1 percent. Once the ticker OGXP3 is excluded, although the rank position remains the same, the portfolio return falls from 6.4 to 4.0 percent. In both cases, market return in the absence of political and external shocks remains negative but not as strong. Nonetheless, the qualitative interpretation that the 7-1 match was a huge

political shock and that the direct sentiment effect was negative remains the same.

In principle, it is not clear whether both *Oi* and *OGX* should be excluded from the sample, as they are expected to be highly sensitive to political shocks. Nonetheless, firm-specific news released between the close of the stock market on October 3rd (Friday) and October 6th (Monday), or between October 24th (Friday) and October 27th (Monday), may hinder the interpretation that the cross-sectional pattern of stock returns on the first trading day after the first- or second-round vote was shaped primarily by the election results. To guard against this possibility, we run queries from March 1st 2014 to October 31st 2014 in the dataset of news articles of Brazil's main business newspaper, *Valor Econômico*. We search for news on *OGX* and *Oi*, the two influential stocks identified above, that might justify movements in abnormal returns around the first- and second-round votes that are unrelated to politics. Our conclusions for each of these firms are the following.

- *OGX* (OGXP3). On October 30th 2013, *OGX* filed for bankruptcy protection in Brazil. Since then, several judicial disputes have followed. The news flow was particularly intense during the campaign, also around the election days, as a restructuring plan was being implemented. Moreover, former executives of *OGX* were facing criminal charges at that time. We should emphasize, however, that after the first- and second-round votes, when election results were clearly anti- and pro-Rousseff, abnormal returns were -16.6 and 11.0 percent, respectively. Importantly, we could not track any firm-specific news that could justify such hike after the second-round vote.
- *Oi* (OIBR4). On October 2nd 2013, when the company was already facing financial problems, a merger between *Oi* and the Portuguese company *Portugal Telecom* was announced. This merger was in process throughout 2014. The news flow for this firm was particularly intense during the campaign, including around the election days. In particular, an unexpected exposure of *Portugal Telecom* to the financially troubled *Espírito Santo* bank raised many concerns regarding the merger. Moreover, during October 2014, *Oi*'s CEO resigned, *Portugal Telecom*'s assets were sold

abroad, and possible offers to buy *Portugal Telecom* were reported. After the first- and second-round votes, when election results were clearly anti- and pro-Rousseff, abnormal returns were -10.3 and 1.3 percent, respectively.

4.3 Pre-Event Estimation Window

We argue in Appendices A and B that stocks turned particularly sensitive to expected electoral outcomes around March 2014. Hence, we consider the pre-event estimation window between March 2013 and February 2014. As a robustness check, to reassure that the pre-event estimation period is not contaminated by electoral factors, we consider a more conservative window between January 2013 and December 2013. The set of the fifty most liquid stocks during the period remains the same. Results barely change. Indeed, the 7-1 event continues to be the 6th most important political shock, whereas the anti-Rousseff portfolio still yields 6.4 percent in the trading day after the match and stock market returns net of political and external factors remain roughly the same. Were *OGX* (O_i) excluded from the sample, rank position and portfolio excess return would be 7th (9th) and 3.8 (5.1) percent, respectively.

4.4 Demeaned Weights and Feasible Strategy

Throughout the paper we construct weights based on abnormal returns after the first- and second-round votes. Hence, weights do not need to sum zero. This is not an issue as all returns are in excess of the risk-free rate. Nevertheless, if we consider demeaned portfolio weights, such that they sum zero, results barely change. In this case, the anti-Rousseff portfolio posted a 6.2 percent excess return after the 7-1 match, still the 6th most important political development. Moreover, overall market prices net of external and political factors decreased by 1.3 percent.

Previously, we reported portfolio returns computed with abnormal returns, which are not feasible since they are “net of” dummy variables, intercept and lagged variables. In this section, we also consider the returns of a feasible strategy, say $\epsilon_{i,t}^*$ for all i and t , in which we hedge local and external factors but ignore dummies and intercept. Weights are

still those reported in Figure 1, which are constructed with abnormal returns after the first- and second-round votes. We view the former strategy as a better way to measure political shocks, whereas the later represents an actual portfolio return.

In the estimation of $\epsilon_{i,t}^*$, we also account for the effect of lagged factor terms and lagged individual stock return term appropriately. In the case of lagged factor returns, we follow the common approach of summing up coefficients relative to the same factor and apply the resulting number to the coefficient of the contemporaneous factor return only, while dropping the lagged factor. Let $\hat{\beta}_i^*$ be the vector of summed coefficients relative to the same factor, and X_t^* be X_t without the lagged factors, then

$$\hat{\epsilon}_{i,t}^* = r_{i,t} - (1 - \hat{\rho}_i)^{-1} \hat{\beta}_i^* X_t^*,$$

where $\hat{\epsilon}_{i,t}^*$ rather than $\hat{\epsilon}_{i,t}$ is used to compute the anti-Rousseff portfolio return.

In this case, the trading day after the 7-1 match ranks 12th, when the anti-Rousseff portfolio yielded a return of 5.4 percent. The market index net of external and political factors was down by 0.9 percent.

Finally, if we use demeaned weights and this feasible strategy, the anti-Rousseff portfolio return would be 5.1 percent, whereas the market return without political and external shocks would be a negative 0.8 percent, after the 7-1 match, which still ranks 12th.

4.5 Other Matches

Edmans et al. [2007] find that losses, rather than wins, have a negative impact on the stock market returns through their effects on investors' sentiment. In this section we check whether the pattern of stock returns on trading days after other Brazilian matches (mostly wins) during the World Cup reflect any relevant political content. Results are shown in Table 2.

Table 2: Political Content in Brazilian Matches During the World Cup

This table plots the rank position and the return of the anti-Rousseff portfolio, as well as other statistics described in Table 1, after Brazilian matches during the 2014 World Cup. The analysis follows the description in Table 1.

Rank	Date	R	Bovespa (raw)	Bovespa (wo ext)	Bovespa (wo ext/pol)	Rank (1st rnd)	Rank (2nd rnd)	Event
6	10-Jul	6.4%	1.7%	1.7%	-1.4%	5	7	Brazil 1-7 Germany
22	14-Jul	3.6%	1.7%	1.5%	-0.3%	26	23	Brazil 3-0 Netherlands
58	18-Jun	2.1%	1.6%	1.0%	0.0%	78	35	Brazil 0-0 Mexico
90	13-Jun	1.2%	-0.6%	-0.4%	-1.0%	85	120	Brazil 3-1 Croatia
137	30-Jun	-0.4%	0.0%	0.0%	0.2%	158	99	Brazil 1-1 (3-2) Chile
139	7-Jul	-0.4%	-0.2%	0.2%	0.4%	150	137	Brazil 2-1 Colombia
147	24-Jun	0.2%	0.1%	0.6%	0.5%	100	88	Brazil 4-1 Cameroon

In fact, except for another loss to Netherlands in the dispute for third place during the final weekend of the World Cup, again by a wide score of 3-0, other Brazilian matches rank relatively low among the 159 dates. A possible borderline exception is a tie without goals against Mexico, on June 18th, which ranks 58th (more on that below).

As we argued above, the perception that the 7-1 match was a political event could be reinforced during the final weekend of the World Cup. On Monday, July 14th, right after its end, the return of the anti-Rousseff portfolio was up by 3.6%, nearly two percentage points above the overall market return in this period. This is the 22nd most relevant political development according to our metric.

4.6 Inattention in Match Days

Importantly, whenever Brazilian games were held on weekdays, the Bovespa closed earlier than usual.²⁶ Ehrmann and Jansen [2017] argue that, during World Cup matches, lack of attention leads to lower trades and volumes as well as changes in the price formation process. Hence, Table 3 considers a specification in which these days are treated as if the Bovespa were closed.²⁷ In this case, returns around these matches are the difference

²⁶All matches, except those against Chile and Netherlands, were held on weekdays.

²⁷The Bovespa also closes earlier (or opens later) on some special holidays, which receive the same treatment as weekdays holding Brazil's matches.

between prices one trading day after and one trading day before them.

Table 3: Excluding Days When the Bovespa Closed Earlier or Opened Later

This table plots the rank position and the return of the anti-Rousseff portfolio, as well as other statistics described in Table 1, after Brazilian matches during the 2014 World Cup. In contrast with the analysis in Tables 1 and 2, we exclude trading days when the Bovespa closed earlier or opened later than usual from the sample. Except for this restricted sample, the analysis follows the description in Table 1.

Rank	Date	R	Bovespa (raw)	Bovespa (wo ext)	Bovespa (wo ext/pol)	Rank (1st rnd)	Rank (2nd rnd)	Event
4	10-Jul	8.4%	1.4%	1.9%	-2.1%	3	3	Brazil 1-7 Germany
22	14-Jul	3.6%	1.7%	1.5%	-0.3%	26	24	Brazil 3-0 Netherlands
89	13-Jun	1.2%	-0.6%	-0.4%	-1.0%	83	116	Brazil 3-1 Croatia
96	24-Jun	1.1%	-0.7%	-0.2%	-0.7%	84	138	Brazil 4-1 Cameroon
97	18-Jun	1.1%	1.0%	0.2%	-0.3%	131	63	Brazil 0-0 Mexico
135	30-Jun	-0.4%	0.0%	0.0%	0.2%	156	96	Brazil 1-1 (3-2) Chile
137	7-Jul	-0.4%	-0.2%	0.2%	0.4%	148	131	Brazil 2-1 Colombia

Once these days are excluded from the sample, the tie against Mexico falls nearly forty positions. Moreover, every game, except both humiliating defeats to Germany and Netherlands, ranks very low – below the 100th position – according to at least one of the metrics based on a single political shock used to construct portfolio weights.

It is reassuring, thus, that both humiliating losses remain politically relevant. If anything, the 7-1 match becomes more politically relevant once days when the Bovespa closed earlier are excluded from the sample. After the 7-1 event, the anti-Rousseff portfolio yielded 8.4 percent, being the fourth most relevant political development.

Moreover, the market return net of political and external effect becomes even more negative after the 7-1 defeat (-2.1 percent), although the version just net of external factors had a stronger positive return (1.9 percent).

5 Discussion

We document that the 7-1 match was perceived by financial markets as a huge political shock against the incumbent, hiding the usual negative direct sentiment effect of a sports

loss on stock market returns.

Our preferred long-short portfolio strategy aiming to profit from political developments against the incumbent posted a 6.4 percent excess return after the 7-1 event, while the overall market was up by 1.7 percent. According to this metric, the 7-1 match was the third largest political development against the incumbent (and the sixth overall) during the election period. Once we factor out external and political factors, market return decreased by 1.4 percent, which was the 8th largest decline during the period, in line with the previous literature on sports sentiment and stock returns.

Hence, our empirical strategy uncovers a net positive effect on stock prices stemming from a negative change in sentiment. If the change in voters' sentiment also has an impact on the expected outcome of close presidential elections, politically sensitive firms with large weights in the market index may drive the overall market return up. In other words, the negative effect, due to the behavioral response of investors to their sentiment, can be overwhelmed by the positive effect, due to the arguably rational response of investors to voters' sentiment near an uncertain election.

Our empirical strategy, however, is silent on whether the 7-1 defeat to Germany, in fact, influenced electoral outcomes. It could be the case that traders might have simply misinterpreted the 7-1 match as a political development. In this case, stock returns would be affected, but voting intention polls would not. Therefore, one may argue that these polls should be used to measure the political impact of the 7-1 defeat. Indeed, the gap between Rousseff and Neves diminished after the 7-1 match, although the long period in between the two adjacent polls makes any causal interpretation impossible (see Figure 7 in Appendix B). Albeit imperfectly, as long as financial markets somehow grasp, at least partially, how a sentiment shock relates to voting behavior, and factor them into their daily investment decisions, the use of daily stock returns circumvents this problem. Importantly, even if accurate daily polls were available, the use of stock market data might still be preferable. As we argue in Appendix D, linkages from soccer to politics may take time to unfold. In this case, daily polls around the 7-1 match would underestimate the magnitude of the political impact, whereas, due to their forward-looking nature, stock

prices might reflect this process to a larger extent.²⁸

To the extent that stock returns reflected true changes in voting behavior after the 7-1 event, we provide in Appendix D a discussion of possible mechanisms at play behind this transfer of domains from soccer to politics. We also compile anecdotal evidence suggesting how this transfer of domains operated in practice after the 7-1 match. In addition, we catalogue some of the many episodes, over countries and time, in which politicians turned to soccer as an attempt to obtain political gains. In that sense, this paper provides indirect empirical evidence consistent with the use of soccer as a political instrument in those many episodes.

²⁸By using individual data, Depetris-Chauvin and Durante [2017], for instance, fail to find an effect of victories (even in high-stake games) of national teams from Sub-Saharan Africa on incumbent approval.

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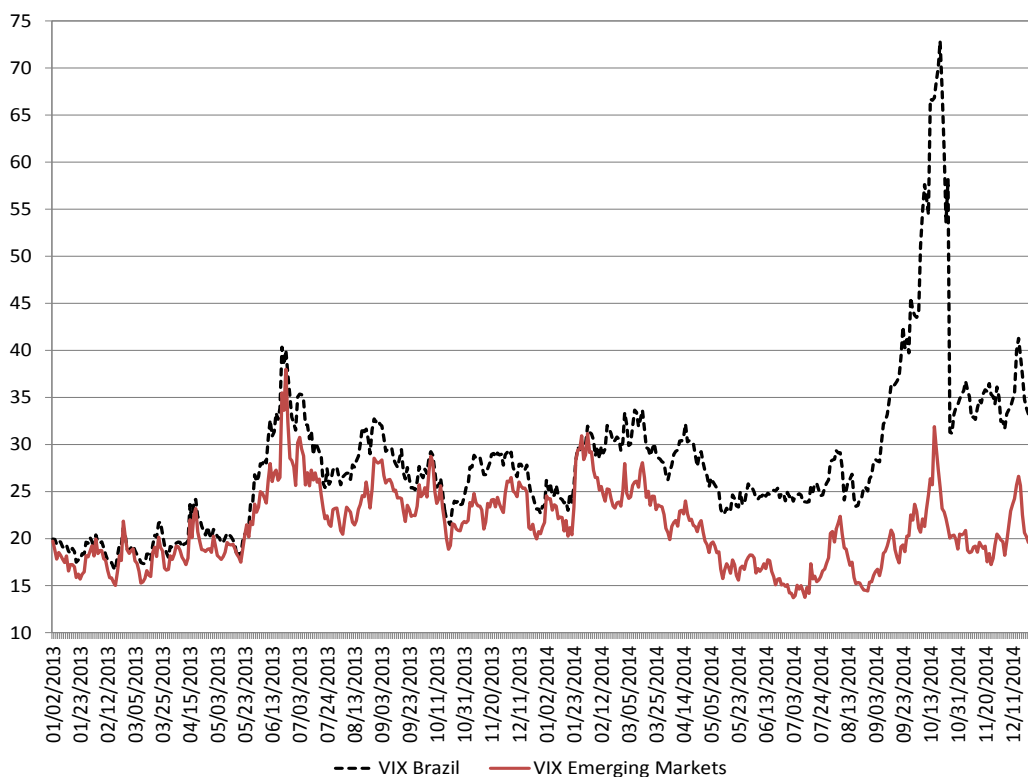
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Appendix A - Pre-Event Estimation Window

In order to prevent that political developments specific to the 2014 electoral run affect the estimation of abnormal returns, we restrict the pre-event estimation window to be between March 2013 and February 2014. The implicit assumption is that such developments started to affect stock prices as of March 2014. Figure 6 in this appendix, by comparing the CBOE Volatility Indexes (VIX Indexes) for emerging markets and Brazil, provides evidence supporting this assumption.

Figure 6: VIX Index: Brazil vs. Emerging Markets

This figure plots the daily evolution of the CBOE Volatility Indexes (VIX Indexes) during 2013 and 2014 for both Brazil and emerging markets. Source: Chicago Board Options Exchange, <http://www.cboe.com/micro/vix/>.



The presidential election, with its ups and downs, was perhaps the main driving force behind the high volatility in financial markets observed in Brazil during 2014. Both VIX Indexes for emerging markets and Brazil evolved closely enough until February 2014. As of March 2014, the Brazilian index indicated more volatile asset prices, reflecting

an uncertain electoral scenario, which reinforces our choice for the pre-event estimation window. As a conservative robustness check, we also consider the pre-event estimation window to be between January 2013 and December 2013. Results barely change.

Finally, notice that the gap between both measures increased a bit until July. As of August, the Brazilian index soared reflecting the convoluted electoral scenario after Eduardo Campos – the third place in the voting intention polls at the time – died tragically in a plane crash.²⁹

²⁹The difference between volatilities in Brazil and other emerging markets should be even larger as the VIX Index for emerging markets factors in some Brazilian assets.

Appendix B - 2014 Presidential Election

Presidential elections in Brazil are held every four-year, with the president being elected by absolute majority in a two-round system with mandatory voting. The dynamics of the 2014 electoral run were unpredictable.³⁰ The objective of this section is to interpret the 2014 electoral events through the lens of the metric developed to measure the political content in the cross-section variation of abnormal returns, i.e. our political factor.

In what follows, we introduce the major candidates and, then, summarize the presidential electoral dynamics.

- Dilma Rousseff. The incumbent president, from *Partido dos Trabalhadores* (PT),³¹ who was running for reelection.
- Aécio Neves. Former Governor of Minas Gerais³² and Senator from the main opposition party, *Partido da Social Democracia Brasileira* (PSDB).³³ He was running in a presidential election for the first time.
- Eduardo Campos. Former Governor of Pernambuco³⁴ from *Partido Socialista Brasileiro* (PSB).³⁵ Part of his strategy was to establish a third-way to break the polarization between PT and PSDB.³⁶ Campos was also running for the first time.
- Marina Silva. Former Senator and vice-president of Campos' candidacy, who replaced him after his tragic death in a plane crash. She had already ran in the 2010 election, when she finished third, with 19.33% of the valid votes.

Also, there were nine other (minor) candidates in the 2014 presidential run. Together they obtained 3.55% of the valid votes.

³⁰Villa [2014] documents in details the daily developments during the 2014 electoral presidential run.

³¹Workers' Party.

³²Out of twenty and six states, Minas Gerais is the second most populous, the third (ninth) richest in terms of GDP (GDP per capita), and the fourth largest state in the country.

³³Brazilian Social Democracy Party.

³⁴Pernambuco is the seventh most populous, the ninth (sixteenth) richest in terms of GDP (GDP per capita), and the nineteenth largest state in the country.

³⁵Brazilian Socialist Party.

³⁶Since 1994, the dispute has been polarized between the two main candidates, affiliated with PT and PSDB. Fernando Henrique Cardoso, from PSDB, defeated Lula, from PT, in 1994 and 1998; Lula defeated José Serra and Geraldo Alckmin, both from PSDB, in 2002 and 2006, respectively; and Dilma Rousseff defeated José Serra in 2010.

To simplify exposition, we divide the 2014 election dynamics into three phases. The switch from one phase to another was marked by arguably unexpected political shocks.

1. From the beginning of 2014 up to August 13th, when Campos unexpectedly died in a plane crash in the morning.
2. From mid-August up to October 5th, when the first-round vote revealed that the gap between Rousseff and Neves was far smaller than predicted by the polls.
3. From October 6th to October 26th, when Rousseff won the election with 51.64% of the valid votes, the smallest share in Brazilian recent democratic history.

The first phase encompasses the period up to August 13th, when Campos unexpectedly died in a plane crash in the morning. Figure 7 reports the results from twelve polls conducted by Datafolha and Ibope, the main pooling institutes in Brazil, during this phase.³⁷ We report results from polls concerning second-round voting intentions.³⁸ Left (right) plots consider Datafolha (Ibope) polls, whereas top (bottom) plots consider simulations with Neves (Campos) in the second round against Rousseff. Shares do not sum to 100 percent as we consider percentages of all possible votes, including null and undecided. Also, there is a discrepancy between Datafolha and Ibope numbers even for close polling dates, which we attribute to methodological differences in the way polls are conducted by each institute.³⁹

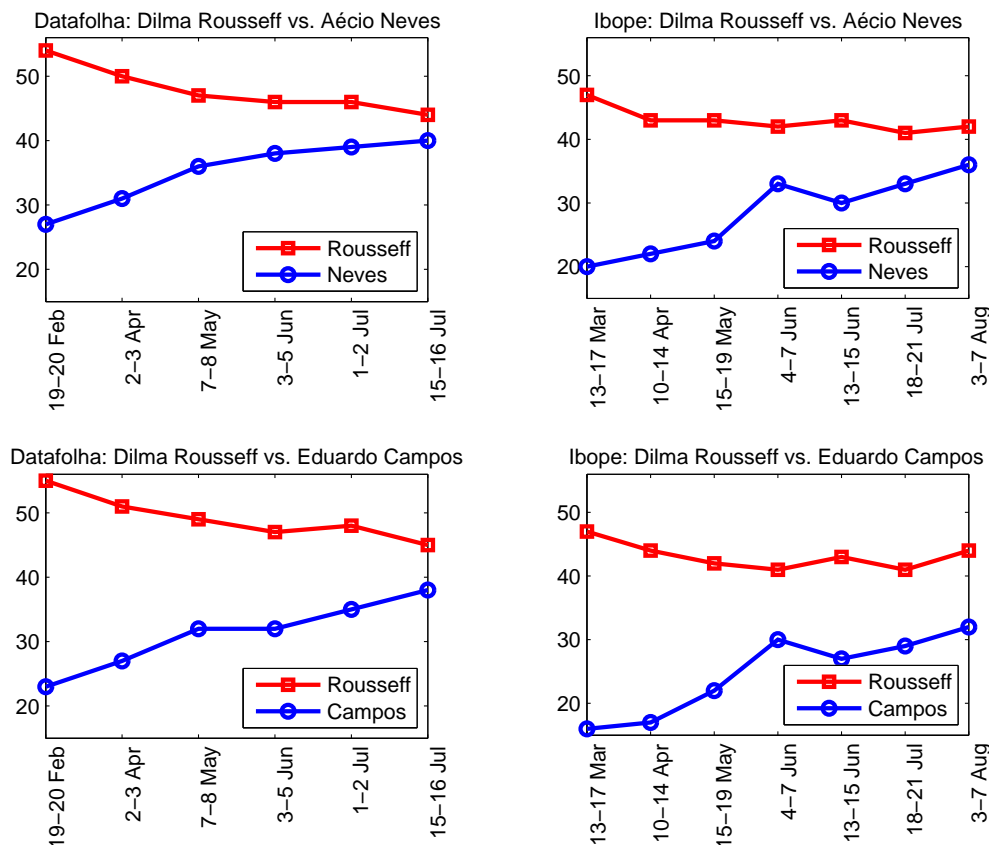
³⁷Data were downloaded from <http://noticias.uol.com.br/politica/pesquisas/>.

³⁸In this section, we choose to report results concerning second-round voting intentions, which are easier to follow and compare across polls. Results concerning first-round voting intentions yield similar trends.

³⁹Those differences regard the ordering (and content of some) of the questions, location of the interviews and sampling strategy.

Figure 7: Phase 1 (Polls Up to Campos' Death)

This figure plots the percentage of the votes (including null and undecided) across polls. Left (right) plots consider Datafolha (Ibope) polls. Top (bottom) plots consider simulations with Neves (Campos) in the second round against Rousseff. Source: <http://noticias.uol.com.br/politica/pesquisas/>.



In the beginning of 2014, many analysts claimed that Rousseff would easily win the elections, perhaps in the first round. Figure 7 shows that this view did not survive a few months. Indeed, the gap between Rousseff and her opponents fell gradually up to Campos' tragic death.⁴⁰

Economic policies adopted during Rousseff's first mandate, which included earmarked credit, fiscal lenience and price controls, led Brazil to an economic fiasco. The main

⁴⁰We should explain why we did not also consider the unexpected death of Eduardo Campos, who was in the third place according to the polls, as a political shock to measure the political content in the cross-section variation of abnormal returns. Although clearly unanticipated, the impact of this shock on electoral outcomes was uncertain. Many doubts were raised immediately after Campos' death. Would Marina Silva substitute Eduardo Campos? Would PSB choose another candidate? Or, perhaps, support Aécio Neves or Dilma Rousseff? Though the natural alternative was to launch Silva, the confirmation of her candidacy came only on Saturday, three days after the accident. Hence, although the political shock associated with Campos' death was clearly unanticipated, its sign was uncertain at the time.

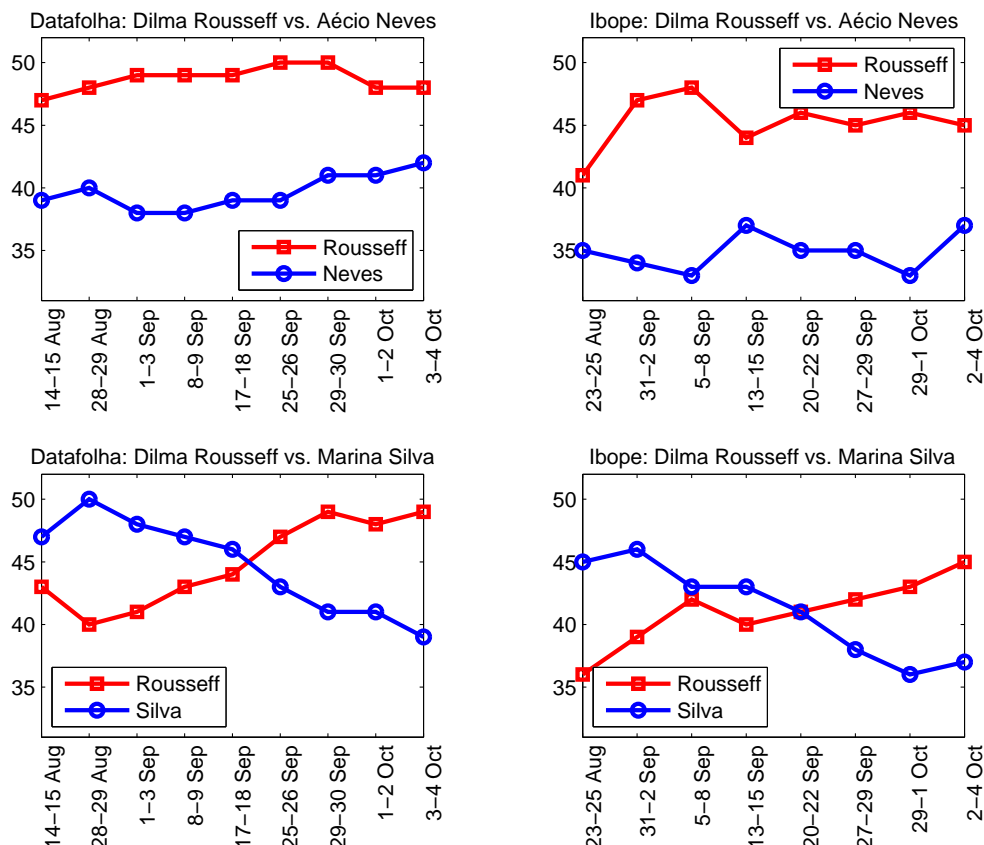
economic risk involving Rousseff's reelection was even more lenience and government intervention, which would deepen the crisis. Hence, from March 5th (when Rousseff was the clear favorite according to the polls) to August 12th (right before Campos' death, when the latest polls indicated a gap between Rousseff and Neves of only 4-6p.p.), the version of the Bovespa Index in which we factor out external factors yielded an excess return of 12.1%,⁴¹ whereas the return of anti-Rousseff portfolio explained above was up by 39.0%.

The second phase goes from August 13th to October 5th, the first-round vote. Figure 8 reports the results from seventeen polls conducted in this period concerning the second round possibilities, with Marina Silva substituting Eduardo Campos as the candidate from PSB.

⁴¹From now on, Bovespa Index refers to this version of the index.

Figure 8: Phase 2 (Polls from Mid-August to the First-Round Vote)

Percentage of the votes (including null and undecided) across polls. Left (right) plots consider Datafolha (Ibope) polls. Top (bottom) plots consider simulations with Neves (Silva) in the second round against Rousseff. Source: <http://noticias.uol.com.br/politica/pesquisas/>.



The commotion after Campos' death, which gave an enormous visibility to Silva, as well as the recall from the previous presidential election, made her, according to many analysts, the clear favorite to win the elections. The peak of her favoritism was reached by the end of August, when the Datafolha poll indicated that Silva would beat Rousseff by a 10p.p. margin in a second-round vote. However, lacking the powerful structure behind Rousseff's and Neves' candidacy, Silva's candidacy lost steam. As in 2010, she ended up in the third place, with 21.32% of the valid votes.

From August 12th to September 2nd, when Silva's odds of winning reached its peak, the Bovespa Index increased by 6.2% whereas the anti-Rousseff portfolio yielded an excess return of 10.5%. From September 2nd to October 3rd (on the eve of the election day), when Silva's candidacy had already faltered while Neves' had not yet taken off, the

Bovespa Index fell by 12.1% whereas the anti-Rousseff portfolio generated a loss of 21.5%. The first round results were known by night on the election day, held on Sunday, October 5th. We interpret them as an unexpected political shock that led to an update of the odds of winning in favor of Neves. On Thursday, October 2nd, Datafolha (Ibope) polls were released showing Rousseff with 40% (40%), Neves with 21% (19%) and Silva with 24% (24%) of the votes in first round. During the weekend, after a debate broadcasted live at Friday night, the new polls indicated Rousseff with 40% (40%), Neves with 24% (24%) and Silva with 22% (21%) of the votes. On the election day, Rousseff, Neves and Silva had 37.58%, 30.31% and 19.26%, respectively, of the votes (including null votes). In other words, the polls underestimated the strength of Neves. In the next day, the Bovespa Index and the anti-Rousseff portfolio exhibited an excess return of 4.8% and 9.7%, respectively.

Finally, Figure 9 reports the results from ten polls conducted after the first-round vote. Left (right) plot considers Datafolha (Ibope) polls. After the election day, according to the polls, Neves remained 2p.p. ahead Rousseff up to mid-October, when the anti-Rousseff portfolio reached its peak yielding a cumulative excess return of 50.7% since March 5th. Then, the structure of Rousseff's candidacy was able to guarantee her recovery. After this peak up to the election day, the Bovespa Index fell by 14.6%. Right after the election day, held on Sunday, October 26th, it fell by 2.6% more. Similarly, the anti-Rousseff portfolio yielded a loss of 21.4% during the same period, and a further loss of 10.5% after the election day. During the second-round campaign, political developments were clearly dictating the volatility in financial markets.

Figure 9: Phase 2 (Polls During the Second Round)

Percentage of the votes (including null and undecided) across polls. Left (right) plot considers Datafolha (Ibope) simulations. Source: <http://noticias.uol.com.br/politica/pesquisas/>.

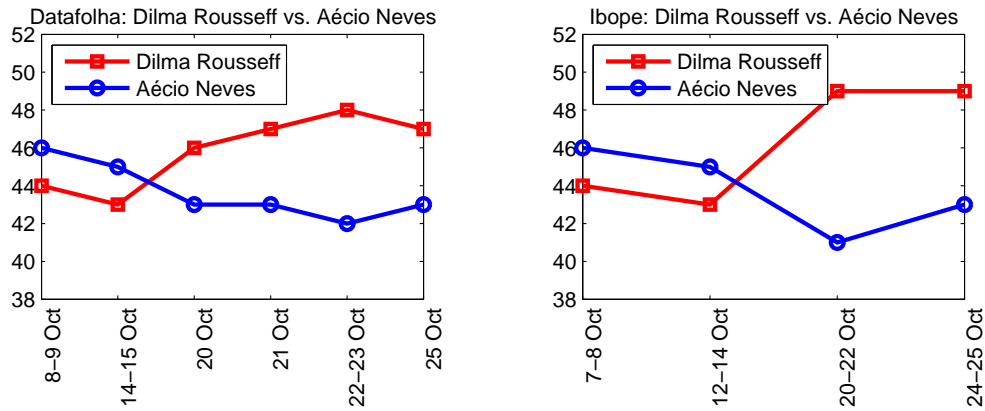


Figure 2 in the main text summarizes this discussion. Altogether, the evidence presented in this section suggests that the 2014 electoral run was characterized by many relevant political developments, reinforcing our finding that the 7-1 match was indeed a huge political shock.

Appendix C - Links to Articles Used in Table 1

Links to Articles Used to Support Results in Table 1. Source: Valor Econômico.

Rank	Date	Valor Econômico link
1	27-Oct	http://www.valor.com.br/financas/3751350/bovespa-fecha-em-queda-apos-vitoria-de-dilma-petrobras-cai-12
2	6-Oct	http://www.valor.com.br/financas/3724378/bovespa-sobe-quase-5-apos-resultado-da-eleicao
3	21-Oct	http://www.valor.com.br/financas/3743078/bovespa-perde-6-em-dois-dias-com-reviravolta-na-corrida-presidencial
4	13-Oct	http://www.valor.com.br/financas/3733570/bovespa-registra-maior-alta-em-tres-anos-com-rali-eleitoral
5	23-Oct	http://www.valor.com.br/financas/3746730/dilma-avanca-nas-pesquisas-e-ibovespa-passa-cair-15-no-ano
6	10-Jul	http://www.valor.com.br/financas/3610232/puxada-pela-petrobras-gol-e-bancos-bovespa-fecha-em-alta
7	7-Apr	http://www.valor.com.br/financas/3508582/estatais-tem-nova-alta-e-impulsionam-bovespa
8	30-Sep	http://www.valor.com.br/financas/3717270/bovespa-perde-117-em-setembro-e-tem-pior-mes-em-mais-de-dois-anos
9	16-Oct	http://www.valor.com.br/financas/3738226/bovespa-tem-forte-queda-com-indefinicao-eleitoral-e-tensao-externa
10	6-Jun	http://www.valor.com.br/financas/3577180/pesquisa-eleitoral-turbina-ganho-de-estatais-e-bovespa-sobe-mais-de-3
11	27-Mar	http://www.valor.com.br/financas/3497448/bovespa-dispara-35-apos-piora-de-dilma-em-pesquisa
12	18-Jul	http://www.valor.com.br/financas/3619070/euforia-com-datafolha-leva-bovespa-retomar-patamar-de-marco-de-2013
13	4-Sep	http://www.valor.com.br/financas/3683562/bovespa-fecha-em-queda-apos-pesquisas-indicarem-reacao-de-dilma
14	11-Apr	http://www.valor.com.br/financas/3514328/bovespa-acumula-ganho-de-15-apos-quatro-semanas-seguidas-de-alta
15	24-Oct	http://www.valor.com.br/financas/3748448/bovespa-sobe-no-dia-mas-tem-pior-semana-desde-2012-com-eleicao

Appendix D - Soccer and Politics

To the extent that stock returns reflected changes in voting behavior after the 7-1 event, rather than a misinterpretation of financial markets, we discuss in this section possible mechanisms at play behind this transfer of domains from soccer to politics. We also compile anecdotal evidence suggesting how this transfer of domains operated in practice after the 7-1 match. Finally, we catalogue some of the many episodes, over countries and time, in which politicians turned to soccer as an attempt to obtain political gains.

A related paper to ours is Healy et al. [2010], who document in the US an electoral impact favoring the incumbent of wins in local college football games. Similarly, Corbi [2017] finds that losses, but not wins, in local Brazilian soccer games hurt the incumbent. The authors claim that these games, by affecting voters' sense of well-being, also affect their decisions at the polls. As documented in Edmans et al. [2007] and Healy et al. [2010] (see the references therein), sports results have a significant effect on mood and, thus, sense of well-being. Whenever a team, whether local or national, wins or loses, the sense of well-being among its supporters is affected in a similar way. Importantly, positive emotions may cause people to favor the status quo. Analogously, negative emotions may call for a change. Since people transfer emotions from one domain to another, the emotions triggered by sports outcomes may have fueled the sense of dissatisfaction or satisfaction with the incumbent government. In addition, when people are in a bad mood, they are more likely to recollect negative events. Similarly, voters in a bad mood would tend to remember those negative events associated with the incumbent's past actions.

Aside using stock market data to recover a political outcome, our results differ from Healy et al. [2010] and Corbi [2017] in at least two dimensions. First, we document a sizeable political shock stemming from the 7-1 match. Indeed, among the many events that happened along the convoluted 2014 presidential election, the 7-1 match was perceived to have a high political impact. In contrast, Healy et al. [2010] find that a win within 10 days before the election day increases locally the incumbent's vote share in Senate, gubernatorial and presidential elections, on average, by only 1.6p.p. Corbi [2017] finds similar results in terms of magnitude. More generally, in reviewing the evidence, Healy

and Malhotra [2013] argue that voters commit errors by punishing incumbents for actions beyond their control, but the aggregate effects of such errors are often small.

Second, our results suggest that a political shock associated with a sports outcome can be very persistent. In fact, the second-round vote took place more than three months after the 7-1 match. In contrast, Healy et al. [2010] and Corbi [2017] did not find an effect of sports outcome outside a few days window before the election day. Hence, mood effects must be implausibly persistent (or perceived to be implausibly persistent) so that stock prices reflect political spillovers that would last for such a long time. If very persistent effects of mood were driving our results, other Brazilian games in the World Cup should have a political impact. However, as Tables 2 and 3 in Section 4 highlight, the patterns of stock returns on trading days after other Brazilian matches in the World Cup do not reflect any relevant political content. These matches rank very low among the 159 dates. In other words, it does not seem to be only about temporary changes in mood after winning or losing a game as in Healy et al. [2010]. The huge sentiment shock triggered by the 7-1 defeat should have interacted with other factors so as to engender substantial punishment at the polls months later.

In addition, Healy et al. [2010] also show with a survey conducted during a college basketball tournament that surprising wins and losses affect presidential approval. Importantly, once people are made aware of the reason for their mood, effects on presidential approval are eliminated. The authors interpret it as suggestive evidence that the mood effects operated in the subconscious, but by moving them to the conscious, people rejected information unrelated to the incumbent's performance. In the context of this paper, given the salience of the 7-1 defeat, it is hard to argue that its mood effects operated subconsciously. Furthermore, Corbi [2017] also notices that mood effects on voting disappear for close elections. To the extent that the salience of close elections reduces the cost to obtain information on or pay attention to candidates, the author interprets this result as evidence of rational inattention.⁴²

Given that the size, persistence and salience of the political shock associated with the 7-1 event, as well as the fact that the 2014 presidential run was a close election, weaken

⁴²See, for instance, Matejka and Tabellini [2016].

the mood interpretation of the results, we propose an explanation in which the sentiment shock interacted with other elements. Substantial punishment at the polls should be rooted in genuine dissatisfaction (that goes beyond mood) with the government. At the time of the World Cup, two pieces of evidence suggest that Brazilians had enough motives to be deeply frustrated with the incumbent government. First, one year before the World Cup, there were large public demonstrations in several Brazilian cities, known as the June Journeys. These protests were unexpected and decentralized. Hence, the motives of the protesters were highly diffuse, including high bus ticket prices, bad public services, corruption, police brutality, large public expenses with the World Cup, among others. They were indicative of a latent dissatisfaction with the current state of affairs in politics. Second, Brazil was also facing huge economic failure in 2014. Due mostly to the economic policies adopted during Rousseff's first mandate, GDP grew only 0.1% whereas inflation was 6.4%. We argue that the huge sentiment shock associated with the failure in the World Cup was perceived by financial traders to trigger a transfer of domains that would lead people to somehow update their beliefs regarding the government's responsibility for failures in other domains.⁴³ This would lead them to tell apart government propaganda – which insisted on denying Rousseff's responsibility in generating such failures – from reality, and reinforce their genuine dissatisfaction with the government.

The precise mechanism behind such transfer of domains is hard, if not impossible, to test empirically in the context of this paper. Hence, we conjecture below a few, perhaps complementary, possibilities borrowed from political and sociological pieces cited below. As a by-product, we also claim that traders not only intuit or understand, at least partially, the mechanisms described below, but also consider them in their daily trades.⁴⁴ Of course, one can always argue that these mechanisms are not operative in practice and traders simply misinterpreted the sentiment shock associated with the 7-1 match as a political shock.

First, the huge failure at home may have affected negatively the degree of pride in (or

⁴³In that sense, our paper is also related to an emerging literature that has been studying how biased beliefs shape political behavior and outcomes (e.g. Bischoff and Siemers [2013], Ortoleva and Snowberg [2015] and Levy and Razin [2015]).

⁴⁴Op-eds in Brazilian newspapers, such as DaMatta [2014] and Werneck [2014], advanced and discussed some of these possible links between the 7-1 match and electoral outcomes.

identity with) the nation, something we call “national pride” in a broad sense,⁴⁵ which itself may have affected negatively the prospects of Rousseff’s victory. Many authors, such as Duke and Crolley [1996] or DaMatta [2006], claim that national teams are symbols and extensions of the nation-state that go beyond soccer. Successes in the soccer arena become a source of national pride and identity.⁴⁶ Depetris-Chauvin and Durante [2017], for instance, show that victories (in high-stake games) of national teams from Sub-Saharan Africa make people identify more with their country and less with their ethnic group. Moreover, as in our case, this effect is sizeable and does not appear to be short-lived.⁴⁷ One may argue that stronger feelings of attachment to the nation lead to more conformity to its political status quo and political norms. Huddy and Khatib [2007], for example, find that national identity promotes political involvement.

Second, the humiliating aspect of the defeat at home may have triggered a general reflexive process, in which Brazilians hoped not only to understand and reconcile with the huge failure in the soccer field, but also beyond it. Indeed, several episodes have been documented in which failures in the soccer arena prompted some sort of soul-searching. See, for example, Crolley and Hand [2002], who argue that “England’s frequent failures on the pitch often become a source of much soul-searching and national mourning”.⁴⁸

Third, the 7-1 match was perceived to be a disaster, which may have triggered a social search for culprits. As people are ready to listen and willing to blame, such search may facilitate the task of political opponents in communicating, explaining and, perhaps, forging government’s failures in other domains. In addition, as Achen and Bartels [2016] argue after analyzing the electoral impact of natural disasters, government’s blame could be socially constructed even if not responsible for the disasters.

Fourth, the 7-1 match has a narrative potential. Shiller [2017] defines narrative to be “a

⁴⁵There are many nuances in defining patriotism, national identity, national pride and nationalism (see Huddy and Khatib [2007]), something from which we abstract in this paper.

⁴⁶According to the BBC Global Poll, in a study conducted in 21 countries, 40% of the surveyed people said that their country performance at the Olympics affects a lot their national pride, whereas only 14% said it does not affect their national pride at all. See <http://www.bbc.com/news/world-16245075>.

⁴⁷In addition, the authors also claim that victories make people more likely to trust members of other ethnic groups. They also document a transfer of domains by showing that countries that barely qualified to Africa Cup of Nations, relative to countries that barely did not, experienced significant less violent conflict in the following six-months.

⁴⁸Similarly, in 2010, after France lost one game and tied another in the World Cup, BBC affirmed that “France’s World Cup ‘disaster’ prompts soul-searching”. See: <http://www.bbc.com/news/10370449>.

simple story or easily expressed explanation of events that many people want to bring up in conversation or on news or social media because it can be used to stimulate the concerns or emotions of others, and/or because it appears to advance self-interest.” In that sense, the narrative potential behind the 7-1 match could be strategically fine-tuned and channelled against the government by political opponents, or by citizens unsatisfied with the government.

This transfer of domains from soccer to politics, through the linkages described above, might be particularly operative in a country like Brazil, where soccer is a, if not the, major source of pride and glory. Brazil is the most successful national team in the World Cup with five championships, and best overall performance with 70 wins, 17 ties and 17 losses. Moreover, Brazil is the only national team that has played in all editions. This is an impressive performance as soccer is highly subject to unpredictable factors that frequently undermine favoritism. Perhaps, the national soccer team is one of the most successful national institutions in Brazil. The fact that such excellence in soccer was challenged at home in a World Cup promoted at the expenses of taxpayers represents a huge negative sentiment shock, which could set in motion any of the aforementioned social processes.

In what follows, we provide some anecdotal evidence suggesting how this transfer of domains operated in practice, helping people reassess their evaluation of the government. First, given that Fifa, the international soccer federation, requested facilities for the World Cup to be built according to demanding specifications at the expenses of taxpayers, demonstrators before and during the World Cup called for “Fifa-standard” schools and hospitals.⁴⁹ The huge failure in the World Cup may have amplified the salience of the underlying motives behind these demonstrations. Second, during some

⁴⁹On June 19th 2013, an article in the New York Times reports that “[...] tens of thousands protested outside the newly built stadium [...], as the police tried to disperse them with tear gas, rubber bullets and pepper spray. In what would normally be a moment of unbridled national pride, demonstrators held up placards demanding schools and hospitals at the “FIFA standard,” challenging the money Brazil is spending on the World Cup instead of on health care or the poorly financed public schools.” One year later, on June 28th 2014, the same New York Times reports that “[...] some residents are expressing their displeasure through graffiti. The side of one building reads: ‘We want FIFA-standard jobs. We want FIFA-standard education and health care.’” See <http://www.nytimes.com/2013/06/20/world/americas/brazil-protests.html> and <https://www.nytimes.com/2014/06/29/sports/worldcup/world-cup-2014-residents-wonder-how-new-stadiums-will-benefit-region-after-cup.html>, respectively.

games, especially the opening match (in which President Rousseff was present) and the 7-1 match, Brazilians yelled obscene chants against President Rousseff.⁵⁰ Such aggressiveness was not restricted to the soccer arena. Tweets with the hashtag *#foradilma* (i.e. *#dilmagetout*) reached 3.2 and 3.7 thousands on June 12th and July 8th, when Brazil played the opening and the 7-1 matches, respectively. The average of tweets per day with this hashtag during the World Cup was 1.3 thousands, a much smaller figure.⁵¹ Hence, these matches served as stage for people to demonstrate and communicate openly their frustrations with the government. Finally, at some point during the electoral run, expectations were pointing toward a 7% inflation and 1% growth, yielding an easy analogy with the 7-1 match widely used to link the fiasco in the soccer field with the collapse of the economy. Eduardo Campos, for instance, used such analogy in an interview to *Jornal Nacional*, a primetime news program aired by the largest television network in the country, one day before his death.⁵²

Finally, Duke and Crolley [1996] and Kuper [2003], among many others, report several anecdotal evidence over time and countries suggesting that soccer was often used by politicians to obtain political gains. General Franco, for instance, used soccer widely to promote Spanish nationalism and his fascist regime. For example, before each soccer game, the players were obliged to line up, salute General Franco and sing the fascist anthem. In Italy, Silvio Berlusconi used excessively soccer terminology and metaphor to push his political career. The party founded by him in 1993, for example, was named after a soccer chant, *Forza Italia* (meaning something like *Go, Italy!*). In Croatia, after independence from Yugoslavia, President Tudjman changed the name of Dinamo Zagreb, a local soccer club, in order to distance the club from its communist past. The new name, Croatia Zagreb, was never accepted by its supporters. During local elections one

⁵⁰These events were widely covered by the international press. See, for instance, <http://www.bbc.com/news/world-latin-america-27841356> and <http://washington.cbslocal.com/2014/07/09/brazil-fans-start-obscene-chant-toward-female-president-during-world-cup-loss/>.

⁵¹The data we obtained consider the sum of tweets during the 24 hours before 9pm of a given date. Since both games started at 5pm, we conjecture that the bulk of tweets happened in a 4 hours window. As a ground for comparison, the maximum number of tweets per day in 2014 was 18.3 thousands, on the eve of the second round election day.

⁵²See <http://g1.globo.com/jornal-nacional/noticia/2014/08/eduardo-campos-e-entrevistado-no-jornal-nacional.html>. Even the international press relied on such analogy to describe Brazil's economic fiasco (see <https://www.ft.com/content/b8d3dd00-2842-3d7e-9dd2-7b6fb3d478d5>).

month after the name change, political opponents had promised to help the club get its old name back.⁵³ In Nigeria during the 1993 presidential run, the candidate Moshood Abiola promised that the national team would reach the World Cup if elected. During the 1970s, Latin America was plagued with military dictatorships that also used soccer aiming to obtain political gains. In Brazil, the marching theme during the successful campaign in the 1970 World Cup, *Pra Frente Brasil* (i.e. *Forward Brazil*), had also been used in propaganda promoting the military regime. In Argentina, after the 1976 military coup, the generals were suspected of using improper methods to guarantee Argentina's triumph in the 1978 World Cup, in line with their view that such triumph would reunite the country. More recently, after the transition to democracy, Argentina provided another powerful example. Right before the 2009 presidential election, the incumbent Cristina Kirchner pushed the Argentina's soccer association to renege on a long-term contract with a media group, so that the federal government could produce a television program called *Fútbol para Todos* (i.e. *Soccer for All*) for the broadcasting of games in a state-run station.⁵⁴ In Iran, whenever the national team succeeded in qualifying matches to the 1998 and 2002 World Cup, celebrations were usually accompanied by demonstrations against the regime. So when the national team lost a game against Bahrain and, thus, did not qualify to the 2002 World Cup, rumours spread that players were pressured to lose. As Kuper [2003] emphasizes, this "may be a unique case of a regime wanting its national team to fail." Of course, other examples abound.

Not surprisingly, the political use of soccer was also salient in Brazil during the 2014 World Cup. A striking example is that of former president Luiz Inácio Lula da Silva, who belongs to the same party as Dilma Rousseff. He mentioned in a speech, before the 7-1 defeat, that "we are going to win this cup because Brazil needs it."⁵⁵

In that sense, this paper provides indirect empirical evidence in line with the practices of many incumbents, who used soccer in an attempt to enhance their political power.

⁵³Eventually, the name was changed back to Dinamo Zagreb.

⁵⁴This program also featured institutional advertising from the Argentine presidency. Before, most of the matches were broadcasted on cable TV or as pay-per-view events. See Vázquez and Cayón [2014].

⁵⁵See <http://politica.estadao.com.br/noticias/geral,lula-atropela-planalto-e-adianta-anuncio-de-programa-cientifico-imp-,1517840> (own translation).