

The impact of political majorities on firm value: Do electoral promises or friendship connections matter?

Online Appendix

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A1 Sarkozy's network

To select firms that are connected to Sarkozy, we first use information provided by Chemin and Perrignon (2007) and Dély and Hassoux (2008) to construct a list of businessmen connected to the candidate. We then looked for firms in the SBF 120 which they managed or owned during the first few months of 2007. To assess ownership, we check whether an individual holds—directly or through another firm—over 5% of shares or voting rights. A firm may thus be connected to Sarkozy via more than one businessman. The detailed matches between businessmen and firms are presented below.

Bernard Arnault is the chief executive officer and a shareholder of LVMH; Nicolas Bazire is the company secretary of LVMH; Vincent Bolloré is the chairman and a shareholder of Havas, and the chief executive officer and a shareholder of Bolloré Group; Daniel Bouton is the chairman of La Société Générale; Martin Bouygues is the chief executive officer of Bouygues and a shareholder of Bouygues, TF1 and Alstom; Henri De Castries is the chief executive officer of AXA; Serge Dassault is the chief executive officer and a shareholder of Dassault; Jean-Claude Decaux is the chief executive officer and a shareholder of JC Decaux; Paul Desmarais and Albert Frère are shareholders of Imerys, Lafarge, and Suez via Groupe Bruxelles Lambert; Jean-René Fourtou is chairman of Vivendi; Pierre Giacometti is the

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director of Ipsos France; Arnaud Lagardère is the chairman of the board and a shareholder of EADS, and the general and managing partner and a shareholder of Lagardère; Anne Lauvergeon is the chief executive officer of Areva; Patrick Kron is the chief executive officer of Alstom; Michel Pébereau is the chief executive officer of BNP Paribas; Gilles Pélisson is the chief executive officer of Accor; François Pinault is the chief executive officer and a shareholder of PPR, and a shareholder of Bouygues; Henri Proglio is the chief executive officer of Véolia Environment; Franck Riboud is the chief executive officer of Danone; Jean-Philippe Thierry is the chief executive officer of AGF.

Our list of businessmen connected to Sarkozy also contains 6 individuals who are not associated with SBF 120 firms: Robert Agostinelli (founder of Rhône Capital), Antoine Bernheim (chief executive officer of Generali), Agnès Cromback (chairwoman of Tiffany France), Bruno Cromback (chief executive officer of Augis 1880), Dominique Desseigne (chief executive officer of Groupe Barrière), and François Sarkozy (vice-chairman of Bio-Alliance Pharma).

A2 Press citations of businessmen’s last names

We construct data on press citations of the 21 businessmen listed in Sarkozy’s network, and of businessmen who were chief executive officers or chairmen of 55 randomly-selected firms that belong to the SBF 120. We construct the latter group in two steps: first, we randomly selected firms; second, we looked for the name of the chairman or chief executive officer (as from mid-2006 to mid-2007) using the firms’ websites.

We then use Factiva.com to count the number of times each businessman was cited in the French press—either alone, jointly with “Sarkozy”, or jointly with “Royal”—over the following periods: from September 1st to December 12th 2006, from January 1st to May 6th 2007, and from May 7th to August 31st 2007. Technically, we set the date ranges, restricted the region to France and the language to French, and treated similar results as duplicates. The number of “publications” returned by each request is reported in Table A2.

As indicated in the last column of Table A2, we discard 9 observations—4 in Sarkozy’s network and 5 from the sample of random selected businessmen—and did not use them for the analysis presented in the text. There are two reasons to do so: frequent French first names and names that are obviously associated with someone other than the businessman in whom we are interested. For example, we discard data associated with the name “Giscard d’Estaing” as this is the name of a former French president. The businessman we are interested in is his son, but it is likely that many citations refer to the former president—especially around

the time of a presidential election. We also discard data associated with the name “Bouygues”, as this is the name of a friend of Sarkozy, but also of the eponymous firm. This is the case for other businessmen, but Bouygues was at that time one of only three French mobile network operators. As such, this name is likely to appear in a variety of contexts that are not related to the businessman himself. However, all of our results here are robust to the inclusion of the name “Bouygues”.

A3 Efficiency tests on NewsFutures data

We present below tests of the efficiency hypotheses for NewsFutures.com prediction-market data. To test for weak efficiency, we use runs tests—also known as Wald-Wolfowitz tests—and unit-root tests. To test for semi-strong efficiency, we follow Williams (1999, 2005) and look for systematic patterns in the hourly and daily returns of contract prices. We apply all tests to the two winner-take-all contracts observed from January 1st to May 6th 2007. Overall, we do not find conclusive evidence which would lead us to question seriously the weak and semi-strong efficiency hypotheses regarding NewsFutures.com market data.

A3.1 Weak efficiency tests

The runs test is a non-parametric test that checks the mutual independence of a sequence of elements. A “run” of a sequence is a maximal (non-empty) segment of the sequence composed by equal elements. For example, the sequence $[- + + + + - -]$ contains three runs: $[-]$, $[+ + + +]$, and $[- -]$. Let N be the number of observations, N_a (resp. N_b) the number of positive (negative) elements of sequence X_t . Let R be the number of observed runs. Under the null hypothesis, the number of observed runs, given N_A (N_b), is approximately normally distributed with:

$$\mathbb{E}(R) = \frac{N + 2N_a N_b}{N},$$

and

$$\sigma^2(R) = \frac{2N_a N_b (2N_a N_b - N)}{N^2 (N - 1)} = \frac{(\mathbb{E}(R) - 1)(\mathbb{E}(R) - 2)}{N - 1}.$$

If there are too many or too few runs, we have to reject the hypothesis of statistical independence. A small (large) number of runs indicates positive (negative) serial correlation. Writing $Z = \frac{R - \mathbb{E}(R)}{\sigma(R)}$, we reject the null hypothesis if $|Z| > 1.96$. We performed runs test on the sign of $X_t = \Delta \textit{Candidate} - \Phi$, where $\Delta \textit{Candidate}$ is the daily change in percentage of the price of the Sarkozy or Royal winner-take-all contract, and Φ is either the mean or median of $\Delta \textit{Candidate}$. For both series of prices, the median and the mean are identical and equal to zero.

Out of 126 daily observations, 71 (50) runs are observed for $\Delta\text{Sarkozy}$ (ΔRoyal) and the p-value of the test is 0.17 (0.16). Hence, we cannot reject the hypothesis of serial independence for price changes.

We can also test for weak efficiency using random-walk tests. If winner-take-all contract prices follow a logarithmic random walk, then the returns have a white noise distribution. The logarithmic random walk of a price P can be written as:

$$\log P_t = \log P_{t-1} + \varepsilon_t,$$

where ε_t is a white noise. The return at time t is $\frac{P_t - P_{t-1}}{P_{t-1}}$, which is approximated by $\log\left(\frac{P_t}{P_{t-1}}\right)$.

We carry out augmented Dickey-Fuller tests on the opening and closing prices of Sarkozy and Royal winner-take-all contracts. For the Sarkozy series, we obtain a MacKinnon approximate p-value of 0.98 (0.97). The analogous figures for Royal are 0.99 (1.00). With these test results, we cannot reject the null hypothesis that the series have unit roots, so that prices of winner-take-all contracts follow a logarithmic random walk.

A3.2 Semi-strong efficiency tests

The core idea underlying semi-strong efficiency tests is that if a market incorporates all publicly-available information, then it should be impossible to earn extra returns on the basis of this information. We argue in the main text that the market does seem relevant political events. If two markets are semi-strong efficient, then identical bets in the two markets should lead to the same returns. We do not have access to all time-series of the odds on bets placed in other markets—bookmakers, parimutuel betting, or other prediction markets—for the 2007 French presidential election. However, we obtained 17 odds from the real-money bookmakers Ladbrokes.com. Figures A1(a) and A1(b) show that the change in these odds fits the prices on NewsFutures.com relatively well. We therefore do not reject the hypothesis that the different markets are efficient in the semi-strong form.

Any investment strategy which is based on obvious patterns in returns yielding systematic capital gains is based on past prices. Looking for such patterns brings a first test of weak-form efficiency. Since these patterns are public information, the existence of any such patterns would imply a failure by traders to take all public information into account: this is thus also indicative of semi-strong inefficiency. We here apply this idea to NewFutures.com contracts, and look for systematic differences in returns over days of the week or hours of the day. Figure A1(c) plots the average daily returns of the winner-take-all Sarkozy contracts for each day of the week, with the associated 95% confidence intervals. There are no statistically-

significant differences in returns by day of the week. Figure A1(d) reproduces the same statistics for the Royal contract, and leads to the same conclusion. Figures A1(e) and A1(f) plot the average hourly returns of contracts linked to Sarkozy and Royal. Once again, there are no statistically-significant differences in returns by hour of the day. These test results are thus consistent with the semi-strong efficiency hypothesis.

References

- Chemin, Ariane, and Judith Perrignon. *La Nuit du Fouquet's*. Fayard, Paris, 2007.
- Dély, Renaud, and Didier Hassoux. *Sarkozy et l'argent roi*. Calmann-Levy, Paris, 2008.
- Williams, Leighton Vaughn. “Information Efficiency in Betting Markets: A Survey.” *Bulletin of Economic Research* 51, 1: (1999) 1–30.
- . “Semi-Strong and Strong Form Information Efficiency in Betting Markets.” In *Information Efficiency in Financial and Betting Markets*, edited by Leighton Vaughn Williams, Cambridge University Press, 2005.

Table A1: List of firms included in the sample.

	Industry	Close friends of Sarkozy	Network of Sarkozy	Program of Sarkozy	Program of Royal	CAC 40	State ownership
ACCOR	Consumer services		Yes	Yes		Yes	[5, 10]
ADP	Industrial						[40, 100]
AGF-ASS.GEN.FRANCE	Financial		Yes			Yes	
AIR FRANCE -KLM	Consumer services						[10, 25]
AIR LIQUIDE	Basic materials					Yes	
ALCATEL-LUCENT	Technology					Yes	(0, 5)
ALSTOM	Industrial	Yes	Yes	Yes	Yes	Yes	
ALTEM	Technology			Yes			
ALTRAN TECHN.	Technology			Yes			
APRIL	Financial			Yes			
APRR	Industrial						
AREVA CI	Utilities		Yes				[40, 100]
ARKEMA	Basic materials						
ASSYSTEM	Industrial			Yes			[10, 25]
ATOS	Technology						
AXA	Financial		Yes	Yes		Yes	
BACOU-DALLOZ	Consumer goods						
BENETEAU	Consumer goods						
BIC	Consumer goods						
BNP PARIBAS ACT.A	Financial		Yes			Yes	
BONDUELLE	Consumer goods						
BOURBON	Oil and gas						
BOUYGUES	Industrial	Yes	Yes	Yes		Yes	
BUSINESS OBJECTS	Technology						
CAP GEMINI	Technology					Yes	
CARREFOUR	Consumer services				Yes	Yes	
CASINO GUICHARD	Consumer services						
CIMENTS FRANCAIS	Industrial						
CLARINS	Industrial						
CLUB MEDITERRANEE	Consumer services						
CNP ASSURANCES	Financial				Yes		[40, 100]
CREDIT AGRICOLE	Financial			Yes		Yes	
DANONE	Consumer goods		Yes			Yes	(0, 5)
DASSAULT SYSTEMES	Technology	Yes	Yes				
DERICHEBOURG	Industrial			Yes	Yes		
DEXIA	Financial			Yes	Yes	Yes	[10, 25]
EADS	Industrial	Yes	Yes	Yes	Yes	Yes	[10, 25]
EDF	Utilities				Yes	Yes	[40, 100]
EIFFAGE	Industrial			Yes			[5, 10]
ESSILOR INTL.	Health care			Yes		Yes	
EULER HERMES	Financial						
EURAZEO	Financial						
EURONEXT	Financial						
EUTELSAT COMMUNIC.	Consumer services						[25, 40]
FAURECIA	Consumer goods						
FIMALAC	Financial						
FRANCE TELECOM	Telecommunications					Yes	[25, 40]
GAZ DE FRANCE	Utilities					Yes	[40, 100]
GECINA NOM.	Financial						
GEMALTO	Industrial						
GENERALE DE SANTE	Health care						
GEOPHYSIQUE(GLE)	Oil and gas				Yes		[5, 10]
GROUPE STERIA	Technology						
GUYENNE GASCOGNE	Consumer services						
HAULOTTE GROUP	Industrial				Yes		
HAVAS	Consumer services	Yes	Yes				
HERMES INTL	Consumer goods						
ICADE	Financial			Yes			[40, 100]
ILIAD	Technology				Yes		
IMERYS	Basic materials	Yes	Yes				
INGENICO	Industrial						
IPSOS	Consumer services		Yes				
JC DECAUX SA.	Consumer services	Yes	Yes				
KLEPIERRE	Financial						
L'OREAL	Consumer goods					Yes	
LAFARGE	Industrial	Yes	Yes		Yes	Yes	
LAGARDERE S.C.A.	Consumer services	Yes	Yes			Yes	
LEGRAND	Industrial			Yes			
LVMH	Consumer goods	Yes	Yes		Yes	Yes	
MAUREL ET PROM	Oil and gas						
MERSEN	Industrial						
METROPOLE TV	Consumer services			Yes			
MICHELIN	Consumer goods				Yes	Yes	
MITTAL STEEL A	Basic materials					Yes	
NATIXIS	Financial						
NEOPOST	Technology						
NEXANS	Industrial						
NEXITY	Financial			Yes	Yes		[5, 10]
NRJ GROUP	Consumer services						
OBERTHUR CARD SYS.	Industrial						
PAGESJAUNES	Consumer services						
PERNOD RICARD	Consumer goods					Yes	(0, 5)
PEUGEOT	Consumer goods			Yes	Yes	Yes	
PIERRE VACANCES	Consumer services						
PPR	Consumer services	Yes	Yes			Yes	
PUBLICIS GROUPE SA	Consumer services				Yes		
REMY COINTREAU	Consumer goods						
RENAULT	Consumer goods					Yes	[10, 25]
RHODIA	Basic materials				Yes		
RODRIGUEZ GROUP	Consumer goods						
S.E.B.	Consumer goods						
SAFRAN	Industrial			Yes	Yes	Yes	[25, 40]
SAINT GOBAIN	Industrial					Yes	(0, 5)
SANOFI	Health care					Yes	

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Table A1: List of firms included in the sample (continued).

	Industry	Close friends of Sarkozy	Network of Sarkozy	Program of Sarkozy	Program of Royal	CAC 40	State ownership
SCNEIDER ELECTRIC	Industrial				Yes	Yes	(0, 5)
SCOR SE	Financial						
SES	Consumer services						[5, 10)
SOCIETE GENERALE	Financial		Yes			Yes	(0, 5)
SODEXO	Consumer services			Yes			(0, 5)
SOITEC	Technology						
SPIR COMMUNICATION	Consumer services					Yes	
STMICROELECTRONICS	Technology					Yes	
SUEZ	Utilities	Yes	Yes		Yes	Yes	(0, 5)
TECHNICOLOR	Consumer services					Yes	
TECHNIP	Oil and gas						(0, 5)
TELEPERFORMANCE	Consumer services			Yes			
TF1	Consumer services	Yes	Yes	Yes			
THALES	Industrial						[25, 40)
TOTAL	Oil and gas					Yes	
TRIGANO	Consumer goods						
UBISOFT ENTERTAIN	Consumer goods						[5, 10)
UNIBAIL-RODAMCO	Financial						
VALEO	Consumer goods						[5, 10)
VALLOUREC	Industrial					Yes	
VEOLIA ENVIRON.	Utilities		Yes	Yes	Yes	Yes	[10, 25)
VINCI	Industrial			Yes	Yes	Yes	
VIVENDI	Consumer services		Yes			Yes	(0, 5)
WENDEL	Financial						
ZODIAC AEROSPACE	Industrial						[5, 10)

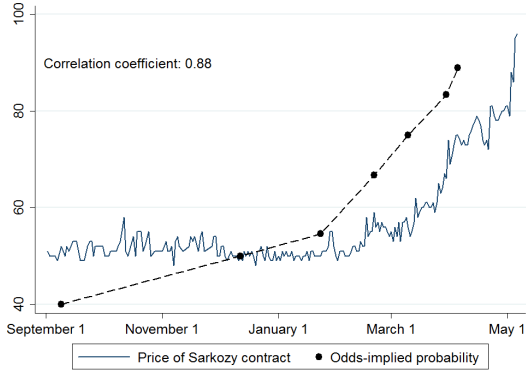
This table presents the list of the 119 firms used in this paper. These firms appeared in the French stock-market index SBF 120 between September 1st 2006 and May 6th 2007. Eurotunnel is excluded from the analysis as its trading was suspended for a large part of the period. The industry classification is from Euronext. State ownership is the share of capital that is owned by the French State. The CAC 40 is the index of the forty largest firms listed on the French stock market. Blanks indicate firms which do not belong to the different groups or which have no State ownership. See the text for details about the construction of the different groups.

Table A2: Press citations of businessmen's last names: raw data.

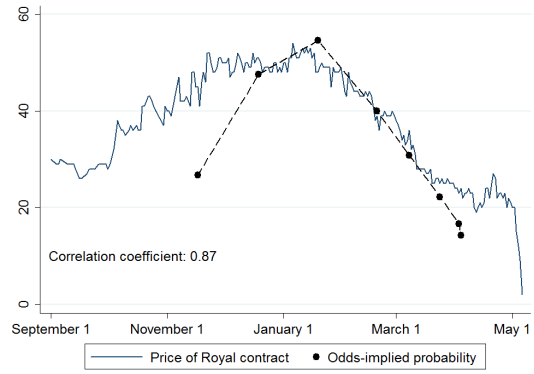
		From Sept 1 st to Dec 12 th 2006			From Jan 1 st to May 6 th 2007			From May 7 th to Aug 31 st 2007			
		With	With	Total	With	With	Total	With	With	Total	Disc.
Sarkozy's network		Sarkozy	Royal	cites	Sarkozy	Royal	cites	Sarkozy	Royal	cites	
B. Arnault		35	23	401	42	42	753	175	45	690	
N. Bazire		3	142	1 364	7	169	1 258	13	93	1 199	Yes
V. Bolloré		23	34	796	42	45	551	404	106	821	
D. Bouton		31	39	868	48	51	1 042	48	25	1 090	
M. Bouygues		109	101	2 387	236	222	2 696	451	91	2 911	Yes
H. De Castries		5	11	333	39	37	420	80	19	411	
S. Dassault		77	62	987	98	72	1 182	189	41	1 139	
J.-C. Decaux		4	7	273	11	11	352	22	10	260	
P. Desmarais		1	3	43	1	5	54	11	3	32	
J.-R. Fourtou		4	4	46	2	2	49	7	1	38	
A. Frère		272	460	7 860	516	515	7 556	554	218	6 487	Yes
P. Giacometti		7	8	141	57	49	180	25	10	139	
A. Lagardère		149	105	2 358	370	303	2 544	650	102	2 054	
A. Lauvergeon		15	14	156	63	45	187	166	39	284	
P. Kron		4	3	177	23	11	97	34	2	101	
M. Pébereau		36	24	169	79	71	227	32	5	91	
G. Pélisson		3	2	109	2	5	135	2	1	79	
F. Pinault		57	50	968	72	64	1 309	99	28	597	
H. Proglou		21	10	87	9	9	78	25	3	90	
F. Riboud		9	9	162	4	8	126	21	7	221	
J.-P. Thierry		910	705	17 206	1 082	1 114	15 670	920	443	12 591	Yes
Random businessmen											
ALCATEL-LUCENT	S. Tchuruk	13	9	216	27	32	167	35	3	97	
ALTEN	S. Azoulay	0	0	92	2	3	126	5	5	86	
APRIL	B. Rousset	55	96	1 393	117	152	1 630	93	110	1 274	
ARKEMA	T. Le Hénaff	1	1	97	2	2	82	0	0	94	
ASSYSTEM	D. Louis	2 211	1 965	29 498	3 254	3 005	30 717	4 061	1 529	27 540	Yes
BIC	B. Bich	0	1	13	0	1	49	1	0	15	
BOURBON	E. Hugot	1	0	55	0	0	54	2	1	46	
BUSINESS OBJECTS	B. Liautaud	0	0	6	0	0	24	0	0	11	
CAP GEMINI	P. Hermelin	2	3	47	4	4	60	1	3	63	
CAREFOUR	J. L. Duran	2	9	300	5	8	428	12	9	265	
CIMENTS FRANCAIS	Y.-R. Nanot	0	0	28	0	0	14	0	0	22	
CLUB MEDITERRANEE	H. Giscard d'Estaing	224	188	684	668	485	1 382	561	148	1 017	Yes
CNP ASSURANCES	E. Alphandéry	1	2	25	8	4	25	6	0	28	
CREDIT AGRICOLE	G. Pauget	0	1	165	4	3	216	11	6	223	
EIFFAGE	P. Berger	27	83	2 189	102	92	2 348	50	45	2 076	
EULER HERMES	W. Verstraete	0	0	8	0	2	13	0	0	12	
EURONEXT	D. L. Niederauer	0	0	0	0	0	1	0	0	0	
FAURECIA	Y. Delabrière	0	0	5	0	1	41	2	0	17	
FRANCE TELECOM	D. Lombard	19	35	1126	30	66	1004	43	26	748	
GAZ DE FRANCE	J.-F. Cirelli	88	32	726	37	30	144	76	7	167	
GECEA NOM.	B. Michel	1 926	2 312	46 621	3 997	4 234	49 865	3 751	1 988	42 899	Yes
GEMALTO	O. Piou	0	0	61	0	2	63	0	1	22	
GROUPE STERIA	F. Énaud	0	0	1	0	0	0	0	1	2	
HAULOTTE GROUP	P. Saubot	0	0	18	1	0	35	0	1	18	
HERMES INTL	P. Thomas	168	360	11 134	464	684	12 776	494	402	11 155	Yes
ICADE	E. Bertier	0	0	46	0	0	55	6	3	67	
ILIAD	C. Poidatz	0	0	16	0	0	13	0	0	5	
INGENICO	J. Stern	31	20	314	16	23	248	24	12	207	
L'OREAL	J.-P. Agon	2	0	67	6	12	162	5	8	216	
MERSEN	C. Cocozza	0	0	2	0	0	16	0	0	5	
METROPOLE TV	N. De Tavernost	7	1	62	4	6	81	3	2	72	
MICHELIN	M. Rollier	1	0	56	3	3	64	3	2	69	
NATIXIS	B. Comolet	0	0	4	0	0	2	0	0	5	
NEOPOST	J.-P. Villot	0	0	30	0	1	36	0	0	24	
NEXITY	A. Dinin	0	1	58	1	2	114	9	2	58	
NRJ GROUP	J.-P. Baudecroux	0	0	28	1	1	36	1	2	22	
PEUGEOT	F. Saint-Geours	0	2	106	2	3	218	4	2	147	
REMY COINTREAU	D. Hériard Dubreuil	5	11	560	5	10	445	3	3	368	
RENAULT	C. Ghosn	20	26	568	19	20	418	28	6	309	
RODRIGUEZ GROUP	G. Rodriguez	72	72	2 137	88	100	2 435	180	70	2 043	
S.E.B.	T. De La Tour d'Artaise	0	0	27	0	0	20	1	1	9	
SAFRAN	J.-P. Herteman	1	0	30	0	0	5	3	4	52	
SAINT GOBAIN	J.-L. Beffa	3	4	89	17	19	151	23	2	111	
SCHNEIDER ELECTRIC	J.-P. Tricoire	0	4	115	2	2	107	1	0	63	
SCOR SE	D. Kessler	7	23	164	11	10	221	4	10	286	
SPIR COMMUNICATION	P. Léoni	0	0	61	1	1	67	0	0	76	
STMICROELECTRONICS	C. Bozotti	0	1	18	1	0	32	0	0	19	
TECHNICOLOR	D. Ranque	2	3	86	12	10	130	15	0	73	
TECHNIP	T. Pilenko	0	0	10	1	1	69	1	0	30	
TELEPERFORMANCE	D. Julien	657	880	14 168	808	980	15 413	485	554	13 458	Yes
THALES	L. Vigneron	5	16	932	24	28	784	17	5	764	
TRIGANO	F. Feuillet	1	2	325	8	7	308	2	0	183	
UBISOFT ENTERTAIN	Y. Guillemot	1	4	397	5	7	357	12	7	317	
UNIBAIL-RODAMCO	G. Poittrinal	2	0	10	0	0	50	0	0	24	
WENDEL	J.-M. Wendel	13	8	1 002	14	16	735	30	20	619	

The table shows the numbers of citations of businessmen's last names retrieved from Factiva.com. See the text for technical information regarding data construction. See the text for information about businessmen listed in Sarkozy's network. The group of *random businessmen* is constituted of the chief executive officers or chairmen (as from mid-2006 to mid-2007) of randomly-selected firms. *Disc.* stands for "discarded", i.e. observations not used in the analysis. The reasons for this discarding are as follows: "Bazire" is also the name of a horse-racing stable owner, and "Royal" appears frequently in horses' names; "Bouygues" was one of the only three French mobile network operators at that time; "Frère" means "brother" in French; "Thierry" was the 35th most-popular first name in France over the Twentieth Century, this was the first name of 277,862 French people in 2010; "Louis" was the 9th most-popular first name in France over the Twentieth Century, this was the first name of 215,373 French people in 2010; "Giscard d'Estaing" is the name of a former French President; "Michel" was the 3rd most-popular first name in France over the Twentieth Century, this was the first name of 661,998 French people in 2010; "Thomas" was the 40th most-popular first name in France over the Twentieth Century, this was the first name of 256,237 French people in 2010; "Julien" was the 26th most-popular first name in France over the Twentieth Century, this was the first name of 298,895 French people in 2010. The information on French first names comes from Meilleursprenoms.com.

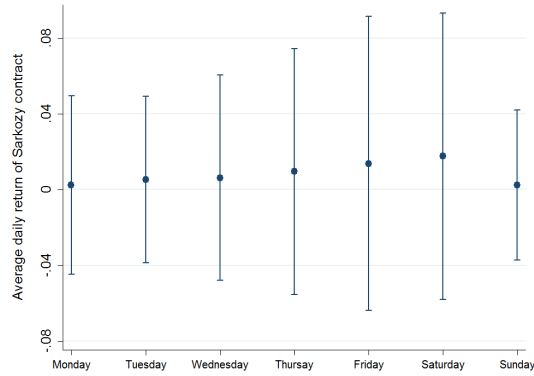
Figure A1: Tests of the semi-strong efficiency hypothesis for prediction-market data.



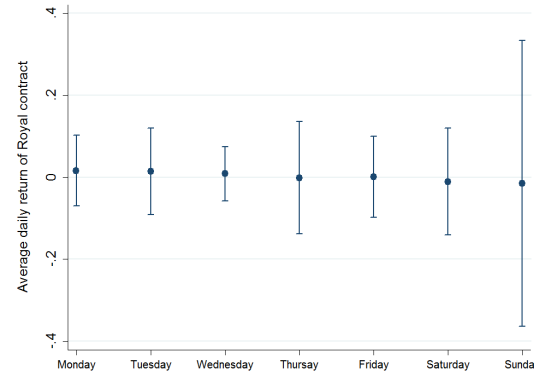
(a) Bookmakers' odds and Sarkozy's contract prices.



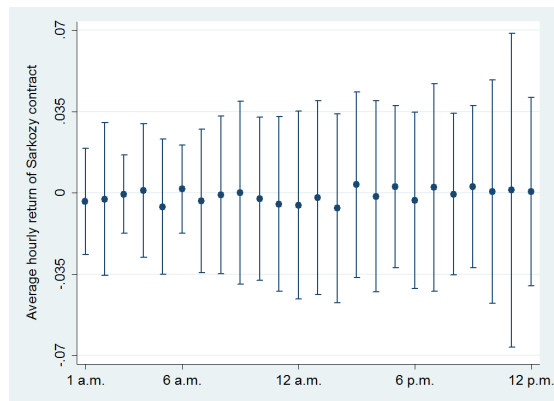
(b) Bookmakers' odds and Royal's contract prices.



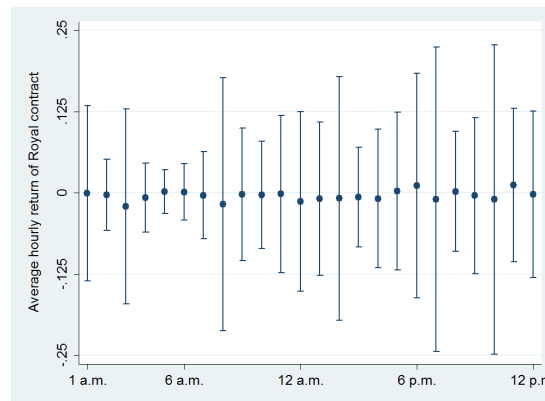
(c) Average daily returns of Sarkozy's contract by day of the week.



(d) Average daily returns of Royal's contract by day of the week.



(e) Average hourly returns of Sarkozy's contract by hour of the day.



(f) Average hourly returns of Royal's contract by hour of the day.

Prices of Royal and Sarkozy winner-take-all contracts are from NewsFutures.com. Odds are from Ladbrokes.com. Implicit graphical odds are not used to calculate correlation coefficients between series. Daily returns are computed from 9am to 5 : 30pm French legal time. For each hour h , the hourly return is computed using the price of the first transaction after $h - 30$ min and the price of the last transaction before $h + 30$ min. The dots are the average overs day of the week or hour of the day. The lines are the 95% confidence intervals.