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Political Connections and White-collar Crime: Evidence from Insider Trading in France*

Thomas Bourveau^a Renaud Coulomb^b Marc Sangnier^c

November 2020

Abstract

This paper investigates whether political connections affect individuals' propensity to engage in white-collar crime. We identify connections by campaign donations or direct friendships and use the 2007 French Presidential election as a marker of change in the value of political connections to the winning candidate. We compare the behavior of Directors of publicly listed companies who were connected to the future President to the behavior of other non-connected Directors, before and after the election. Consistent with the belief that connections to a powerful politician can protect someone from prosecution or punishment, we uncover indirect evidence that connected Directors are more likely to engage in suspicious insider trading after the election: Purchases by connected Directors trigger larger abnormal returns, connected Directors are less likely to comply with trading disclosure requirements in a timely fashion, and connected Directors trade closer in time to their firms' announcements of results.

KEYWORDS: Political Connections, White-Collar Crime, Insider Trading.

JEL CODES: D72, G14, G18, G38, K22, K42.

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*“Selon que vous serez puissant ou misérable,
Les jugements de cour vous rendront blanc ou noir.”*¹

Les Animaux malades de la Peste – Jean de La Fontaine, 1678

1 Introduction

Insider trading based on privileged information is a crime in most countries (Bhattacharya and Daouk 2002).² The decision to engage in illegal insider trading can be considered a rational choice based on the trade-off between the expected private costs and benefits (Becker 1968). Among these expected costs, the probability of being investigated or punished can vary by individual characteristics, such as one’s social networks if these can be used to reduce exposure to punishment.

In this paper, we study how political connections affect individuals’ propensity to engage in alleged illegal insider trading. To this end, we use data on Nicolas Sarkozy’s known friendships with businessmen constructed by Coulomb and Sangnier (2014) and the list of large contributors to his 2007 electoral campaign leaked by *Mediapart.fr*, a French news website. We relate this data to detailed and comprehensive information on the trades by Directors³ of French listed companies around the time of the 2007 French Presidential election to see whether Directors connected to Nicolas Sarkozy—the winning candidate—changed their financial-market behavior in response to his new powers.

Uncovering changes in the behavior of Sarkozy associates in financial markets following his election is challenging for a number of reasons. First, Sarkozy was a rising star in the political arena before the election, and the 2007 electoral outcome was partly predicted in the weeks before the election. In addition, Directors do not trade their company’s shares very frequently. Together, these facts prevent us from identifying changes in financial behavior following the 2007 election using a sharp-discontinuity identification approach. In addition, connections to Sarkozy are likely correlated with difficult-to-observe but distinctive characteristics that might be associated with particular financial-market behavior. To circumvent these difficulties, we use two complementary identification strategies to capture

¹“Thus human courts acquit the strong, And doom the weak, as therefore wrong.” The Animals Sick of the Plague – Translation by Wright (1842).

²This regulation is motivated by the expected damages to society of such behavior. Insider trading using privileged information discourages outsiders from investing in equities (Ausubel 1990), reduces corporate investment (Manove 1989), and raises the cost of equity (Bhattacharya and Daouk 2002). For further discussion of the costs of insider trading based on privileged information, see Manne (1966), Fishman and Hagerty (1992), Leland (1992) and Brochet (2019), among others.

³Throughout the paper, we refer to “Director” as any Executive or External Board Member whose trades need to be reported to the AMF by law.

the change in Sarkozy associates' financial activities in the 2-year window around the 2007 French Presidential election. We first take a difference-in-differences approach, where we compare Sarkozy associates to non-connected Directors who sit on the same Boards as do the Sarkozy associates. This helps us to uncover significant changes in behavior that pass a series of robustness checks and falsification exercises. Second, we use a synthetic control method approach, as pioneered by [Abadie and Gardeazabal \(2003\)](#) and used by [Angrist and Kuersteiner \(2011\)](#), [Cavallo et al. \(2013\)](#), [Acemoglu et al. \(2016\)](#) and [Angrist et al. \(2018\)](#), among others. We compare the post-treatment outcomes of Sarkozy associates to those of a non-treated group selected to best match the pre-treatment outcomes of the treated group: this also reveals a post-election change in behavior that is particular to Sarkozy associates.

We uncover evidence of greater suspicious trading activity by connected Directors after the election: Directors connected to Sarkozy trade more using privileged information about their company's stocks after Sarkozy's victory relative to non-connected Directors. They are also less likely to comply with legal trade-reporting requirements, and they trade closer to their firm's announcement of results (a period in which significant privileged information circulates within firms).

France in 2007 provides a particularly appropriate context in which to tackle our research question, for a number of reasons. First, both the regulatory framework and the *de facto* prosecution of insider trading were stable around the time of the 2007 French Presidential election. This is best illustrated by the stability in the prosecution activity of insider-trading cases examined by the *Autorité des Marchés Financiers* (AMF)—the national agency overseeing French financial markets—over the 2006–2008 period. In addition, a European directive applied in Spring 2006 made it compulsory for all Board Members of publicly listed French firms to report trades in their company's shares to the AMF, producing comprehensive trade-level data that we extracted from the AMF archives. Second, the victory of Nicolas Sarkozy in the 2007 French Presidential election represented a large positive shock to the value of pre-election connections to Sarkozy.⁴ Third, France is particularly well-suited to investigate Directors' social ties, as the country's elites are very concentrated and politically connected, as documented by [Kramarz and Thesmar \(2013\)](#). Last, one key feature of the French setting is that companies are not allowed to directly finance political parties. This, together with the leaked list of large contributors to the Sarkozy campaign, allows us to

⁴The literature has used different measures of the value of political connections. Elections or political nominations are used by [Knight \(2007\)](#), [Ferguson and Voth \(2008\)](#), [Goldman et al. \(2009\)](#), [Cooper et al. \(2010\)](#), [Imai and Shelton \(2011\)](#), [Coulomb and Sangnier \(2014\)](#) and [Akey \(2015\)](#). Other events have also been considered, such as non-electoral power shifts ([Fisman 2001](#), [Jayachandran 2006](#) and [Acemoglu et al. 2018](#)), the appointments of politically connected Directors ([Faccio 2006](#) and [Fan et al. 2007](#)) and the local-government appointments of former employees ([Cingano and Pinotti 2013](#)).

identify the effects of individual- rather than firm-level connections.

We do not rely on the cases detected or prosecuted by the Police or Judiciary, as they may change their monitoring and prosecution according to the identity of the suspects and their political ties. In contrast, detailed and a priori comprehensive information about trades by Directors of French listed companies allow us to construct three dependent variables capturing different dimensions of their trading behavior that can be related to illegal insider trading according to the finance literature and the red flags used by market-monitoring authorities ([Autorité des Marchés Financiers, 2009](#)).⁵ First, we follow the literature and proxy the information content of trades via the abnormal stock returns following the public disclosure of insider purchases. Difference-in-differences estimates suggest that the abnormal returns triggered by purchases announced by Sarkozy associates rose by about 1% following the 2007 Presidential election, which is an economically significant effect.

Insiders trading on private information may have incentives to delay reporting their trades, as any delay lengthens the period during which privileged information can progressively leak to other market participants. A greater delay in reporting may then dilute the market's reaction to insider trades, making them more difficult to detect. This is why insiders are obliged to report their trades in a timely manner. In France, the Executives and Board Members of French publicly listed companies are required to disclose to the AMF any transactions on stocks of firms in which they hold a managerial position or a Directorship within five business days. This is the second dimension in which we observe Directors' behavior. Our difference-in-differences estimates suggest that the probability that connected Directors exceed this reporting time limit rose by about 12% following Nicolas Sarkozy's election.

Last, we present evidence that connected Directors traded on average about 1.5 months closer to the announcements of firm results after the election. Under the assumption that information (which is not yet available to other market participants) is more likely to be available to insiders close to results announcements, this further suggests that connected Directors traded more using firm-sourced privileged information after the election.

The estimates of the change in Sarkozy associates' trading behavior using a synthetic control method are consistent with the evidence from the difference-in-differences approach. The rise in the abnormal returns from purchases by connected Directors is around double that previously estimated, as is that for the Sarkozy associates' drop in compliance. The

⁵Our approach is in line with studies that rely on indirect evidence of fraudulent behaviors. For example, [Baltrunaite \(2020\)](#) and [Andreyanov et al. \(2018\)](#) interpret observations of firm bidding behavior in public procurement auctions as evidence of political favoritism or corruption. [Byrne and De Roos \(2019\)](#) and [Dong et al. \(2019\)](#) relate dynamics in firm gross margins or in retail prices as indirect evidence of outlawed cartel behaviour in the industrial organization literature.

estimate for the time between connected Directors' trades and the firm's next result release is unaffected.

Our findings are consistent with the classic model of crime as rational behavior in [Becker \(1968\)](#), with the expected costs of crime depending on the probability of being caught and the severity of the punishment if convicted. This line of reasoning, like the popular belief noted by [Jean de La Fontaine in 1678](#), suggests that Directors may be more likely to engage in fraudulent behavior if they believe that their connections will help protect them against prosecution. This protection can be manifested at different non-mutually exclusive levels: their financial activities may be less monitored by the financial regulatory authorities, they may run a lower risk of prosecution, and they may face smaller penalties if prosecuted.⁶

An alternative explanation is that Sarkozy associates' trades contain more privileged information than those by other Directors, as the former have greater access to government information about future policies.⁷ We do not believe that this is the main channel at play for four reasons. First, Sarkozy associates are not the only group that may have privileged access to government information. If lobbyists, policy-makers, union officials or journalists also have this information, future reforms should already appear in market prices, so that the market's reaction to connected Directors' trades should be negligible. Second, were privileged information to be extracted from the government via more efficient lobbying, non-connected Directors sitting on the same Board as a connected Director may also have access to this information.⁸ If so, the specific behavior of Sarkozy associates after the election, uncovered from the within-firm comparison with non-connected Directors, could be interpreted as Sarkozy associates using more private information in their trades than non-connected Directors, while the latter also have access to privileged government information. Third, connected Directors trade closer to the announcement of the firm's results, in line with the interpretation that Directors trade on firm- rather than government-sourced information. Finally, we provide a more direct test that supports the evidence that a change in government-sourced information does not alone drive the increase in trading anomalies of

⁶This is consistent with the empirical evidence in [Correia \(2014\)](#), who shows that US firms' political contributions reduce the penalties prescribed by the Securities and Exchange Commission for both firms and their executives in cases of prosecution for fraudulent accounting practices. Note that Directors may also believe that political connections place them under stronger scrutiny due, for instance, to greater media attention, making them less inclined to act illegally. While we are not able to directly test for the existence of this alternative mechanism, our empirical results at least suggest that this is not dominant, since this would produce less, rather than more, suspicious trading activity.

⁷[Akin et al. \(forthcoming\)](#) and [Jagolinzer et al. \(forthcoming\)](#) provide empirical evidence in favor of this conjecture during the financial crisis in the US banking industry.

⁸Similarly, it is unlikely that connected Directors with strategic information from the government would not share it with their fellow non-connected Board Members, as this could be more profitable overall than opportunistic trading.

connected Directors after the election. Analyzing the market reaction to the announcements of Directors' purchases, we do not find a post-election change in the abnormal returns of the same industry stocks as those traded by Sarkozy associates when the latter stocks are disclosed to the public. This suggests that trades by connected Directors are unlikely to contain privileged government-sourced and industry-relevant information.

Overall, while we cannot fully disentangle all of the different mechanisms at play, our preferred interpretation is that the increase in suspicious trades is due to a feeling of impunity on the part of Sarkozy associates that led them to use more firm-sourced privileged information, rather than due to easier access to privileged information about future government policies. Note, however, that trading based on privileged information is illegal regardless of the source of the privileged information (government or firm) and the mechanisms, i.e., whether Sarkozy associates use more private information because they feel protected and/or they have access to more private information after the election (and feel safer using it).

Our work here contributes to two distinct strands of the literature. The first is that on the determinants of individual engagement in illegal activities. Adding to the analysis of the determinants of crime, we show that political connections seem to encourage white-collar crime.^{9,10} We stress the importance of social ties in criminal activities, as in [Patacchini and Zenou \(2008\)](#), [Bayer et al. \(2009\)](#) and [Mastrobuoni \(2015\)](#). [Patacchini and Zenou \(2008\)](#) show that even weak ties to criminals increase the probability of becoming a criminal. [Bayer et al. \(2009\)](#) consider how the social ties amongst offenders constructed during shared juvenile detention in the US affect future criminal behavior. In [Mastrobuoni \(2015\)](#), the economic status of Italian Mafia members increases with their centrality in the criminal social network. Our research differs from this work as we look at the impact of connections to politicians—not criminals—on the likelihood of engaging in criminal activity. In line with papers that study crime and misconduct that are rare and/or difficult to uncover, we focus on indirect signals of criminal activities (e.g., [Byrne and De Roos 2019](#), [Dong et al. 2019](#), [Baltrunaite 2020](#) and [Andreyanov et al. 2018](#)). We use three measures of Directors' actual behavior on financial markets, which allows us to provide a number of pieces of evidence consistent with politically connected Directors engaging more in suspicious trading.

Our second contribution is to the growing literature on the value of political connections. This literature focuses primarily on firms, finding evidence that political connections lead to

⁹The non-exhaustive list of crime determinants in the literature includes income, employment and socio-economic disparities ([Gould et al. 2002](#) and [Miguel 2005](#)), education ([Lochner and Moretti 2004](#) and [Deming 2011](#)), social interactions ([Glaeser et al. 1996](#)), the expected punishment ([Cornwell and Trumbull 1994](#)), prior juvenile incarceration ([Aizer and Doyle 2015](#)), police activity ([Levitt 1997](#) and [Di Tella and Schargrodsky 2004](#)) and migration-policy enforcement ([Pinotti 2015](#)).

¹⁰Another strength of our work is that our sample is composed of Directors of French listed companies, who form a relatively homogeneous group in terms of employment, salary, education and social background.

favorable treatment by politicians in power. Following the seminal work of [Fisman \(2001\)](#), a number of papers have shown that the equity value of politically connected firms is affected by political events (see [Jayachandran 2006](#), [Knight 2007](#), [Claessens et al. 2008](#), [Ferguson and Voth 2008](#), [Cooper et al. 2010](#), [Dube et al. 2011](#), [Coulomb and Sangnier 2014](#) and [Acemoglu et al. 2016](#), among others).¹¹ This literature has recently started to quantify the social costs of political connections by examining firms' behavior. For instance, [Fisman and Wang \(2015\)](#) show that workplace fatalities in China are higher in politically connected firms; similarly, in [Schoenherr \(2019\)](#), the public-procurement contracts granted to politically connected South Korean firms are of lower execution quality and have more frequent cost increases after renegotiation. We depart from this literature by looking at the impact of political connections on individual behavior in order to uncover the private value of personal connections to a politician that are gained at the expense of society. Our approach is common to a small number of recent contributions, such as [Cruz et al. \(2020\)](#), who document that incumbent municipal politicians give favorable treatment to households that are central in the social network and can thus provide larger electoral support. Another set of studies estimate the value of political personal connections by documenting that politicians' relatives have better labor-market outcomes in the public sector both in Sweden ([Folke et al. 2017](#)) and the Philippines ([Fafchamps and Labonne 2017](#)) and the private sector in Italy ([Gagliarducci and Manacorda 2020](#)). Our results differ from these studies as we focus on individuals outside of the politicians' family who engage in illegal behavior that is costly to society.¹²

As our difference-in-differences analysis is carried out within firms, our evidence refers to individual- rather than firm-level connections. Overall, we find evidence that politically connected Directors are more likely to engage in fraudulent behavior after the election of Nicolas Sarkozy. A back-of-the-envelope calculation suggests that this behavior is profitable, as the latent stock-market gains of Sarkozy associates rose by roughly 886,000€ per person

¹¹The literature has shed some light on the channels through which these connections affect firm value. For instance, politically connected firms can receive preferential treatment from public institutions ([Gordon and Hafer 2005](#), [Correia 2014](#) and [Tahoun and van Lent 2018](#)), obtain more or more profitable government contracts ([Goldman et al. 2013](#), [Boas et al. 2014](#), and [Baltrunaite 2020](#)) and enjoy preferential access to finance and bank loans ([Khwaja and Mian 2005](#)).

¹²[Folke et al. \(2017\)](#) find no evidence of illegitimate favors and instead interpret their results as evidence that children of politicians who were already living in a municipality prefer to stay there and work and delay joining a university. [Fafchamps and Labonne \(2017\)](#) examine elections in the Philippines and show that a politician's relatives are more likely to obtain discretionary managerial positions in the local public sector. The setting does not allow them to distinguish between pure political gains and a hiring decision motivated by the goal to better execute and deliver on the candidates' political promises. Finally, [Gagliarducci and Manacorda \(2020\)](#) document that relatives of politicians are more likely to enjoy labor-market benefits (employment and income) in the local private sector. They interpret their results as evidence of corruption since the effect is stronger for sectors that depend more on the public administration and in places with stronger judicial anti-corruption campaigns.

following the 2007 Presidential election. This is a significant amount in the French context, even for top-level Executives, as the average fixed CEO salary in the 40 largest French listed firms was 985,000€ in 2007 (Teulon 2013).

The remainder of the paper is organized as follows. Section 2 describes the institutional and political context. Section 3 lays out the data and our estimation strategies. The empirical results are presented and challenged in Section 4. Last, Section 5 contains concluding remarks.

2 Institutional context

This section introduces the French regulatory setting pertaining to insider trading and describes the context of the 2007 Presidential election.

2.1 Insider-trading regulation

The *Autorité des Marchés Financiers* (AMF) ensures investors' protection and guarantees the proper functioning of financial markets. Its court—the enforcement committee—decides on penalties.

Like most developed countries, France has laws restricting trading using private information. The first law was passed in 1970: Article L.465-1 of the *Code monétaire et financier* prohibits insiders from carrying out or facilitating transactions before the public is informed of any privileged information. The 2005 version of the code lists a maximum penalty of two years imprisonment and a fine of 1.5 million€, which can rise to up to ten times the amount of the alleged illegal profit. Importantly, the code's provisions on insider trading remained unchanged over the 2006–2008 period.

Insider-trade reporting requirements under French law come from the 2003 European Market Abuse Directive (2003/6/EC). This directive aims to harmonize disclosure requirements within the European Union by mandating the public disclosure of insider transactions within five business days. Since April 2006, the Directors of French listed firms have been required by Article L.621-18-2 of the *Code monétaire et financier* and AMF general regulations to disclose their trades directly to the AMF.¹³ This information is then posted on the AMF's website. Before this date, trades were not systematically disclosed and thus

¹³This reporting requirement also applies to corporate entities controlled directly or indirectly by the insider, as well as direct family members (e.g., partners and children) when they are trading shares of the insider's company. In practice, family members remain unnamed, and the report provides only the identity of the Director with whom they are associated.

were not immediately observed by market participants. Directors who fail to disclose their transactions within the time limit incur financial penalties.

Market monitoring is carried out by the AMF Market-Surveillance Department for all financial instruments traded on the French stock exchange. This relies on a number of automated tests to identify “atypical movements in trading volumes, intermediaries’ market shares, prices and other situations,” as stated in the [AMF 2009 Annual Report](#). These alerts cover all sorts of anomalies, not only those related to potential illegal insider trading. Alerts launched by the AMF internal monitoring system are complemented by other sources such as suspicious-transaction reports from intermediaries. If suspicion remains after the first check by AMF analysts, the AMF will start an investigation that leads to a report. The AMF enforcement committee can then decide to dismiss the case, to impose penalties, and/or to refer the case to the Judicial Authorities.¹⁴

While trading on private information is illegal in France, not all opportunistic trades end up being prosecuted due to enforcement frictions.¹⁵ Online Appendix Table [B1](#) summarizes all of the publicly available information on AMF monitoring activity and the number of reported punishments related to insider trading over the 2005–2009 period. Only a few AMF investigations produce punishment for illegal insider trading around our sample period, likely due to the burden of proof of demonstrating the use of private material information. More generally, the figures presented in Online Appendix Table [B1](#) suggest that there was no change in the AMF’s overall investigation effort, as measured by the number of investigations or procedures opened, around the 2007 French Presidential election. Online Appendix [B](#) contains further discussion of AMF monitoring and prosecution activities.

2.2 Political context

The French President is elected for a five-year term by direct universal suffrage. In the 2007 election, Nicolas Sarkozy was chosen as the official candidate of the largest Right-Wing party—the *Union pour un Mouvement Populaire* (UMP). His main competitor was Ségolène Royal, the official candidate of the largest Left-Wing party—the *Parti Socialiste*. The first round of the 2007 French Presidential election was held on April 22nd. As no candidate received a majority of votes in this first round, a second round between the two candidates with the greatest number of first-round votes was held on May 6th. Nicolas Sarkozy won this second round with 53.06% of the votes.

¹⁴The cases investigated or prosecuted by the AMF were anonymized over the period of interest, as were the punishments.

¹⁵Opportunistic trades also take place in the United States ([Cohen et al. 2012](#)), even though the US has the most stringent insider trading regulation and enforcement, dating back to as early as 1903 ([Bhattacharya and Daouk 2002](#)).

Sarkozy had been a member of the successive governments during the previous Presidential term.¹⁶ However, his election as President had a significant impact on his power, which consequently increased the value of a connection to him, for at least two reasons. First, France is a semi-Presidential Republic where the President has extensive power, and Nicolas Sarkozy was known to have a strong vision of the President’s role (Jan 2011). In France, the Prime Minister is chosen by the President and appoints the government, the composition of which has to be validated by the President. The Parliament votes on laws that are *de facto* backed by the President. Over the past two terms, Presidential elections have immediately preceded parliamentary elections, with the party of the elected President systematically obtaining the parliamentary majority. The French National Assembly can be dissolved by the President at any time.

Enforcement of securities regulation can also be affected by the President, who can influence the two institutions in charge of insider-trading prosecution—the AMF and public prosecutors. The President appoints the Director of the AMF for a 5-year term. In addition, public prosecutors are not exempt from the influence of the Executive, as they are under the authority and control of the Minister of Justice, who is appointed by the President and the Prime Minister. Public prosecutors’ lack of independence has been explicitly acknowledged by the European Court of Human Rights.¹⁷ See Online Appendix C for additional information on how political power can influence insider-trading monitoring and prosecution in France.

Second, there was a well-documented animosity between Nicolas Sarkozy and both former President Jacques Chirac and Prime Minister Dominique de Villepin (see Online Appendix D for more details). This animosity seriously limited Nicolas Sarkozy’s influence prior to his election. His 2007 victory was then accompanied by a real increase in his power.

3 Data and estimation strategy

This section first describes the data used in this paper. We then present the different dependent variables employed to uncover evidence of suspicious trading, and sketch out the estimation strategies.

¹⁶During President Jacques Chirac’s second term (2002–2007), Nicolas Sarkozy served as Minister of the Interior in Jean-Pierre Raffarin’s first government from May 2002 to March 2004. He was then appointed Minister of Finance in Raffarin’s second government from March 2004 to May 2005. He was again appointed Minister of the Interior in Dominique de Villepin’s government from June 2005 to March 2007. Nicolas Sarkozy left this position to run in the 2007 Presidential election. He was also the leader of the UMP party from November 2004.

¹⁷The European Court of Human Rights’ judgement of the *Medvedyev and Others v. France* case states that in France, “the public prosecutor is not a ‘competent legal authority’ within the meaning the Court’s case-law gives to that notion [...] as he lacks the independence in respect of the executive to qualify as such.”

3.1 Defining political connections

We consider two types of pre-election connections between Nicolas Sarkozy and the Directors of French listed firms: major individual campaign contributions and friendship ties.¹⁸

French law has prevented firms from contributing to political parties since 1995, and private contributions are not publicly disclosed. However, in September 2012 the French news website Mediapart.fr published a column in which journalists reported the existence of a leaked list of major contributors (“*grands donateurs*”) to Sarkozy’s 2007 Presidential campaign. This list was produced by the party’s administration and contains the first and last names of 565 individuals who had contributed to the UMP and one of its related micro-parties.¹⁹ The existence of the list has never been contested or denied, even by the UMP, and its accuracy has been publicly confirmed by some of the individuals who appear on it. As highlighted by Arfi et al. (2012), many individuals working in finance were in this group of major contributors, which was actually a club—called the *Premier Cercle*—whose members gathered at meetings and dinners organized for that purpose (Cori 2010 and Mauduit 2010). This suggests that the composition of the group was common knowledge among its members, and that the identities of the UMP’s major individual contributors were known by stock-market participants around the time of the 2007 French Presidential election.²⁰

During the 2007 electoral campaign, French media reported a number of friendship connections between Nicolas Sarkozy and prominent businessmen. We selected the 27 businessmen who were identified as friends of Sarkozy by Coulomb and Sangnier (2014), using information from books written by journalists and political pundits (Chemin and Perrignon 2007 and Dély and Hassoux 2008).

No such connections are known for Ségolène Royal, the main Left-Wing candidate in the 2007 French Presidential election. The media did not report friendship connections between the Socialist candidate and businessmen, the only exception being that with Pierre Bergé, a millionaire businessman who was a public supporter of the *Parti Socialiste*. Similarly, no sign has ever emerged of any structured group of contributors to her campaign. According to the

¹⁸Ferguson and Voth (2008) use Directors’ campaign contributions to identify politically connected firms. Johnson and Mitton (2003) and Coulomb and Sangnier (2014) use Friendships between politicians and Directors or shareholders to link firms to politicians.

¹⁹According to information in the media, the UMP administration acknowledged that individuals who appear on the list of major contributors gave at least 3,000€ to the party during the 2007 campaign. In France, the maximum allowed individual donation to a political party was 7,500€ in 2007. However, it is well known that numerous micro-parties are used as donation recipients to bypass this constraint. The actual amounts donated by individuals on the list are not known.

²⁰Arfi et al. (2012) reveal suspicions of complaisance concerning tax fraud by campaign contributors. The activities of some members of this list also attracted the attention of the judicial authorities. For instance, a member of this group who works as a bank CEO gained private benefits from complex offshore loopholes, according to Livolsi and Israel (2014).

official donation figures provided by the [Commission nationale des comptes de campagne et des financements politiques](#), Royal received 743,432€, as compared to 9,125,105€ for her opponent. Thus, although we cannot formally rule out that some individuals may have funded both parties, this appears to be unlikely given the modest campaign fund-raising of the Socialist Party and its stand in the media against the main UMP contributors. In addition, contributors to Sarkozy’s campaign presumably shared the party’s ideology when joining the group, which functioned as a club. See Online Appendix [E](#) for more details.

3.2 Data on insider transactions

Since the 2006 application of the European directive, all Board Members of French listed firms must report their trades in their company’s shares to the AMF. These trades are available from the AMF website as forms stored in an archive or accessible via the website’s search engine. We collected all forms that relate to insider trades made from May 2006 to mid-2013 and designed a program to extract information from the documents. See Online Appendix [F](#) for a brief presentation of the AMF data collection and information extraction.

Each trade is uniquely identified by the name of the insider, the name and stock identifier of the company whose stocks were traded and the transaction date. The forms also indicate the position of the insider (e.g., Executive or non-Executive Director), the type of transaction (sale or purchase), the price at which the trade was operated and the total traded value, as well as the date at which the trade was disclosed to the AMF and the announcement date (the date at which the AMF made the trade public to market participants). The dataset is presumably comprehensive.²¹ It contains 10,914 trades conducted from mid-2006 to mid-2008—the time-window we use in the empirical analysis. These trades are associated with 1,827 distinct Directors.

3.3 Observation of Directors’ behavior

In this paper, we attempt to estimate the impact of political connections on white-collar crime, here illegal trading by insiders of publicly listed corporations. Since the underlying mechanism reflects both a lower probability of detection and/or lighter punishment if prosecuted, we cannot rely on prosecution data that would be tainted by any leniency bias of

²¹There is ultimately no way to prove that all insider trades are reported. However, we believe that non-reporting is negligible for three reasons. First, we found no evidence of unreported trades in prosecution cases, or in the media. Second, the brokers who would have carried out these trades would be legally exposed. Finally, any exercise of stock options has to be reported in firms’ annual reports, which helps to reconcile operated trades with those reported. All in all, it seems reasonable to conclude that all insider trades are reported.

the judicial system towards the politically connected. We instead use observable indirect measures that plausibly capture changes in the likelihood of breaking the law.

We consider three dependent variables to capture different dimensions of Directors' behavior and uncover evidence of illegal insider trading. These are consistent with the insider-trading literature and the alert indicators used by enforcement authorities (see sub-Section 2.1 and Online Appendix B). We first look at abnormal stock returns triggered by the announcement of insider trades to proxy for the private information content of these trades. We then examine whether Directors comply with the AMF insider-trading reporting regulations. Last, we use the time from a trade to the firm's next corporate results announcement as an indicator of Directors' opportunistic timing of their trade to potentially benefit from important non-public information within the firm prior to the result announcement. While the first variable relates to the *market perception*, the other two capture the *observed* financial activity of Directors.²²

The two-day compound abnormal return on purchases at the announcement date

An extensive body of literature has used the abnormal returns from insider-trade announcements to measure the trades' information content (see Meulbroek 1992, Lakonishok and Lee 2001, Fidrmuc et al. 2006 and Fidrmuc et al. 2013, among others). The intuition is that if market participants believe that insider trades reflect privileged information about the firm's future cash flows, outsiders will mimic the insider's trades, leading to abnormal returns when the insiders' trades are made public.²³ On the contrary, if insiders trade for reasons other than profiting from their information (e.g., because of liquidity constraints or for diversification purposes), these trades should not trigger abnormal returns.

One conclusion from these contributions (see in particular Lakonishok and Lee 2001, Jeng et al. 2003) has been that insider sales have a much lower information content than their purchases.²⁴ We follow the literature and use the abnormal returns triggered by the

²²The decision to trade obviously relates to information that is available to an insider and will be disclosed in the future. Directors are themselves part of the information-disclosure decision, as well as part of the information-production process, as members of the firm's Board. In addition, the decision to report a trade in a timely fashion reflects the aforementioned strategic incentives. As a result, the three variables are obviously related via strategic decisions. The investigation of the precise form of this nexus of interactions is, however, beyond the scope of this paper.

²³This echoes the semi-strong efficiency hypothesis (Malkiel and Fama 1970), in which all public information is incorporated into prices. Following this approach, an insider-trade announcement is a *new* piece of information relevant to the market valuation of a firm only if the trade uses private information.

²⁴The main mechanism behind this result is that insider sales are driven mostly by diversification and liquidity motives, as Directors' portfolios are over-exposed to the stock of their company due to compensation schemes. As a result, uninformed traders may conjecture that an observed sale is less likely to rely on private information than a purchase. In other words, the private-information signal from a sale is *noisier* than that from a purchase. Observers then extract less information from sales than from purchases.

announcement of insider purchases to proxy for their informational content.

We obtain daily stock and market returns from *Thomson Reuters Datastream* and follow [MacKinlay \(1997\)](#) in constructing firms’ abnormal returns on purchases at the announcement date. For each purchase, we first estimate the relationship between a firm’s return and that of the market over a period of 30 days before the announcement date. We then predict the firm’s returns from those observed on the announcement day and over the next two days using the estimated market model.²⁵ A similar approach is used by various contributions in the literature, including [Jayachandran \(2006\)](#), [Knight \(2007\)](#), [Coulomb and Sangnier \(2014\)](#) and [Acemoglu et al. \(2016\)](#).

The returns to trade will be insignificant on average if insiders trade for reasons that are unrelated to their private information.²⁶ If we can therefore isolate the specific factors/situations (such as political connections) that make insider returns, on average, statistically different from zero, this would suggest that insiders traded using private information, which is illegal. Online Appendix [B](#) further discusses the difference between our statistical approach and that of the Judicial entities that assess opportunistic trades.

Compliance with the legal time limit for reporting trades

As discussed in Section [2](#), Directors have to directly disclose their trades in their company’s stocks to the AMF within five business days. Directors who fail to disclose their transactions within this time limit incur financial penalties. We construct a *Compliance with legal time*

²⁵We run the following regression for each stock i for which a purchase is announced on day t :

$$\mathbb{R}_{i\tau} = \alpha_{it} + \beta_{it} \times \bar{\mathbb{R}}_{\tau} + \varepsilon_{i\tau}, \text{ with } \tau \in [t - 30, t - 1],$$

where $\mathbb{R}_{i\tau}$ is firm i ’s stock return on day τ , $\bar{\mathbb{R}}_{\tau}$ is the market return on day τ , and $\varepsilon_{i\tau}$ is an error term. We use the SBF 120 as the market return. The SBF 120 is a reference index composed of the 120 most actively traded stocks on the Paris Stock Exchange. We estimate the above expression separately for each firm and each announcement date, which yields trade-level estimated parameters $\hat{\alpha}_{it}$ and $\hat{\beta}_{it}$. These are used to calculate the abnormal returns of each purchase over the two following business days using the following formula:

$$\tilde{\mathbb{R}}_{i\tau} = \mathbb{R}_{i\tau} - \left\{ \hat{\alpha}_{it} + \hat{\beta}_{it} \times \bar{\mathbb{R}}_{\tau} \right\}, \text{ for } \tau \in [t, t + 1, t + 2],$$

where $\tilde{\mathbb{R}}_{i\tau}$ is the abnormal return of stock i on day τ . As highlighted by [Jayachandran \(2006\)](#), the use of abnormal returns rather than standard market returns addresses the concern that the share prices of some firms may covary. If covariance pertains due to covariance between these firms and the market, firms will have the same estimated beta, and the abnormal returns will be independent. Finally, we last calculate the two-day compound abnormal return on purchases as:

$$\tilde{\mathbb{R}}_{it}^{\text{com}} = (1 + \tilde{\mathbb{R}}_{i,t}) \times (1 + \tilde{\mathbb{R}}_{i,t+1}) \times (1 + \tilde{\mathbb{R}}_{i,t+2}) - 1.$$

²⁶By construction, abnormal returns at random dates are on average equal to zero, as they represent the error terms from our return-estimation models.

limit dummy if the trade is disclosed to the AMF within five business days. Past research has shown that insiders attempt to hide the private information embedded in their trades by delaying trade disclosure (Fidrmuc et al. 2006 and Brochet 2010). Insiders might prefer to delay their trade reporting to attenuate the market reaction when the trade is disclosed to market participants, as the market’s reaction usually constitutes the initial red flag identifying potentially illegal trades. As this strategy is known to the AMF, a delay in disclosure can also be a red flag. The overall insider strategy depends on beliefs regarding the signals used by the AMF to detect insider trading and the effect of trade reporting on the market’s reaction to the public trade announcement.

Time to the firm’s next results announcement

Privileged information is likely to be held by insiders in the period immediately before corporate results releases. A large body of evidence has shown that informed insider trading occurs around corporate announcements (see Keown and Pinkerton 1981, Hirschey and Zaima 1989 and John and Lang 1991, among others). We crawled *TradingSat.com*—an information website about French financial markets—to collect the dates of public announcements by French listed firms and calculated the *Time to firm’s next results announcement* for each trade as the time (in days) between the insider transaction date and the next public results announcement by the firm. While it is not possible a priori to know when insiders become aware of relevant information, it is reasonable to assume that awareness rises at least weakly as firm announcements draw closer. Thus, given that trading is the Director’s decision, trades closer to a results announcement are more likely to reflect private information than those that are more distant. Consistent with this interpretation, we estimate that the abnormal returns following the announcements of insider purchases are on average 30% higher for trades one month closer to the firm’s next results announcement (p-value= 0.013).

3.4 Estimation strategies

Given that the result of the 2007 French Presidential election was anticipated in the weeks preceding the vote (see Online Appendix D and Coulomb and Sangnier 2014), and that Directors do not trade their companies’ shares every day, it is not possible to carry out a sharp discontinuity-style analysis. We therefore use a two-year time-window around the 2007 French Presidential election to capture changes in Directors’ behavior linked to the victory of Nicolas Sarkozy. Trades are allocated to the pre- or post-election periods according to the transaction date.

We match data on insider trades to the list of connected businessmen to identify indi-

viduals who appear in both datasets. Of the 565 campaign contributors, 33 are Directors who traded stocks in the 2-year time-window around the 2007 French Presidential election; so are 18 out of the 27 businessmen friends of Nicolas Sarkozy. Only two Directors qualify as both friends of Nicolas Sarkozy and campaign contributors. We consider all of these 49 individuals as *Sarkozy associates*.

The group of Sarkozy associates represents 2.7% of the traders operating during our time-window. They differ from other Directors in a number of ways. First, Sarkozy associates are Board Members of larger firms, as shown by the plots in Figure 1(a) of the distributions of firm market capitalization in 2007.²⁷ Second, connected Directors are more likely to hold Executive positions than are other Directors, as illustrated in Figure 1(b). Sarkozy associates also differ from other Directors in their trading activity: they trade more frequently and trade larger amounts, as shown in Figures 1(c) and (d).

We apply two estimation strategies to circumvent, as far as possible, the above issues relating to the differences in levels between Sarkozy associates and other Directors.

Difference-in-differences. We first select the 65 firms with Sarkozy associates and use the 336 non-connected Directors in these firms as the comparison group.²⁸ We use this *Associates' firms sample* to estimate the following equation:

$$\begin{aligned}
 y_{ift} &= \beta \text{Sarkozy associate}_i \times \text{Post-election}_t \\
 &+ \gamma \text{Sarkozy associate}_i + \delta \text{Post-election}_t \\
 &+ \nu_f + X_{ift}(1 + \text{Post-election}_t) + \alpha + \varepsilon_{ift},
 \end{aligned} \tag{1}$$

where y_{ift} is one of the three outcomes described above related to the trade on firm f stock by Director i on day t , $\text{Sarkozy associate}_i$ is a dummy for Sarkozy associates, Post-election_t is a dummy for being after May 6th 2007, ε_{ift} is the error term, α is a constant, ν_f is a set of firm fixed effects, and X_{ift} is a vector of trade/trader characteristics that include the (log of the) trade value and a dummy for Directors who were members of the firm's Management Board at the time of the trade.²⁹ Our coefficient of interest, β , is the difference-in-differences

²⁷This difference in firm size obviously affects our ability to calculate the abnormal returns from trades using *Thomson Reuters Datastream* data and retrieve the firm's event agenda from *TradingSat.com*. As illustrated in Online Appendix Figure A1(a), abnormal returns can be calculated for all but 1.54% of trades in associates' firms' stocks, whereas this figure is 11.24% for other firms. Firms' event data is less available, with data missing for 15.38% and 19.33% of associates' and other firms, respectively. Conditional on data availability, Figure A1(b) in the Online Appendix plots the distribution of firms' results announcements over time from January 2006 to December 2008 for each group of firms. The overall distribution of firms' results announcements looks similar across both groups of firms. Announcements are relatively more frequent in March and September.

²⁸The full sample is likely to provide a worse control group than the associates' firms sample, due to the aforementioned differences between Sarkozy associates and other Directors. Evidence using the full sample is presented in Bourveau et al. (2016).

²⁹A trade's value is included to formally isolate changes in Sarkozy associates' behavior (or in the market

estimate of the change in behavior of Sarkozy associates relative to that of non-connected Directors after the Presidential election. The coefficient γ picks up any within-firm differences between the behavior of Sarkozy associates and other Directors over the entire period, while δ captures any common change in the behavior of all Directors post- versus pre-election. The introduction of firm fixed effects washes out any differences between connected and non-connected Directors that may be correlated with firm characteristics, such as firms’ internal regulations. Given the structure of the data, we cluster standard errors by Director, firm and date. We also consider alternative specifications: First, we add firm fixed effects interacted with the post-election dummy to the baseline; then, we add linear trends that are specific to the group of Sarkozy associates and the other Directors; furthermore, we also include trader fixed effects and repeat the specification changes we just described.

Synthetic control method. Our second estimation strategy is inspired by the synthetic control method used in [Abadie and Gardeazabal \(2003\)](#), [Angrist and Kuersteiner \(2011\)](#), [Abadie et al. \(2010, 2015\)](#), [Cavallo et al. \(2013\)](#), [Acemoglu et al. \(2016\)](#), [Gobillon and Magnac \(2016\)](#) and [Angrist et al. \(2018\)](#), among others.³⁰ The synthetic control method compares the post-treatment outcome of the treated group to that of a non-treated group that is selected to best match the pre-treatment outcome of the treated group. We are therefore constrained to using only Directors who traded both before and after the 2007 election. This restriction leaves us with 26 Sarkozy associates and 521 non-connected Directors who constitute the donor pool. We implement our pseudo-synthetic control method approach as follows. We first calculate, for each of the three variables of interest, the average outcomes among Sarkozy associates over the four 3-month periods prior to May 2007. We then select a potential control group by randomly drawing Directors from the donor pool and allowing each selected Director to be duplicated up to 10 times. We next calculate each candidate control group’s fit as the root square error over the pre-treatment sub-periods:

$$\omega_j = \sqrt{\sum_{T=0}^4 (\tilde{y}_{j,T} - \bar{y}_T)^2}, \quad (2)$$

reaction to their trades) that cannot be explained by variations in the traded amounts or any institutional feature that could link the trade volume to these changes. Note that a trade’s value could constitute a ‘bad control’ as the election may impact the amounts traded by Sarkozy associates. However, evidence reported below in [Table 1](#) shows that this is not the case. In addition, excluding this control from the regression does not alter baseline estimates (see [Online Appendix Table G1](#)).

³⁰Our empirical setting has two limitations regarding this approach. (i) Directors do not trade their company stocks at any regular frequency, which prevents us from observing their behavior at a pre-defined frequency and constructing consistent individual weights. (ii) The data do not start until mid-2006 when the reporting of trades became mandatory for Directors of listed firms, which reduces the period in which we can match the outcomes of connected and non-connected Directors. We nevertheless adapt the main features of the synthetic control method to our data.

where $\tilde{y}_{j,T}$ and \bar{y}_T are the average outcome values over sub-period T in candidate control group j and the Sarkozy associates, respectively. We iterate 5,000 times over the donor pool and keep the comparison group with the lowest ω . Finally, we move to the post-election period and apply the retained duplication weights to the selected non-connected Directors. Our pseudo-synthetic control estimate is then calculated as the difference-in-differences change in the behavior of Sarkozy associates with respect to that group. We follow [Acemoglu et al. \(2016\)](#) and calculate the p-values of the estimates by replicating the approach described above for 1,000 placebo groups of associates randomly drawn from the set of non-connected Directors, allowing for up to 25% differences in the size of the group with respect to the original group of Sarkozy associates.

Structure of Sarkozy associates’ trades. The two estimation strategies presented above are designed to uncover changes in the behavior of Sarkozy associates. One potential caveat regarding the interpretation of the estimates is that part of the effect could be driven by changes in the structure of associates’ trades. We test this by estimating difference-in-differences models that take a Director over each of the two 1-year periods around the 2007 election as the unit of observation. Table 1 shows the estimates of interest using the full sample and the associates’ firms sample. We start by investigating the extensive margin of Directors’ trading behavior by constructing a dummy for a Director trading during the period, for each of the pre- and post-election periods. The difference-in-differences estimates in columns 1 and 2 of Table 1 reveal that Sarkozy associates did not change their trading behavior along the extensive margin.³¹ We further test for changes in Directors’ trading in columns 3–12 of Table 1 via alternative dependent variables. We consider Directors’ extensive trading margins (the number of trades, in levels and logs), trade composition (the number of sales over the total number of trades) and trade values (the log of the total and average amounts traded). We find no statistically significant difference-in-differences changes in any of these dimensions. The empirical evidence overall suggests that the cross-section differences in trading structure between Sarkozy associates and other traders, as shown in Figures 1(c) and (d), are not associated with any particular changes over time in the trading patterns of the different groups.

³¹We also used Board composition data from *Mint-Global (Bureau Van Dijk)* and *BoardEx* to check that the number of Sarkozy associates (traders and non-traders) who sit on a Board was stable before and after the election. 116 distinct Sarkozy associates sat on a Board before the election (322 positions) and 122 after the election (334 positions). There are more positions held by associates than there are associates, as they can sit on the Boards of different companies or occupy multiple positions within the same firm.

4 Results

This section presents empirical evidence that Sarkozy associates altered their behavior in financial markets after the 2007 French Presidential election, suggesting an increase in illegal insider trading. We first present difference-in-differences estimates and undertake a series of robustness tests and falsification exercises. We then present the synthetic control estimates.

4.1 Baseline difference-in-differences estimates

We start our analysis by estimating equation (1) using the associates' firms sample for each of the three outcomes of interest. Columns 1, 3 and 5 of the top panel of Table 2 show raw estimates obtained when we use only the minimum difference-in-differences explanatory variables of interest of equation (1). Columns 2, 4 and 6 of the same panel list the estimated coefficients including firm fixed effects and covariates in equation (1). The estimated coefficients on the covariates appear in Online Appendix Table A1.

As shown in columns 1 and 2, the coefficient on *Sarkozy associate* \times *Post-election* is positive and statistically significant at conventional levels when we use abnormal returns following the announcement of purchases as the dependent variable: After the election, more private information was embedded in Sarkozy associates' purchases than in other Directors' trades. This effect is also economically significant. The size of the difference-in-differences estimate is comparable to that of Brochet (2010), who examines the change in insider trade information content following the adoption of the 2002 Sarbanes-Oxley Act, which imposed more timely disclosure by US listed firms' insider traders. Columns 3 and 4 of the top panel of Table 2 present the difference-in-differences estimates using trader compliance with AMF legal disclosure requirements as the dependent variable. The estimate of interest is negative and statistically different from zero: Sarkozy associates became more likely (between 12 and 20 percent) to break the law after Nicolas Sarkozy's victory, relative to other Directors who sat on the same Board. Last, columns 5 and 6 of the top panel use the time from the trade to the firm's next results announcement as the dependent variable. The coefficient on *Sarkozy associate* \times *Post-election* is negative and statistically significant at the 5% confidence level when we include firm fixed effects and covariates. Sarkozy associates trade about 1.5 months closer to their firm's results announcements: In other words, connected Directors trade closer to sensitive periods. As the underlying reason for banning insider trading before a results release is that insiders could hold private information during this period, this estimate is consistent with previous evidence suggesting that connected Directors' trades contain more (firm-sourced) private information after the election of Nicolas Sarkozy.

We then implement two specification changes. We first supplement the baseline specification by allowing the firm fixed effects to interact with the post-election dummy variable (columns 1, 3 and 5 of Table 2’s bottom panel). This further restricts the estimation of the coefficients of interest to the comparison of Directors within each firm and period. While this mechanically reduces the space for identification, this demanding specification does not much affect the estimates of interest, although the difference-in-differences coefficients for the compliance variable and for the time from a trade to the firm’s next results announcement are cut in half (the estimate of the latter variable is less precise but remains close to conventional statistical significance levels). Second, we include group-specific time trends in the estimations to flexibly account for the possibility of different time patterns across groups (columns 2, 4 and 6 of Table 2’s bottom panel). Including the trends increases the size of two of the reported estimates. The introduction of these flexible trends affects the statistical significance of the estimates, but they continue to have p-values below 0.15.

We consider the dynamics of Sarkozy associates’ change in behavior around the election by dividing each of the pre- and post-election periods into four 3-month periods. We investigate the dynamics of this change by introducing an interaction between the *Sarkozy associate* variable and dummies for each sub-period, taking May–July 2006 as the reference period, together with covariates and firm fixed effects as in the even-numbered columns of Table 2’s top panel. The black-filled circles in Figures 2(a)–(c) plot the estimates of interest. These figures do not exhibit visual evidence of the existence of pre-trends.³²

4.2 Main difference-in-differences robustness and falsification tests

This sub-section presents a series of robustness tests and falsification exercises applied to the above findings. Online Appendix G presents additional robustness checks.

Construction of the dependent variables

We start by showing that the main results displayed in columns 2, 4 and 6 of Table 2’s top panel (specification with firm fixed effects and covariates) are not sensitive to the construction of the dependent variables. The top panel of Table 3 shows the estimates of the interaction term in equation (1) using alternative dependent variables. We first change the calibration length of the market model used to calculate abnormal returns following purchase announcements. While the baseline estimation used a 30-day calibration window, the

³²The hollow circles in Figures 2(a)–(c) show the estimated coefficients on the difference between Sarkozy associates’ behavior and that of non-connected Directors in each of the eight sub-periods. These plots echo the estimates presented in the odd-numbered columns of Table 2’s top panel by highlighting the differences in levels between the pre- and post-election periods.

estimate of interest remains similar with 7-, 14-, 60-, 120- and 240-day windows. We then use the CAC40³³ index instead of the SBF120 index for the market return, and we vary the period over which we calculate compound abnormal returns from one to five days, instead of two days. These changes do not affect our estimate of the change in Sarkozy associates' behavior after the election. We next replace the dummy dependent variable of compliance with legal reporting requirements by the continuous number of business days from the transaction to the date at which it is reported. In both levels and logarithms, these alternative variables confirm that Sarkozy associates were slower to report their trades post election. Finally, we consider the log of the number of days from a trade to the firm's next results announcement and a dummy for the trade taking place less than two months from the next announcement. These dependent variables continue to show that connected Directors trade closer to firm result announcements in the post-election period.

Placebo dependent variables

The bottom panel of Table 3 lists the difference-in-differences estimates from placebo dependent variables (variables that should a priori not exhibit any change in behavior). We first provide a direct test that the change in connected Directors' behavior is not driven by an increase in privileged information from the government. We estimate equation (1) replacing a firm's abnormal return by the average abnormal return of other stocks of firms in the same industry following each insider purchase's announcement. We use two levels of *Thomson Reuters Datastream's* industry classification that divide firms into either 43 or 113 distinct industries. As shown in estimates reported on the first line of Table 3's bottom panel, other stocks in the same industry as stocks traded by Sarkozy associates do not exhibit larger abnormal returns after than before the election on the days following the announcement of stock purchases by Sarkozy associates. This suggests that the increase in suspicious activity of connected Directors is not due to easier access to (privileged) government-sourced information that would be relevant for all firms in the same industry.

Then we calculate abnormal returns at the date at which purchases are placed, rather than announced, as the market should not react to trades that are not yet public knowledge. We next use the abnormal returns following the announcement of sales, as [Lakonishok and Lee \(2001\)](#) and [Jeng et al. \(2003\)](#) argue that insider sales contain little information as they are generally made for diversification or liquidity purposes. We also calculate the time from each trade to the firm's next public event that is not a results announcement—and therefore is an event that presumably generates less or no privileged information—and the time between

³³The CAC40 is a capitalization-weighted measure of the 40 most significant stocks of the French stock market.

a trade and the firm’s last results announcement. All placebo dependent variables produce difference-in-differences estimates that are not different from zero.

Additional robustness checks

Online Appendix [G](#) presents a series of additional robustness checks. We first show that the main estimates cannot be replicated using a placebo election date: We shift the election back and forth by up to five months in 2007 and re-estimate equation (1) around each of these dates; then, we replicate the data construction, i.e., the definition of the 2-year observation window and the selection of the associates’ firms sample, and we re-estimate equation (1) replacing the actual election date of May 6th 2007 by all Sundays from May 2008 to May 2011. We then verify that our findings are robust to excluding influential observations or the most active traders, to alternative construction of standard errors and p-values, and to various specification changes.

4.3 Difference-in-differences estimates, trader fixed effects

The data structure allows us to estimate equation (1) using trader fixed effects. This approach, however, mechanically reduces the number of individuals and observations used to identify our coefficient of interest, as not all traders trade before and after the election. Excluding Directors who trade only before or only after the election reduces the sample of trades by about one fourth, and the number of Sarkozy associates who survive this filter is halved.

Table 4 reports estimates obtained using the same specifications as in Table 2 but using trader fixed effects in addition to firm fixed effects. More precisely, columns 1, 3 and 5 of the top panel of Table 4 display estimates obtained when using trader fixed effects and the minimum difference-in-differences explanatory variables of interest as well as trade’s covariates. Firm fixed effects are introduced in columns 2, 4 and 6 of the top panel and further interacted with the post-election dummy variables in columns 1, 3 and 5 of Table 4’s bottom panel. Finally, we included a linear trend for each group of traders and report estimated coefficients in columns 2, 4 and 6 of the bottom panel. Overall, the evidence based on the specifications with trader fixed effects is consistent with previous findings. In particular, including group-specific linear trends does not substantially alter our estimates of interest which remain very precise.

Online Appendix Figure [A2](#) echoes Figure 2 by displaying sub-period interactions terms estimated in the presence of trader fixed effects with (black-filled circles) and without (hollow circles) firm fixed effects. We do not observe any difference in pre-election trends across

groups for any of the three financial outcomes we study. The Sarkozy associates' change in behavior appears in the vicinity of the 2007 Presidential election.

Online Appendix Table A3 displays the same robustness checks as Table 3 but uses a specification with trader and firm fixed effects as in columns 2, 4 and 6 of Table 4. Estimates of interest appear robust to changes in the construction of dependent variables. Finally, regressions with placebo dependent variables return estimated coefficients that are not statistically significant.

4.4 Pseudo-synthetic control estimates

This sub-section takes further advantage of the fact that some Directors trade both before and after the election to implement the pseudo-synthetic control method described in subsection 3.4.

The top panel of Table 5 displays the estimates from this approach for the three dependent variables. These estimates of the Sarkozy associates' change in behavior following the 2007 Presidential election are consistent with the previous findings. They are about twice as large when the dependent variable is abnormal returns or compliance with legal reporting requirements. The estimate is roughly the same size as that in column 6 of Table 2's top panel for the time from a trade to the firm's next results announcement.

Figures 3(a)–(c) depict the synthetic control estimates for each of the alternative dependent variables over the eight 3-month sub-periods dividing the 2-year period around Sarkozy's election. The four pre-election sub-periods are those used to construct the synthetic control group. Figures 3(a)–(c) also show, for each sub-period, the distribution of the estimates from 1,000 placebo groups of associates. These placebo groups also help us evaluate the statistical significance of the estimates by calculating the p-values from the resulting distributions. As shown in the top panel of Online Appendix Table 5, the p-values are either below or close to conventional statistical-significance levels. The same remark applies when we select only placebo groups with a root square error over the pre-treatment sub-periods less than twice that of the original group.

These synthetic control estimates mechanically assign considerable importance to Sarkozy associates who trade more than others, who contribute more to both the selection of the synthetic control group over the pre-election period and the calculation of the post-election differences between Sarkozy associates and the Directors in the selected control group. We modify our approach to address this issue as follows. First, using the same duplication weights as previously, we construct a synthetic control group for each Sarkozy associate by minimizing the difference between her pre-election outcome and that of other Directors. We

then calculate the post-election difference between each Sarkozy associate and her control group, and we average these differences across Sarkozy associates. This assigns the same weight to each Sarkozy associate, but it comes at the cost of not being able to decompose the estimates over time. The bottom panel of Online Appendix Table 5 presents the estimates from this modified approach, together with the p-values from its application to 1,000 placebo groups of associates drawn from the sample of non-connected Directors. Online Appendix Figures A3(a)–(c) present the results graphically. The estimates from this modified approach are consistent with those described above.

Online Appendix Table A4 and Figures A4(a)–(c) and A5(a)–(c) further display the synthetic control estimates obtained when we use only non-connected Directors who sit on the same Boards as Sarkozy associates do to construct the donor pool. These estimates are similar to those obtained when all Directors are included in the donor pool.

5 Concluding remarks

In this paper, we investigate whether political connections affect the individual propensity to engage in illegal activities in financial markets. We analyze detailed data on all reported transactions made by insiders on their company stocks over the 2006–2008 period and document a clear change in the financial behavior of Directors who are connected to Nicolas Sarkozy after he won the 2007 French Presidential election: Connected Directors use private information more when trading, relative to non-connected Directors. Our analyses also reveal that they are less likely to comply with legal trade-reporting requirements, and they trade closer to their firms’ results announcements. Overall, trades by Sarkozy associates exhibit more suspicious trading patterns after his election.

Our difference-in-differences analysis compares Sarkozy associates to non-connected Directors who sit on the same Boards. Our estimates of interest thus represent a lower bound of the true effect of political connections on trading behavior if this effect spills over to non-connected Board Members. One simple way of testing for within-firm spillovers is to run our main regression on the full sample of trading French Directors and add a dummy variable interacted with the post-election variable to see whether non-connected Directors in associates’ firms also changed their behavior. These estimates appear in the top panel of Appendix Table A5. They are not statistically significant, so non-connected Directors do not seem to change their behavior after the 2007 Presidential election, which argues against within-firm spillovers. On the contrary, the triple difference-in-differences estimates of the Sarkozy associates’ change in behavior is consistent with the difference-in-differences estimates above.

Sarkozy associates are composed of friends of the President and large contributors to his campaign. There is no a priori reason for these groups to react differently to Sarkozy's election, but we should not assume that they will react identically, either. We separate the two groups by interacting two distinct dummy variables with the post-election variable. The estimates appear in the middle panel of Appendix Table [A5](#). We find no evidence that either group consistently (i.e., across the three dependent variables) engaged in more suspicious activities. However, the similarity in the estimates might reflect the small sample sizes in the sub-groups.

The changed behavior of Sarkozy associates that we uncover naturally raises the question of the benefits gained. Although we do not know the entire change in Directors' portfolios, as insider trades have had to be reported to the AMF only since mid-2006, and trades on shares of firms for which Directors do not qualify as insiders are not reported, a back-of-the-envelope calculation can help estimate the profitability of this change in behavior. We thus calculate the latent returns as the gap between the change in the stock price and the market index over the 30-day period following a purchase. We then take this as the dependent variable in the above difference-in-differences setting. This resulting estimate suggests that the Sarkozy associates' latent returns rose by 3.17% after the election, relative to those of non-connected Directors. Multiplying this figure by the total value of stock purchases by Sarkozy associates in the year following the election produces a total excess latent benefit of 43.4 million€, corresponding to 886,000€ per Sarkozy associate following the 2007 Presidential election. This is a significant amount in the French context, where the average CEO fixed salary in the 40 largest French listed firms was 985,000€ in 2007 ([Teulon 2013](#)). Including bonuses and stock options, the average CAC40 CEO total compensation was 4.6 million€ in 2007, and 886,000€ represents 19% of this amount. However, CAC40 CEOs are the top Executives in terms of total compensation in France, and our sample of associates also includes Directors who probably earn less (in smaller firms and/or other positions), for whom 886,000€ represents an even larger relative gain. As a final comparison, an investment of 17.7 million€ over a year in a market with a 5% annual return would earn the same amount. In conclusion, while the above calculation is not exact, it does indicate that the individual benefits from Sarkozy associates' change in behavior are likely to be substantial and compare favorably to their business remuneration.

Given our evidence that Sarkozy's election was associated with a change in behavior by his associates towards more-suspicious trading, we might expect the opposite effect after he left office following his defeat to François Hollande in the 2012 Presidential election. We re-estimate our baseline specification over the two-year period around May 5th 2012 as a test. The difference-in-differences estimates for the three dependent variables appear

at the bottom of Online Appendix Table A5. These estimates turn out to be statistically insignificant and provide no evidence of a change towards less-suspicious behavior, although there is a slight rise in compliance with trade-reporting requirements (p-value= 0.164). This suggests that the effect of connections to Sarkozy found in the main text had disappeared by 2012. This could reflect the number of scandals over the 2009–2012 period in which Sarkozy was directly or indirectly implicated (Laffargue 2018). These may have reduced the value of connections to the President. In addition, the prosecution of illegal insider trading in France changed significantly after 2008, with the implementation of more-restrictive legislation on insider trading, as recommended by the European Union.³⁴ This may well have gradually reduced the latitude of French Directors to engage in opportunistic trading.

We last consider the external validity of our paper’s findings. Two characteristics of the French context make our main result—that political connections favor opportunistic trades by insiders—arguably generalizable to other developed countries: The French regulation of insider trading has much in common with that of other developed countries, and the French media have long scrutinized the ramifications of Sarkozy’s social network inside the business community. It may well be that the effect of political connections on insider trading is even larger in contexts when there is less visibility or media attention.

³⁴For instance, the maximum penalty for trading using privileged information was increased to 100 million€ and twenty years imprisonment in 2010. In 2010, the AMF made its first recommendations about no-trade windows applying to insiders in listed firms.

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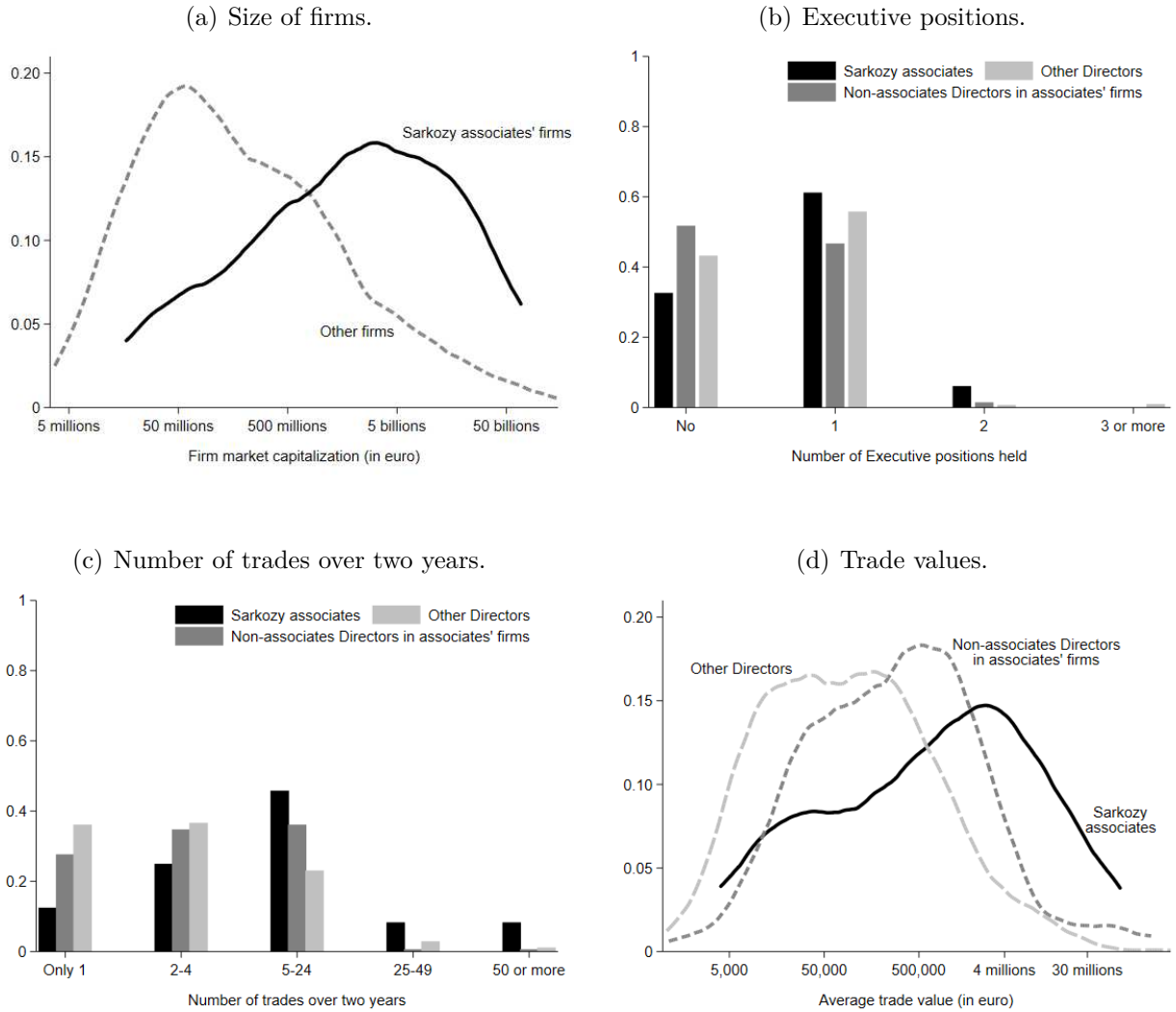
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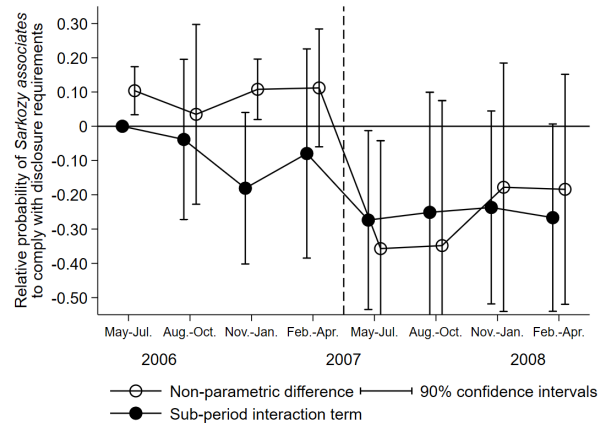
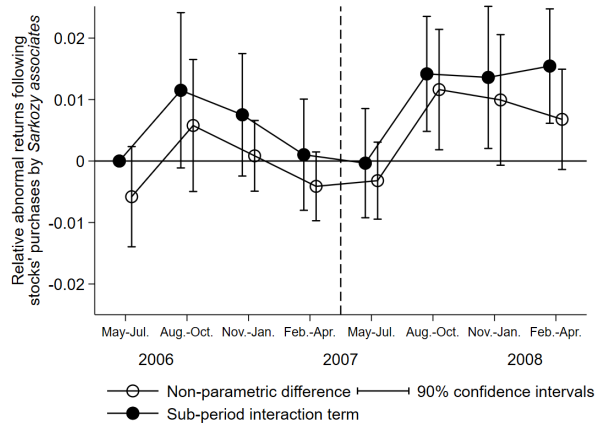
Figure 1: Distributions of Sarkozy associates' characteristics vis-à-vis other Directors.



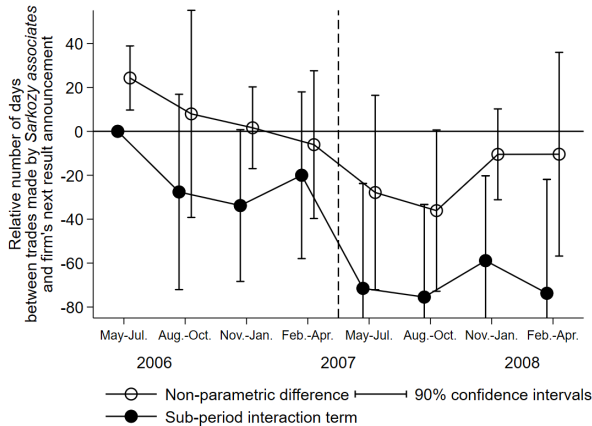
Sarkozy associates are Directors connected to Nicolas Sarkozy. See the text for details about the construction of the group. *Associates' firms* are those whose Board includes at least one Sarkozy associate. Figure (a) plots the distributions of firm market capitalization in 2007 depending on whether Sarkozy associates sit on the firm's Board. For each of the three categories of Directors, the Figure (b) plots the percentage of Directors who hold no, 1, 2 and 3 or more Executive positions. For each of the three categories of Directors, the Figures (c) and (d) plot the distributions of Directors according to the total number of trades carried out over two years and the average value of these trades, respectively.

Figure 2: The dynamics of Sarkozy associates' change in behavior around Sarkozy's election: Non-parametric differences and sub-period interaction terms.

- (a) Two-day compound abnormal return on purchases. (b) Compliance with the five-day disclosure requirements.



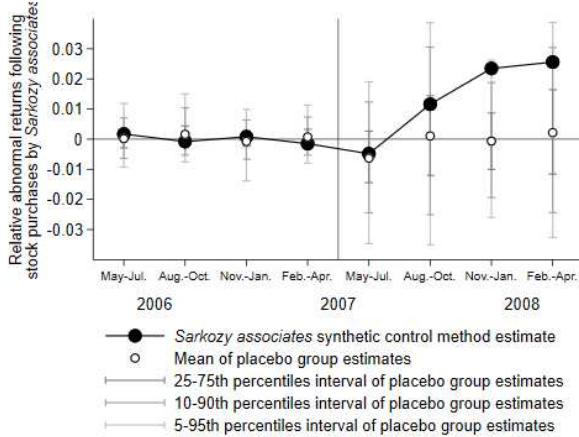
- (c) Time from trade to the firm's next result announcement.



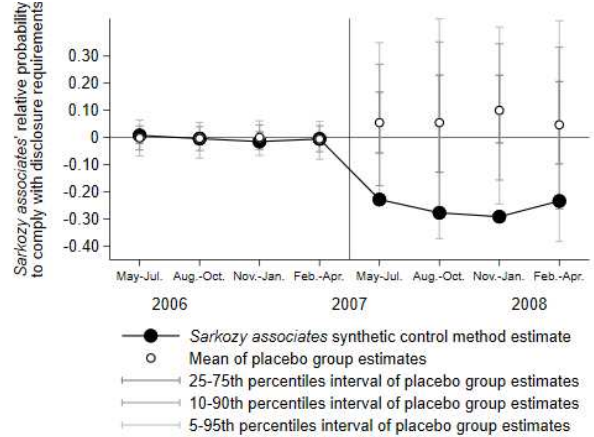
The hollow circles depict, for each of the eight three-month sub-periods around Sarkozy's election, the difference between Sarkozy associates' average outcome and those of non-connected Directors who sit on the same Board as at least one connected Director. The black dots represent estimates of the *Sarkozy associate* variable interacted with the variables dividing up the two-year period around Sarkozy's election into eight three-month sub-periods. The reference period is May to July 2006. As in the even-numbered columns in Table 2, the regressions include covariates and firm fixed effects. Standard errors are clustered by trader, firm and date. See the notes to Table 2 for the definition of the dependent variables. The lower-bounds of some confidence intervals are truncated for representation reasons.

Figure 3: Pseudo-synthetic control estimates of the change in behavior of Sarkozy associates around Sarkozy's election.

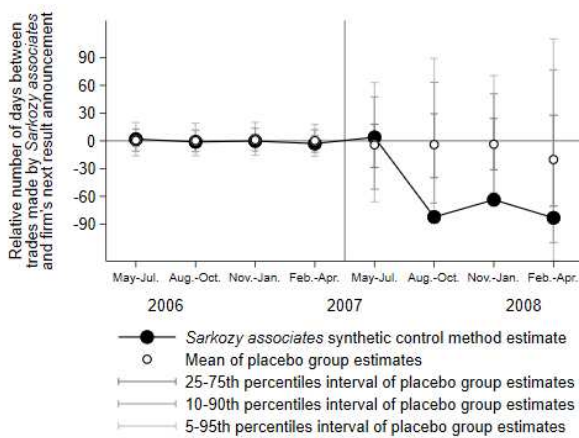
(a) Two-day compound abnormal return on purchases.



(b) Compliance with the five-day disclosure requirement.



(c) Time from trade to the firm's next result announcement.



The figures present the pseudo-synthetic control estimates for each of the eight three-month sub-periods around Sarkozy's election. The four pre-election sub-periods are used to construct the synthetic control group. See the text for more details on the method. The distributions of placebo-group estimates come from 1,000 placebo groups of associates drawn randomly from the set of non-connected Directors, allowing for up to 25% differences in the size of the group with respect to the original group of Sarkozy associates.

Table 1: Difference-in-differences estimation of changes in the trading patterns of Sarkozy associates around Sarkozy's election.

Dependent variable	Trade, extensive margin		Number of trades		Log of number of trades	
	(1)	(2)	(3)	(4)	(5)	(6)
Sample	Full	Associates' firms	Full	Associates' firms	Full	Associates' firms
Post-election	0.040** (0.016)	-0.018 (0.038)	0.201 (0.333)	0.510 (0.650)	0.018 (0.039)	0.109 (0.081)
Sarkozy associate	0.158** (0.063)	0.130* (0.067)	12.162* (7.170)	12.707* (7.199)	0.570** (0.226)	0.556** (0.232)
Sarkozy associate × Post-election	-0.040 (0.088)	0.018 (0.095)	4.853 (11.704)	4.544 (11.756)	0.335 (0.319)	0.245 (0.328)

Dependent variable	Sales ratio		Total traded amount (log)		Average traded amount (log)	
	(7)	(8)	(9)	(10)	(11)	(12)
Sample	Full	Associates' firms	Full	Associates' firms	Full	Associates' firms
Post-election	-0.096*** (0.018)	-0.125*** (0.038)	-0.083 (0.108)	-0.384 (0.252)	-0.102 (0.099)	-0.493** (0.218)
Sarkozy associate	-0.050 (0.063)	-0.061 (0.067)	2.673*** (0.528)	1.409** (0.547)	2.103*** (0.444)	0.853* (0.461)
Sarkozy associate × Post-election	-0.070 (0.083)	-0.040 (0.090)	-0.192 (0.739)	0.109 (0.775)	-0.528 (0.615)	-0.137 (0.647)

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. White-heteroskedastic standard errors appear in parentheses. OLS regressions. Each column presents estimates from a separate regression. All regressions include a constant term. The observations are Board Members of French listed firms who traded stocks of their firm within 365 days of the French Presidential election of May 6th 2007. *Sarkozy associate* is a dummy for the trader being connected to Nicolas Sarkozy. See the text for details of the construction of this group. The *full* sample contains all Directors. The *associates' firms* sample includes connected Directors and non-connected Directors who sit on the same Board as at least one connected Director. An observation is a Director's trading behavior observed either before or after the election. *Post-election* is a dummy for all trades that occurred after the election. In columns 1 and 2, the dependent variable is a dummy for the Director trading during the period, for each of the pre- or post-election periods. Each Director is thus observed twice. The sample sizes are 3,654 and 770 in columns 1 and 2, respectively. Columns 3–12 restrict the sample to Directors who trade during the pre- or post-periods. The sample sizes are 2,268 and 488 in the even- and odd-numbered columns, respectively.

Table 2: Difference-in-differences estimation of changes in behavior of Sarkozy associates around Sarkozy's election.

Panel A						
Dependent variable	Two-day compound abnormal return on purchases		Compliance with the five-day disclosure requirement		Time from trade to the firm's next result announcement	
	(1)	(2)	(3)	(4)	(5)	(6)
Post-election	-0.004*	-0.008	0.039	-0.302**	6.791	35.734*
	(0.002)	(0.009)	(0.046)	(0.149)	(16.676)	(21.049)
Sarkozy associate	-0.006**	-0.004	-0.038	0.084*	7.636	32.581***
	(0.003)	(0.004)	(0.133)	(0.047)	(11.814)	(11.951)
Sarkozy associate × Post-election	0.006**	0.009**	-0.206*	-0.126**	-24.179	-46.412***
	(0.003)	(0.004)	(0.112)	(0.054)	(16.916)	(17.150)
Observations	1,301		2,851		2,455	
Covariates and firm fixed effects	Yes		Yes		Yes	

Panel B						
Dependent variable	Two-day compound abnormal return on purchases		Compliance with the five-day disclosure requirement		Time from trade to the firm's next result announcement	
	(1)	(2)	(3)	(4)	(5)	(6)
Post-election		-0.005		-0.225		71.922**
		(0.012)		(0.143)		(31.440)
Sarkozy associate	-0.003***	-0.009	0.081***	0.287	24.701***	50.190**
	(0.001)	(0.007)	(0.015)	(0.206)	(3.403)	(23.861)
Sarkozy associate × Post-election	0.009***	0.009	-0.063***	-0.326	-20.638	-69.306**
	(0.003)	(0.006)	(0.022)	(0.233)	(13.076)	(34.389)
Observations	1,301		2,851		2,455	
Covariates and firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects × Post-election	Yes		Yes		Yes	
Linear trends		Yes		Yes		Yes

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered by trader, firm and date appear in parentheses. OLS regressions. Each column presents estimates from a separate regression. All regressions include a constant term. Observations are trades by Board Members of French listed firms that took place within 365 days of the French Presidential election of May 6th 2007. *Post-election* is a dummy for all trades occurring after the election. *Sarkozy associate* is a dummy for the trader being connected to Nicolas Sarkozy. See the text for details of the construction of this group. The sample includes connected Directors and non-connected Directors who sit on the same Board as at least one connected Director. *Covariates* include a dummy for individuals who are members of the Management Board of the firm at the date of the trade, the (log of the) trade value, and interaction terms between these two variables and the post-election dummy. See Table A1 in the Online Appendix for the estimated coefficients on these variables. *Two-day compound abnormal return on purchases* is the compound abnormal return (calculated using a firm-specific 30-day market model) of the traded stock over the two days following the announcement of a purchase. *Compliance with the five-day disclosure requirement* is a dummy for the trade being disclosed within five business days. *Time from trade to the firm's next result announcement* is the time (in days) between the trade's date and the next public announcement of results by the firm. In the top panel, estimates from simple regression with the minimum regressors for the difference-in-differences specifications are included in the odd-numbered columns. Estimates of specification (1) are reported in even-numbered columns. The bottom panel reports estimates from regressions that differ from specification (1) in that they include firm fixed effects interacted with the post-election dummy (odd-numbered columns) or a linear trend and a linear trend interacted with the Sarkozy associate variable (even-numbered columns).

Table 3: Difference-in-differences estimation of the change in behavior of Sarkozy associates around Sarkozy’s election: Alternative and placebo dependent variables.

Alternative dependent variables			
7-day market model	0.014*** (0.005)	14-day market model	0.013** (0.005)
60-day market model	0.008** (0.003)	120-day market model	0.007** (0.003)
240-day market model	0.007** (0.003)	CAC 40 market model	0.009** (0.004)
1-day abnormal return	0.004 (0.002)	3-day compound abnormal return	0.011** (0.004)
4-day compound abnormal return	0.008* (0.005)	5-day compound abnormal return	0.010* (0.005)
Number of business days until disclosure	3.265** (1.341)	Log of number of business days until disclosure	0.275** (0.107)
Log of time from trade to firm’s announcement	-0.418** (0.207)	Less than 2 months to firm’s announcement	0.174* (0.089)
Placebo dependent variables			
2-day compound abnormal return of same-industry firms (43 industries)	0.000 (0.002)	2-day compound abnormal return of same-industry firms (113 industries)	-0.000 (0.002)
2-day compound abnormal return at transaction date	0.004 (0.004)	2-day compound abnormal return following sales	0.002 (0.003)
Time from trade to firm’s next event, excluding results announcements	-3.746 (10.293)	Times from trade to firm’s last results announcement	-4.427 (14.520)

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered by trader, firm and date appear in parentheses. OLS regressions. Each cell presents an estimate from a separate regression. The reported estimate is for *Sarkozy associate* \times *Post-election*. All regressions include a constant term, *post-election*, *Sarkozy associate*, covariates and firm fixed effects, as in Table 2. The observations are trades by Board Members of French listed firms that took place within 365 days of the French Presidential election of May 6th 2007. *Post-election* is a dummy for all trades that occurred after the election. *Sarkozy associate* is a dummy for the trader being connected to Sarkozy. See the text for details of the construction of this group. The sample is restricted to connected Directors and non-connected Directors who sit on the same Board as at least one connected Director. The regressions differ from those in columns 2, 4 and 6 of Table 2 in the change of the dependent variable as indicated. See the text for more details. *2-day compound abnormal return of same-industry firms* is the average of the 2-day compound abnormal returns of firms of the same industry following the announcement of a stock’s purchase by an insider, dividing firms into 43 and 113 categories following *Thomson Reuters Datastream*’s industry level 4 and 6 classifications.

Table 4: Difference-in-differences estimation of changes in behavior of Sarkozy associates around Sarkozy's election: Trader fixed effects.

Panel A						
Dependent variable	Two-day compound abnormal return on purchases		Compliance with the five-day disclosure requirement		Time from trade to the firm's next result announcement	
	(1)	(2)	(3)	(4)	(5)	(6)
Post-election	-0.004 (0.010)	0.001 (0.011)	-0.213* (0.117)	-0.225* (0.129)	65.428*** (21.668)	71.272*** (22.225)
Sarkozy associate \times Post-election	0.010** (0.005)	0.011* (0.006)	-0.148*** (0.055)	-0.160*** (0.061)	-66.978*** (22.172)	-69.641*** (24.025)
Observations		946		2,170		1,836
Covariates and trader fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects		Yes		Yes		Yes

Panel B						
Dependent variable	Two-day compound abnormal return on purchases		Compliance with the five-day disclosure requirement		Time from trade to the firm's next result announcement	
	(1)	(2)	(3)	(4)	(5)	(6)
Post-election		0.003 (0.011)		-0.209* (0.124)		75.073*** (22.139)
Sarkozy associate \times Post-election	0.012* (0.007)	0.011** (0.005)	-0.152*** (0.056)	-0.152** (0.062)	-31.685** (15.214)	-68.561*** (23.789)
Observations		946		2,170		1,836
Covariates and trader fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects \times Post-election	Yes		Yes		Yes	
Linear trends		Yes		Yes		Yes

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered by trader, firm and date appear in parentheses. OLS regressions. Each column presents estimates from a separate regression. Observations are trades by Board Members of French listed firms that took place within 365 days of the French Presidential election of May 6th 2007. *Post-election* is a dummy for all trades occurring after the election. *Sarkozy associate* is a dummy for the trader being connected to Nicolas Sarkozy. See the text for details of the construction of this group. The sample includes connected Directors and non-connected Directors who sit on the same Board as at least one connected Director and for whom the dependent variable is observed at least once before and after the election. All regressions include a constant term and trader fixed effects. *Covariates* include a dummy for individuals who are members of the Management Board of the firm at the date of the trade, the (log of the) trade value, and interaction terms between these two variables and the post-election dummy. See Table A2 in the Online Appendix for the estimated coefficients on these variables. *Two-day compound abnormal return on purchases* is the compound abnormal return (calculated using a firm-specific 30-day market model) of the traded stock over the two days following the announcement of a purchase. *Compliance with the five-day disclosure requirement* is a dummy for the trade being disclosed within five business days. *Time from trade to the firm's next result announcement* is the time (in days) between the trade's date and the next public announcement of results by the firm. In the top panel, estimations reported in even-numbered columns include firm fixed effects. The bottom panel reports estimates from regressions that include firm fixed effects interacted with the post-election dummy (odd-numbered columns) or a linear trend and a linear trend interacted with the Sarkozy associate variable (even-numbered columns).

Table 5: Pseudo-synthetic control estimation of the change in behavior of Sarkozy associates around Sarkozy’s election.

Group-level pseudo-synthetic control group			
	Two-day compound abnormal return on purchases	Compliance with the the five-day disclosure requirement	Time from trade to the firm’s next result announcement
P-value, all placebo groups	0.018 [0.045]**	-0.246 [0.020]**	-54.763 [0.121]
P-value, selected placebo groups	[0.007]***	[0.021]**	[0.067]*
Individual-level pseudo-synthetic control group			
	Two-day compound abnormal return on purchases	Compliance with the the five-day disclosure requirement	Time from trade to the firm’s next result announcement
P-value, all placebo groups	0.011 [0.128]	-0.258 [0.019]**	-33.042 [0.118]
P-value, selected placebo groups	[0.067]*	[0.006]***	[0.056]*

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. P-values in brackets. The top panel shows the pseudo-synthetic control estimates from the approach presented in the text. The bottom panel displays the pseudo-synthetic control estimates obtained by finding a control group for each Sarkozy associate by minimizing the difference between the pre-election outcome of this Director and that of other Directors; calculating the post-election difference between each Sarkozy associate and her control group; and averaging the post-election estimates across Sarkozy associates. The p-values are calculated using the distribution of estimates obtained from replicating the pseudo-synthetic control approach for 1,000 placebo groups of associates drawn randomly from the set of non-connected Directors, allowing for up to 25% differences in the size of the group with respect to the original group of Sarkozy associates. The p-values using *selected placebo group* only use placebo groups with a root square error over the pre-treatment sub-periods, or a root square average pre-election difference, less than twice that in the original group, for the top and the bottom panel, respectively.