

Toxic Loans and the Rise of Populist Candidacies*

Emilie Sartre[†]
Brown University - PTP

Gianmarco Daniele[‡]
University of Milan

Paul Vertier[§]
Sciences Po - LIEPP

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Abstract

The role of financial crises in boosting populism has been well documented. Yet the specific mechanisms through which this occurs remain elusive. This paper studies how populist candidacies were fueled by a public financial scandal, triggered by market volatility and financial deregulation. Using an instrumental variable strategy, we exploit the leak of a list of French municipalities which contracted “toxic” loans prior to the crisis as a source of identification. During the subsequent municipal elections, we show that i) populist parties were the main political parties experiencing an increase in vote share, while the incumbent’s political party was electorally punished, ii) both far-right and far-left populist candidacies were more likely in municipalities affected by the scandal, leading to a rise in electoral competition, iii) for the populist far-right, these results were stronger in economically fragile municipalities and in cities with a higher growth of the immigrant population. Importantly, the findings are not driven by the economic aftermath of the scandal and suggest that public finance mismanagement disclosure contributes by itself to the rise of populism during financial crises.

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[†]Brown University - PTP; em.sartre@gmail.com

[‡]University of Milan; gianmarcodaniele@gmail.com

[§]Sciences Po - LIEPP; paul.vertier@sciencespo.fr

1 Introduction

Do financial scandals foster the rise of populist candidacies? Over the last decades, populism has become more and more prevalent, spreading outside Latin American boundaries and reaching old democracies (like the US, France, or the UK). In particular, the aftermath of the 2008 financial crisis saw the emergence of new leaders and coalitions defending authoritarian ideas against democracy, globalization, minorities and immigration.¹ Their "thin-centered" ideology is defined as populist as they promote a clear divide between two antagonist groups: the "corrupt elite" and the "pure people", favoring the will of the latter above all (Mudde 2004).

While the importance of the 2008 financial crisis has been acknowledged in explaining this growing trend towards populist voting, the mechanisms and the entry of populist candidacies have been underexplored.² In this paper, we study how public financial scandals induced by financial deregulation and market volatility lead to the entry of populist candidacies. To the best of our knowledge, this paper is the first to causally identify the impact of public financial scandals on the rise of populism and in particular, on the entry of populist candidacies. To do so, we use as a natural experiment the disclosure in 2011 by a French national newspaper (*Libération*) of the "Toxic Loan scandal". Between 1996 and 2011, more than 1,586 French municipalities contracted 3,016 structured loans with the bank Dexia. These structured loans had fixed interest rates for the first years (on average between 2 and 7 years), before turning to variable interest rates indexed on external indicators (such as foreign exchange rates or spreads of interest rates). Due to the nature of their underlying assets and the lack of insurance coverage for municipalities, these structured products were classified by the Gissler charter as toxic for local governments. The turmoil of the financial crisis induced sharp variations of the external assets on which the structured loans were indexed, therefore affecting their variable part.³ Although these variations were arguably unrelated to the specific financial situation of each municipality, it triggered exceptionally high overheads on many structured loans. The total initial credit amount was already large - about 8.94 billion Euros - but the overhead ratios, defined as the excess interests divided by the initial credit amount, were sometimes astounding: half of them were above 9.1%, 25% were over 13.3%, with a maximum of 114%.

These revelations are of particular interest for two reasons. First, the scandal constitutes a salient institutional shock revealing several aspects of public finance mismanagement. Contrary to the literature showing that mortgages and household debt led to populist voting (Antonides and Calomiris 2018; Gyongyosi and Verner 2020), the toxic loan scandal concerns public

¹Such as Victor Orban in Hungary; the Tea Party and the election of Donald Trump in the US; Law in Justice in Poland; the Independent Greeks and SYRIZA in Greece; AfD in Germany; Front National in France; and Lega Nord in Italy

²As summarized by Guriev and Papaioannou (2020), "pinpointing the exact mechanism is still an open question" and there is so far "an open avenue of research on the strategy of populist parties and on the supply of populism more generally".

³The most striking example is the Swiss Franc, on which nearly 10% of Dexia structured loans were indexed and which played the role of a safe haven before the financial crisis. While its parity with the Euro had been stable for more than a decade, its value went up steadily from around 1EUR=1.5CHF to about 1EUR=1.2CHF between mid-2008 and late 2011.

institutions instead of citizens' portfolio. Mayors were put in the spotlight. They were accused of being involved in one of the biggest European scandals of the 2008 financial crisis (Piffaretti 2012). They were blamed for taking ill-considered risks by adopting structured products based on foreign capital markets. They faced strong criticisms on their involvement in glamorous cultural events paid by the bank to promote their products (Cori and Le Gall 2013). Although some mayors may have acted in good faith, they were in the awkward position of having to publicly defend their contracts with the bank in the press. The scandal had then all the ingredients to appeal to the populist rhetoric – the responsibility of elites, the collusion between public officials and the bank, the danger of foreign capital markets and the fear of fiscal austerity. Second, the French revelations were of particular interest to properly identify the impact of public financial scandals on the rise of populism. The disclosure does indeed contain spatial and temporal heterogeneity. Geographic areas were differently exposed to the revelation. Some French municipalities were clearly mentioned in the *Libération* newspaper while others were not. The disclosure of the scandal also happened at one point in time, right in the middle of the municipal electoral term (i.e, between March 2008 and March 2014). We therefore use this event to analyze whether French municipalities, which were affected by Dexia toxic loan saw a rise in populist voting and an entry in populist candidacies in 2014 compared to municipalities which were not.

While this shock was arguably not anticipated by local incumbents, simple OLS estimates are likely to be biased as municipalities contracting structured loans *with Dexia* might differ on unobserved characteristics. For instance, these municipalities are more likely to be urban, poorer and with a fragile state of public finance. This endogeneity issue prompts us to seek an instrument satisfying two conditions. First, it should predict the adoption of structured loans *to Dexia*, as opposed to the non-adoption of structured loans or the adoption of structured loans provided by other banks. Second, conditionally on other observed factors, it should not be directly correlated to the entry of extreme candidacies or their vote shares. This instrument is provided to us by the history of the relationship between Dexia and French municipalities. Dexia was created in 1996 as a merger of the French and Belgian banks specialized in credits to local governments (respectively *Crédit Local de France* - hereafter *CLF* and *Crédit Communal de Belgique* - hereafter *CCB*). In 1994, many local governments became shareholders of the *CLF*, among which 362 municipalities. As we show, municipalities located close to the shareholder municipalities were much more likely to subsequently adopt toxic loans. The presence of a Dexia toxic loan is therefore instrumented by the geographical distance to the closest shareholder municipality - excluding the latter from the estimation. This instrument builds upon an established literature showing the importance of distance for credit adoption (Degryse and Ongena 2005; Bharath et al. 2009), and upon the idea, documented by qualitative evidence, that shareholder municipalities had strong historical ties with the *CLF* and were more likely to adopt structured loans. Our exclusion restriction is likely to be warranted, since our instrument relies on mayors' decisions made two electoral terms before the largest increase in structured loan contracting (2001-2008), and 17 years before the unexpected leak by *Libération*. We include county fixed effects in our regressions and add a large variety of controls (such as the urban sta-

tus of municipalities, historical municipal budgets, incumbent and population characteristics). We also confirm the validity of our main results using a fixed-effect identification strategy.

Our results are fourfold. First, we show that the municipalities impacted by the scandal experienced a large increase in vote share for populist parties, for both the populist far-right and the populist far-left. Note that populist parties were the only political orientation benefiting from the scandal. Neither the mainstream left, nor the mainstream right, nor the greens saw their vote share increase in these municipalities. This rise in populist voting only occurred at the expense of the incumbent's political party, which experienced a 20 ppt decrease in vote share. At French local elections, the incumbency advantage remains strong and populist parties stay relatively small. Nevertheless, these electoral results suggest that public financial scandals lead to a rise in populist voting at the expense of the mainstream political class in power.

Second, we find that the electoral results are mainly driven by the entry of populist parties in these municipalities. In municipalities which contracted Dexia toxic loans, the likelihood of having a populist candidacy increases six times for the populist far-right and five times for the populist far-left. Due to data limitation, we cannot assert on the entire sample that the populist candidates were running for the first time. Yet we know that a large share of populist candidates was neither in office nor former municipal councilor between 2001 and 2013 in the municipalities which contracted toxic loans (51% for the populist far-left party and 89% for the populist far-right). Moreover, among the municipalities that we follow over time, we notice a larger relative increase in populist candidacies in municipalities affected by toxic loans. No similar results are found for the mainstream political class, including for small political parties like the Greens. These results confirm that populist candidacies particularly entered in municipalities impacted by the scandal. By doing so, they contribute to the rise in electoral competition (i.e. in the number of candidacies).

Third, we observe that the populist far-right party enters in municipalities involved in the public financial scandal, *especially if* these municipalities are historically disadvantaged or have recently experienced migration inflows. The entry of far-right candidacies is indeed particularly reinforced in municipalities with low median income or high unemployment before the 2008 financial crisis and the potential economic aftermath of toxic loans. We find similar results looking at taxation and at municipal expenditure. The higher municipal tax revenues (or municipal tax rates) in the early 2000s are, the more likely populist far-right candidates are to enter in 2014. On the contrary, the higher municipal equipment expenditure in 2000 is, the less likely they are to run for election. Low median income, high unemployment, high taxation and low expenditure on municipal infrastructure before the financial crisis are strongly correlated with their value in 2014. They exacerbate the entry of far-right candidacies in municipalities affected by the scandal as they raise social discontent and increase the likelihood of success of outsiders and/or decrease their entry cost. As populist far-right rhetoric is strongly opposed to migration, we find that the effect of the treatment was even higher where the share of foreign-born citizens had been increasing between 2008 and 2014. Overall, these results confirm that the right-wing populist wave can be reinforced by local economic and social conditions.

Finally, we show that public financial scandals play a role per se in the rise of populism. In the literature on populism and financial crises, one main challenge is to disentangle the impact on populism of *actual* adverse economic shocks from the aftermath of media uproar. In the last section, we argue that public financial scandals can fuel populism, even when they have no impact on household living standards. During the last electoral term, municipalities which contracted toxic loans did not experience more firm closure, more unemployment or more taxation than the municipalities which did not. Yet we could still assert that the rise of populism is explained by the rational expectation of actual future cost incurred by households. This assumption does not seem confirmed as the degree of ex-post toxicity of the loans do not play a role on the rise of populism.⁴ These findings are therefore more likely to reflect a generalized hostile reaction towards mainstream politicians than a reaction to the *actual* economic consequences of such decisions. We find instead evidence that the media uproar of the scandal channeled populist appeal. In articles mentioning the names “toxic loans” and “mayors”, the keywords include the words “local taxation”, “citizens’ initiatives”, “municipal elections” and “local officials”. It suggests that citizens organize themselves to deal with the aftermath of the scandal, including the potential rise in taxation. Such a message favors the populist agenda as it highlights the loss of confidence in the elite, the divide between the elite and the people, and the fear of the future. As populist candidates are more likely to run for election in municipalities covered by the scandal, they enjoy a higher relative press coverage during the electoral campaign – in contrast with the incumbent. Through the analysis of local media, our results explain how a public financial scandal fuels the rise of populism by enhancing the populist rhetoric at time of financial crises. It sheds light on the importance of better understanding the mechanisms between financial crises and populism.

This paper speaks to several strands of the literature. First, it relates to the literature exploring the emergence of extreme and populist votes. Political scientists have been investigating this matter for a long time. They have stated that events discrediting the elites are particularly important to trigger the emergence of such political movements (see for example [Panizza \(2005\)](#)). The recent waves of populism across Europe and the United States have led economists to study such phenomena more closely. On the empirical side, two sets of studies can be mentioned. The first one points to cultural factors, referring to cultural backlash of previously dominant strata of society ([Inglehart and Norris 2016](#); [Mutz 2018](#); [Colantone and Stanig 2018a](#)), or to hostility towards migrants ([Becker, Fetzer et al. 2016](#); [Hangartner et al. 2017](#); [Dustmann, Vasiljeva, and Damm 2016](#); [Viskanic 2017](#); [Edo et al. 2018](#); [Dustmann and Damm 2019](#)). The second one focuses on the role played by economic conditions, whether it relates to openness to trade ([Dippel, Gold, and Heblich 2015](#); [Dorn et al. 2016](#); [Malgouyres 2017](#); [Colantone and Stanig 2018b](#)), unemployment shocks ([Algan et al. 2017](#); [Lechler 2019](#)), or fiscal cuts ([Becker,](#)

⁴The degree of toxicity is instrumented by the presence of a contract indexed on the Swiss Franc. The exclusion restriction is that, conditionally on contracting toxic loan(s), the variations in the Swiss Franc were not anticipated when the contract was signed (as argued by [Bartolone and Gorges \(2011\)](#), [Cour des Comptes \(2013\)](#), [Seban and Vasseur \(2014\)](#)), and did not directly affect the electoral competition other than through their effect on the toxicity of the loan itself. Using this methodology, we do not find that the degree of ex-post toxicity impact populist voting and populist entry.

Fetzer, and Novy 2017).⁵ Relatedly, some studies highlight the specific role of financial crises on the rise of extreme votes. Algan et al. (2017) find a strong relationship between increases in unemployment and voting for populist parties during the Great Recession. Similarly, de Bromhead, Eichengreen, and O'Rourke (2013) and Funke, Schularick, and Trebesch (2016) show that financial crises lead to increased polarization and higher support for extreme-right parties. In contrast to these studies, we do not test the overall political effects of the financial crisis. Instead we are interested in a specific mechanism, i.e. public financial scandals, which contributes to explain *how* financial crisis trickled down to politics.⁶ Second, while the determinants of votes for specific parties are largely explored, empirical evidence on the mechanisms driving the entry decisions of politicians are still at an early stage (Dal Bó et al. 2017), despite important theoretical contributions (Besley and Coate 1997; Osborne and Slivinski 1996). Recent studies have stressed the importance of analyzing the supply-side of politics, with a specific focus on populism (Rodrik 2017; Guiso et al. 2017; Guriev and Papaioannou 2020). In this paper, we specifically tackle this dimension, studying populist party candidate entry in French local elections. Finally, this paper more generally contributes to our understanding of the consequences of public finance mismanagement. Previous studies have focused on corruption or mismanagement scandals to determine to what extent corrupt politicians are likely to be reelected (Ferraz and Finan 2008; Hirano and Snyder Jr 2012; Nannicini et al. 2013), whether corruption sways voters away from the booths (Giommoni 2017) or whether corruption induces a change in candidate quality and party labeling (Cavalcanti et al. 2016; Daniele et al. 2017). However, to the best of our knowledge, we are among the first to assess the impact of a public finance mismanagement scandal on the entry of populist politicians.

The remainder of the paper is as follows. Section 2 underlines the institutional setting, describes the data and provides descriptive statistics. Section 3 describes the estimation strategy. Section 4 reports the electoral results, as well as robustness and additional tests. Section 5 studies the potential mechanism. Section 6 concludes.

⁵Upon a theoretical point of view, Acemoglu, Robinson, and Torvik (2013) argue that voters demand weaker checks and balances on politicians, as it makes it more difficult to bribe politicians by increasing political rent. Acemoglu, Egorov, and Sonin (2013) model populist policies as signals sent by politicians to inform voters they are honest and not tied to special interests. Di Tella and Rotemberg (2016) consider populist votes as a reaction to disloyal leaders, which makes voters turn to less competent ones.

⁶A related contribution on the topic of toxic loans is from Chou (2018), who analyzes their impact on Front National vote shares in the 2014 municipal elections. As in our case, his results suggest higher vote shares for Front National in municipalities where toxic loans were contracted, as well as increased pro-populist feelings among voters. However, he also finds that this effect is stronger where toxic loans were riskier (as measured by the presence of toxic loans indexed on the Swiss Franc). Nonetheless, and as opposed to our contribution, this analysis is unlikely to provide a causal interpretation. First, it does not use any instrumental variable for the presence of Dexia toxic loans (which, as we show, is largely endogenous to a host of factors). Second, it is based on the small and endogenous sample of municipalities which had a Front National candidate in the 2014 elections (thus reducing the set of controls which can be imposed and omitting the strategic entry that we emphasize).

2 Institutional Setting

2.1 Dexia bank and Toxic loans

Dexia bank was created in 1996 as the result of the merger between the French and Belgian banks specialized in credits to local governments: the *Crédit Local de France* (hereafter CLF) and the *Crédit Communal de Belgique* (hereafter CCB). Specifically, the CLF was created in 1987 as a successor of a long-standing French public institution (the *Caisse d'Aide à l'Équipement des Collectivités Locales*) established in 1967. First public, the CLF entered the stock market in 1991 and was rapidly privatized in 1993. In 1994, local governments were allowed to become shareholders. 437 did so on a voluntary basis, among which 362 municipalities.

Dexia then became a major source of funding for the French public sector. According to a report from the [Cour des Comptes \(2011\)](#), as of 2010, 32% of the debt of the French public sector was held by Dexia. Among the loans granted by Dexia to local governments, there was a high share of structured derivatives: 70% of all structured loans granted in France to municipalities were indeed delivered by Dexia ([Bartolone and Gorges 2011](#)). The contracts were usually divided into two periods of time. For some initial years, the interest rate was fixed and lower than market rates. Then for a very long period of time (up to fifty years), the interest rate was indexed on the variation in underlying financial assets. In most cases, the volatility induced by the 2008-2009 financial crisis led to a large increase in interest rates. As shown by [Pérignon and Vallée \(2017\)](#), the spike only occurred after the 2008 financial crisis. In 2009, structured loans were classified by the Gissler Chart based on their level of risk for local governments as they were not insured against it. Some of them were even named as toxic due to the potential volatility of the underlying assets and the complexity of the interest formula. The amount of structured derivatives in the budget of local governments was as high as 30 billion Euros, with 10 billions of highly risky loans ([Cour des Comptes 2011](#)).

Appendix Figure 3 plots the number of contracted structured loans and the number of concerned municipalities over time. These amounts steadily increased reaching a peak in 2006-2007, before decreasing after the beginning of the financial crisis and coming back to zero in 2011 when the scandal was disclosed.

2.2 The scandal disclosure by *Libération*

In September 2011, while negotiations on a bail-out of Dexia were being held, the national newspaper *Libération*⁷ released on its website a confidential file from Dexia, detailing all the high-risk structured loans it granted to local governments. We collected the data released by *Libération* for French municipalities, gathering information on 3,016 risky loans contracted by 1,586 municipalities (i.e., 16% of the municipalities above 1,000 inhabitants). Appendix Figure

⁷With a national print of more than 150,000 copies for about one million of readers, making it the 4th most read general newspaper in France in 2011.

4 represents the basic information contained on this map, namely the total overhead ratio (i.e. the ratio between the excess interests and the initial amounts of all the loans contracted).⁸ In its interactive version, this map also reports information on the borrowed amount, the number of loans, the date of contracting, the end date of the contract and the counterpart bank.⁹

Several pieces of evidence suggest that it is very unlikely that the taxpayers were aware of the issue concerning their municipality before *Libération* released the information in 2011. First, Pérignon and Vallée (2017) argue that the French legislation does not impose municipalities to report their use of derivatives. Second, as pointed out by Tirole (2017), the incumbent mayors would have no interest in disclosing the long-term risks of such derivatives if the initial aim was to maintain a balanced budget, while financing more investments. Third, before September 2011, there were also virtually no Google requests for the French translation of "Toxic Loans" (Appendix Figure 5). In September 2011, a massive spike of requests occurred, which rapidly decreased to a level steadily higher than before. Similarly, while Google searches for Dexia increased during the financial crisis, the peak of Google searches for this bank in France took place at the time of the revelation by *Libération*. Therefore, it seems convincing that taxpayers were mostly unaware of these loans before the *Libération* leak.

The Toxic Loan story was a high-profile scandal, with a long-standing media coverage. Between September 2011 and the first round of the 2014 municipal election, the scandal made the headlines in national and local newspapers, in TV shows, in television reports and on Internet. Still today, there are 105,000 French web pages on toxic loans. Appendix Figure 6 reports the number of press articles mentioning the word "toxic loans" per day over time. More than 75 press articles include the word "toxic loans" the day the information was released. The toxic loan scandal was then regularly highlighted in the press. In January 2014 (i.e., three months before the election), a decision was rendered by the French Constitutional Council against a retroactive law in favor of Dexia. This event sparked renewed interest in the scandal. In the aftermath, television reports on toxic loans were rebroadcasted, including a special TV program (named *Envoyé Spécial*) which attracts 4 million viewers each week.

Most of the time, the scandal was portrayed as the result of excess capitalism and lack of financial regulation. The links between Dexia and French mayors were unveiled. As the French journalists Cori and Le Gall (2013) remind, some French mayors were in close relationship with the bank. They were invited at dinner parties and at social events by Dexia. Such festive events were good opportunities to sign the loan agreements and to renew interest in the financial products proposed by the bank. At that time, Dexia was particularly keen to support associations of elected officials and to become minority shareholder of local semi-public companies specialized in garbage collection and district heating. Some mayors even attended the Executive Board of Dexia. To do so, they were highly well-paid as they received more than 20,000 Euros to attend the four annual sessions. At a time where the global economic crisis

⁸The original version can be found [here](#).

⁹As Dexia was covered for each of these loans, the main counterpart banks were the Bank of America, Barclays, BNP Paribas, Credit Suisse, Deutsche Bank, Dexia Bank Belgium, Goldman Sachs, HSBC, JP Morgan, the Royal Bank of Canada and UBS.

strongly affected French citizens, these revelations sparked outrage against the banking system and public officials. Mayors were accused of poor decision making and incompetence by populist candidates during the electoral campaign. Both the populist far-left and the populist far-right publicly blamed responsible mayors.¹⁰ Overall, the toxic loan scandal was perceived as a public financial scandal revealing the drifts of financial capitalism and globalization.

2.3 In the aftermath of the scandal

Following these revelations, some municipalities decided to challenge their structured loans in court.¹¹ The first sentences were generally in favor of municipalities and allowed them to cancel their loans, arguing that the contract did not indicate the overall effective interest rate (Pérignon and Vallée 2017). However, later ones deemed municipalities informed enough to be aware of the potential risks associated to these loans.¹² On July 29th 2014, a law was voted enacting the retroactive validity of the contracts, even if the effective interest rate was absent or inaccurate.¹³ At the same time, a special relief fund was created by the State, endowed with 1.5 billion Euros in 2014 and then 3 billion Euros in 2015, when the Swiss Franc spiked up again.¹⁴ In 2015, 676 municipalities had applied for help from the fund,¹⁵ which imposed to restructure municipal debt through an average refund of 50% (and up to 75%) of the early loan repayment fees, in exchange for municipalities abandoning judicial litigation.¹⁶ After the bail-out of Dexia, the bank did not have the right anymore to lend to local public entities (or only under very restrictive conditions). In 2013, a new entity was created to provide loans to municipalities, the SFILL-CAFFIL, joint between the State (75%), the Deposits and Consignments Fund (20%) and the *Banque Postale* (5%).¹⁷

2.4 French Municipal Elections and Populist political parties

France has more than 36,000 municipalities, the majority of them having a population below 500 inhabitants. Every six years, municipal elections are held on the same day for every municipality. The latest election years are 1977, 1983, 1989, 1995, 2001, 2008 and 2014.¹⁸ At the municipality level, the electoral system depends on the size of the municipality.

¹⁰For instance, before the 2015 county elections, the former populist far-right Vice President wrote: *"This dramatic situation is due to the local barons of the UMPs [the mainstream political class], who are governing [...] The taxpayers' money vanished because of the headlong rush of this caste of amateurs."* A similar statement is reported by a populist far-left candidate at the 2014 municipal election in the city of Antony: *"The incumbent can always pretend that everything is all for the best in the best of all worlds [...] The executive UMP-UDI [mainstream right] at best lacked critical thinking, and at worse willfully took risks. [...] Is it the role of a local government to gamble with everybody's money?"*

Source: [See the former Front National Vice President's website](#)

¹¹While we do not observe the exact number of such litigation, about a hundred were counted a few days before the municipal elections. Source: [Le Monde newspaper](#)

¹²Source: [Newspaper La Gazette des Communes](#)

¹³Source: Official website *"Vie publique"*

¹⁴Source: [Newspaper "La Gazette des Communes"](#)

¹⁵Source: [Deposits and Consignments Fund](#)

¹⁶Source: [Official website on Local governments](#)

¹⁷Source: [Newspaper "La Gazette des Communes"](#)

¹⁸The 2007 municipal elections were postponed to 2008 as the presidential election was also held in 2007.

Since 2014, any city with more than 1,000 inhabitants has been indeed subjected to a runoff proportional list ballot.¹⁹ Citizens have to vote for a list without any way to cross-out candidates on an individual basis. If a list obtains the absolute majority at the first round, no second round is held. Otherwise, all the lists which received more than 10% of the votes in the first round can go to the second round.²⁰ The ballot is proportional with a bonus for the majority list: a list obtaining the absolute majority gets indeed half of the offered seats, and the remaining seats are proportionally shared among all the lists with more than 5% of the seats. The three biggest cities in France (Paris, Lyon and Marseille) have this runoff system at the *arrondissement* level but not at the *city* level. Therefore, we choose to exclude them from the sample. In cities with less than 1,000 inhabitants, the system has been a two-round majoritarian plurinominal system since 2014. Candidates run within lists but voters can modify them by adding or suppressing their names or even can combine the lists they want. As a consequence, votes are counted by candidates. Any candidate obtaining the absolute majority of valid votes obtains a seat in the municipal council (if the number of votes received is greater than 25% of the number of registered voters). The remaining seats are shared in the second round. Candidates obtaining the greatest share of the votes are then elected.

Note that in both cases, voters elect only municipal councilors who in turn elect the mayor. For cities with more than 1,000 inhabitants, the order on the list is not arbitrary: the top of each list is not only seen as potential municipal councilor but also as candidate for the office of mayor. That is the reason why the word candidate refers here to the head of the party list and can be used interchangeably. At the end, the mayor is the head of the list which gets the highest number of seats. For the rest of our analysis, we will focus on municipalities over 1,000 inhabitants as they share the same voting system, in which votes are counted by lists and not by candidates, and whereby political affiliation is always mentioned.

According to The Populist website²¹ founded by several scientific institutes, there are three populist parties in France: one from the far left and two from the far right. At the 2014 municipal election, the populist far-left was represented by Jean Luc Mélenchon's political groups. In 2009, Jean-Luc Mélenchon and Marc Dolez, two left-wing parliamentarians, founded the Left Party which gathered the sensibilities of the anti-liberal left. Jean-Luc Mélenchon is an outspoken critic of the neoliberalism, of the globalization and of the European Union. He is a proponent of post-capitalism and Marxist theories. His ideology strongly relies on the social divide between the poor and the elite and fits particularly well into the populist rhetoric. In 2012, the Left Party formed a political coalition with members of the French Communist Party in order to join forces against the far right at presidential election. This coalition was named the Left Front and was still in place in the 2014 election. In the rest of the article, we thus define populist far-left candidates as candidates either affiliated with the Left Party or with the Left Front. The other far-right populist parties are the *National Front*, represented by the Le Pen family and *Republic arise* (known today as *Debout la France*), which was founded by Nicolas

¹⁹Before 2014, only cities with more than 3,500 shared this type of ballot.

²⁰The lists which gathered more than 5% of the votes can merge with the other lists.

²¹[Link : The Populist website](#)

Dupont-Aignan. The *National Front* is the main far-right political party in France. It promotes a nationalist populist ideology, with a recurring focus on immigration and Islamism. It has been particularly hostile to the political establishment and is a proponent of a radical change in politics. In contrast, *Debout la France* is a small political party created in 2008. It was first classified as a right-wing political party before being linked with the extreme right. In 2017, Nicolas Dupont-Aignan was even named as future prime minister by Marine Le Pen. Yet at the 2014 municipal election, its political ideology was still in transition and less populist than it is today. Its number of candidacies was also particularly small (less than 135) and not all candidates were required to be officially affiliated. As a result, we consider in our main specification the populist far-right as being represented by the *National Front* and test the robustness of our results by including *Republic arise* and other small far-right political groups.

2.5 Data description

To measure the impact of Dexia toxic loans on the 2014 municipal elections, we first combine the *Libération* newspaper dataset with electoral data on municipalities. Electoral data for municipalities over 1,000 inhabitants are provided by the *Ministry of Interior*. They contain variables such as the number of party lists and their political affiliation. To build the instrumental variable, we use an exhaustive list of the CLF shareholder municipalities, which entered the capital of former Dexia bank in 1994. Data were taken from the publication in the *Official Gazettes* of December 16th 1994 and were then matched with GIS data from the *National Institute of Geographic and Forest Information*.

To control for different city covariates, we use several administrative datasets at the municipality level, such as the Census, the municipal budget data and the *National Registry of Representatives*. Firstly, we control for population characteristics using the 2011 Census Data.²² Such data include shares of each socio-professional category, age structure of the population, level of education, structure of the local housing market (vacant housing, main residencies, share of landlords and social housing), type of municipality (rural/urban), share of foreign-born inhabitants and its winsorized growth rate between 2008 and 2013 (winsorized at the 1% and 99% level). As median income could be affected by the aftermath of the scandal, we add the 2001 median income, delivered by the *National Institute of Statistics and Economic Studies*. Secondly, we consider the 2000 budgetary variables using data from the *Ministry of the Economy*. It enables to avoid capturing the economic impact of toxic loans on municipal budgets. Control data include capital expenditure, the total amount of local taxation, debt stock and overall budget result, all winsorized at the 1% and 99% levels and expressed per inhabitant.²³ Thirdly,

²²Since 2004, municipalities with less than 10,000 inhabitants are covered by an exhaustive census survey done every five years. For bigger municipalities, census remains on an annual basis but is not exhaustive anymore (i.e. surveys are restricted to 8 % of the population). Therefore, the 2011 Census Data cover all French municipalities surveyed between 2009 and 2013.

²³The overall budget result gives an overview of the budget of French municipalities. More specifically, it is equal to the operating accounting result minus financing requirement. The budget of French municipalities is indeed divided into two sections: an operating one (for all the operational aspects of the municipality) and an investment one (for all the change in the asset value of the municipality).

we control for the characteristics of incumbent mayors using the *National Registry of Representatives*, provided by the *Ministry of Interior*. It delivers information for each elected mayor about her gender, age, party and socio-professional category.

Finally, to disentangle the mechanisms, we combined several data sources on local taxation, firm closure and local newspapers. To look at the economic aftermath of the scandal, we use data on municipal tax rates delivered by the *Ministry of the Economy* through the *Inventory of local taxation*. We also look at firm closure thanks to the *Official Bulletin of Civil and Commercial Announcements* (BODACC). Last, we investigate media coverage. Thanks to the *Factiva* data, we have access to national and local newspapers published between the disclosure of the scandal and the first round of the 2014 municipal election. In particular, we first collect French articles mentioning the name “toxic loans”, to understand the media coverage of the scandal. Then, we retrieve the number of articles for each candidate at the 2014 municipal elections. It enabled us to compute the relative press coverage enjoyed by each candidate in its municipality after the scandal disclosure (and during the municipal campaign). To do so, we divided the total number of articles mentioning one candidate with the total number of articles mentioning a candidate within the municipality.

2.6 Descriptive Statistics

Quantity and amounts of structured loans

Table 1 summarizes the main characteristics of the loans in our dataset. As the total number of loans corresponds to 8.94 billion Euros, it represents a sizable share of the debt amount of French municipalities (59.9 billion Euros in 2011). The average loan size is 2.96 million Euros, with a maximum of 77.9 million Euros. In 2011, the overhead ratio is on average of 11.8%, with a median of 9.1% and a maximum of 114%. Among those municipalities, 47% contracted more than one structured loan to Dexia.

Table 1: Characteristics of contracted loans

	Mean	SD	Min	Max	Q1	Median	Q3	Total
Amount	2,964,836	3,928+06	13,000	7.79e+07	543,000	2,059,000	3,73+06	8.94e+09
Overhead ratio	0.118	0.104	-0.180	1.142	0.061	0.091	0.133	
N	3016							

Structured products and underlying assets

While media coverage frequently mentioned the Euro-Swiss Franc exchange rate, portfolios were more diversified at that time and many structured products were indexed on different underlying assets. In fact, only about 10% of the contracted loans were based on the Swiss Franc exchange rate while more than 50 % were linked to the Euro Interbank Offered Rate. As

shown by Appendix Table 7, four types of underlying assets can be pointed out: inflation rates, interbank offered rates, exchange rates and Constant Maturity Swap spreads.²⁴

Characteristics of municipalities with structured loans

To highlight differences between municipalities which adopted structured loans and those which did not, we conduct several t-tests. The two samples are on average quite different (Appendix Tables 8, 9, 10). First, treated municipalities appear more as urban ones. Their population is clearly larger while the housing market seems more constrained, with a lower proportion of homeowners and a higher proportion of tenants. Second, mayors differ between the two samples. Mayors in charge of municipalities with Dexia toxic loans are more likely to be managers or professionals. They also tend to come more from the moderate left or from the extreme left than their counterparts²⁵. Third, municipalities which took toxic loans face more economic and financial issues than the others: unemployment rate is larger and median income is lower. Their financial position is more fragile: even if intoxicated municipalities have larger budgets, their debt is higher, both in terms of stock and annual repayments.²⁶

Among municipalities which contracted toxic loans, we also find mixed evidence of selection into the degree of toxicity. On the one hand, mayors and population characteristics do not substantially differ when we focus on the degree of toxicity (Appendix Tables 11 and 12). On the other hand, operating revenues, operating expenses per capita, debt stock and annual repayments are larger for highly intoxicated municipalities (Appendix Table 13).²⁷ Selection into the degree of toxicity would not be totally surprising. While ex-post toxicity was driven by the financial crisis, and even though the ex-post risk was unlikely to be fully taken into account by municipalities, riskier loans might have had ex-ante lower interest rates during the first years due to the risk premium, thus leading to a selection effect.

3 Empirical strategy

3.1 Endogeneity issues

Even though the sharp increase in interest rates was unlikely to be anticipated neither by taxpayers, nor by local administrations, nor by Dexia itself (Bartolone and Gorges 2011; Cour des

²⁴These underlying assets are not directly mentioned in the database. However, thanks to administrative records, we deduce them from the names of the 135 standard contracts.

²⁵Note that this last point does not contradict our hypothesis that voters would reward populist political lists to punish mainstream parties involved in the scandal. In municipalities with Dexia toxic loans, a large part of the mayors in charge in 2013 come from moderate right and moderate left (45.3% and 41.5% respectively) while only 6.3% were from the extreme left. Still we control for the political orientation of the incumbent in our regressions.

²⁶Those figures are from 2013 so fragile financial position may be partly due to toxic loans. However, in terms of variation, both operating expenses and investment expenditures grow to a lesser extent between 2008 and 2013 in those municipalities (Appendix Table 14). In 2000, debt is higher in municipalities impacted by the scandal, both in terms of stock (+499 Euros) and annuity (+53 Euros).

²⁷Note that similarly, investment revenues and expenditures grow to a lesser extent between 2008 and 2013 for municipalities which were ex-post highly intoxicated (Appendix Table 15).

[Comptes 2013](#); [Seban and Vasseur 2014](#)), municipalities adopting structured loans remain different from municipalities which did not, both in terms of observable (see Section 2.6) and unobservable characteristics. At least two main reasons are at stake.

First, part of structured loan contracting might be due to strategic motives. As we observe in the data, French municipalities which chose such products often face financial issues and/or heavy investment projects. In that respect, lower fixed interest rates at an early stage might have appeared interesting to help them being temporarily released from financial stranglehold. It does not mean however that contracting structured products was entirely driven by real financial needs. [Pérignon and Vallée \(2017\)](#) and [Tirole \(2017\)](#) argue that since such derivatives momentarily help to decrease tax rates and debt burden, they were particularly interesting for reelection purposes. It may have been indeed the case for the 2008 municipal elections ([Pérignon and Vallée 2017](#)).²⁸ Such motives might bias naive estimations in several ways, depending on whether strategic behaviors are positively or negatively linked with the emergence of extreme candidacies.

Second, we only observe structured loans contracted to Dexia. Naive estimators may be biased if the loans proposed by Dexia are more appealing to some municipalities than others or if Dexia specifically targeted certain municipalities. Considering the history of Dexia and the adopted strategy of the bank to expand, this last point appears to be confirmed. As [Cori and Le Gall \(2013\)](#) described it, staff bonuses were indexed on the sales of structured products to French municipalities and in the mid-2000, target figures were also put in place to incentive their employees. Therefore, brokers were keen to get in touch with French municipalities and have selected them according to their size, their historical ties and their financial position ([Cori and Le Gall 2013](#)).

3.2 Instrumental variable strategy

In order to circumvent potential biases, we instrument toxic loan contracting by distance to the closest 1994 shareholder municipality (i.e., the closest municipality which entered the former Dexia bank capital - the “CLF”). This builds upon the fact that distance is an important determinant of credit adoption ([Degryse and Ongena 2005](#); [Bharath et al. 2009](#)). Municipalities with historically tighter links with Dexia were indeed more likely to become Dexia shareholders.²⁹

Appendix Figures 7 and 8 show that municipalities which became shareholders in 1994 were likely to adopt toxic loans earlier and to contract large share of them among their annual

²⁸Note that while the number of adopted structured loans steadily increased between 1996 and 2006-2007, there are however no clear political cycles on the average amount per contract. Strategic behaviors might exist but they remain a limited part of the story.

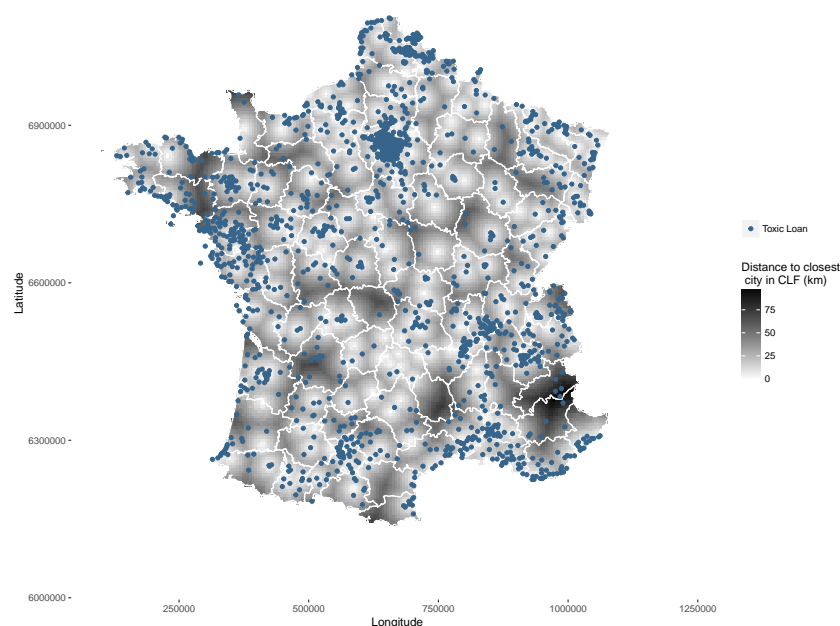
²⁹This point is consistent with [Cori and Le Gall \(2013\)](#) and with anecdotal evidence testifying the strong links between French municipalities and the CLF. For example, [Lenglet and Touly \(2016\)](#) argued that “the case of many officials in small municipalities illustrates, in our opinion, the danger of trust linkages that mayors and aldermen secured for years with Dexia. Indeed, this bank [...] partly stems from [...] a public establishment of the Deposits and Consignments Funds. Obviously, this moral capital served to mislead officials”.

Source: Newspaper “Capital”

debt stock, in the early 2000s.³⁰ In particular, Appendix Figure 7 plots the kernel distributions of the earliest starting year of contracts for the 1994 municipal shareholders and for the other involved municipalities. We notice that a large share of shareholder municipalities contracted toxic loans very early and that the median year is clearly smaller among them (2004 vs 2005). This result is in line with Dexia business strategy. In the late 1990s and early 2000s, their business plan was to efficiently sell structured products to local governments (Cori and Le Gall 2013). To find more clients, they first choose municipalities with the closest historical ties (i.e., the 1994 shareholder municipalities), before selling more products to neighboring municipalities.

Figure 1 shows the location of municipalities involved in the scandal and compares it to the distance to the closest shareholder municipality (computed on a 5km×5km grid). It appears graphically that many treated municipalities were located within short-range of municipalities which entered the CLF capital in 1994.

Figure 1: Distance to closest city in CLF and adoption of Toxic Loan



Importantly, the exclusion restriction is that distance does not affect the electoral outcomes of 2014 other than through its effect on toxic loan contracting. This hypothesis is likely to be warranted for three reasons. First, the 362 cities which entered the CLF capital are not only urban, economic or cultural centers. They are located all over the territory and many among them are small to medium sized.³¹ Therefore, it is unlikely that our instrumental variable captures

³⁰Unfortunately, data on debt stock are only available since 2000

³¹The first quartile of their distribution remains particularly small as it is equal to 8137 inhabitants. Shareholder municipalities and municipalities which contracted toxic loans are not significantly different on many aspects, including the total amount of toxic loans and the excess interests per capita they have to repay.

an effect of distance to important centers, which may be itself correlated to the rise of populist movements.³² Second, since we focus on municipalities which were not shareholders, we only take into consideration the role of distance. We thus leave aside potential endogeneity arising from the fact that municipalities which entered the CLF might have unobserved characteristics explaining both this decision and the 2014 electoral outcomes. For instance, this may be the case if the 1994 mayor, whose identity is unobserved by us, had been reelected until 2014. Third, municipalities entered the former capital in 1994, thus well before the main wave of toxic loan contracting. The latter indeed occurred between 2001 and 2011. It is therefore unlikely that the distance affects anything except the probability of having toxic loan. Nonetheless, we include a large set of controls in our specifications - including department fixed effects, urban status of the municipality, 2000 municipal budgets and incumbent and population characteristics (Section 2.6). Our results are not particularly sensitive to their inclusion (Section 4).

3.3 Main specification

We estimate the impact of Dexia toxic loan(s) on electoral entry, abstention and vote shares for the 2014 municipal election, using an instrumental variable strategy in municipalities over 1,000 inhabitants. Our main specification is the following:

$$Y_i = \alpha + \beta T_i + \gamma X_i + \epsilon_i \quad (1)$$

where Y_i is an outcome variable in municipality i , T_i is a dummy equal to one if municipality i is listed as having a toxic loan in the *Libération* database and zero otherwise and X_i is a set of covariates. We then exploit the binary nature of our instrumental variable by using the Probit-2SLS method proposed by Wooldridge (2002) and Wooldridge (2010). It consists in running a 2-SLS estimation where the instrument is the predicted value of the treatment variable. The latter is taken from a Probit model where the treatment variable is regressed on our measure of distance to the closest 1994 shareholder municipality.³³ Formally our first stage is written as follows:

$$T_i = \alpha' + \beta' \hat{T}_i + \gamma' X_i + \epsilon'_i \quad (2)$$

where T_i is the treatment variable (i.e. municipality i having at least one toxic loan) and \hat{T}_i is the predicted value of T_i taken from the following Probit model:

$$Pr(T_i) = \Phi(\log(Dist_{CLF_i}), X_i) \quad (3)$$

³²Note that in Pérignon and Vallée (2017) however, the instrument may be linked with distance to urban centers. They indeed use distance to the closest Dexia branch, but the 24 Dexia branches were essentially located in regional capital cities.

³³This estimation is based on the *ivtreatreg* package from STATA. Note that we do not implement in the first stage a probit model as it would introduce nonlinearity and would not produce consistent estimates (Wooldridge (2010) in section 15.7.3). On the contrary, Wooldridge (2002) and Wooldridge (2010) prefer the Probit-2SLS procedure when facing a binary treatment as it is more efficient. In our case, using the standard-2SLS, many predicted values for the dummy T_i are negative due to large geographical distance. Our preferred specifications are thus conducted through Probit-2SLS.

where $\log(Dist_{CLF_i})$ is the log distance of municipality i to the closest municipality which entered the CLF capital.

Probit stage and Strength of our instrument

The strength of our instrument is assessed in Table 2. Controlling or not by observable characteristics, we find that municipalities which are close to shareholder municipalities are much more likely to contract toxic loan(s). The coefficient on the distance is highly significant. Our instrument remains strong and unchanged, using the Probit-2SLS (Columns 1 and 2) or the Standard-2SLS (Columns 3) settings. Note that the F-Stat is of 14.87, so largely above 10.³⁴

Table 2: IV Regression (Probit Stage)

1_{Toxic}	(1)	(2)	(3)
Log of distance to closest CLF city	-.158*** (.029)	-.145*** (.036)	-.021*** (.006)
Marginal effect	-.030*** (.005)	-.020*** (.005)	
Department FE	Y	Y	Y
Urban Status	Y	Y	Y
2000 Municipal budgets	N	Y	Y
Incumbent Characteristics	N	Y	Y
Population Characteristics	N	Y	Y
N	9181	9181	9181
Chi2	1296.96	2832.18	N.A
P>Chi2	0.000	0.000	N.A
Cragg-Donald Wald F	N.A	N.A	14.865

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of the immigrant population and its growth rate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Placebo test

To confirm that our instrumental variable was *actually* capturing Dexia business strategy, we finally conduct a placebo test on our probit stage. Among our sample of municipalities above 1,000 inhabitants, we randomly draw a thousand times 365 pseudo-shareholder municipalities without replacement. Each time, we compute the distance between a municipality and the closest selected pseudo-shareholder municipality. After excluding all pseudo-shareholders of our sample, we normally conduct our Probit-Stage, including all our control variables. Through this procedure, we obtain 1000 p-values. The median of their distribution is equal to 0.240 and belongs to a 95% confidence interval between 0.2089 and 0.2672. Therefore, the geographical

³⁴In the Appendix, we further document this first stage by showing that the estimated coefficients of the Probit Stage are hardly sensitive to the set of included control variables. (Appendix Table 16).

distance between random municipalities and the other municipalities does not significantly predict the adoption of toxic loans. It is reassuring as it confirms that our instrument variable indeed captures Dexia business strategy.

4 Results

4.1 Electoral Results

In this section, we test whether the 2011 scandal disclosure has a significant impact on the 2014 municipal election. Our hypotheses are the following. First, in line with previous studies (Chong et al. 2011; Kostadinova 2009; Costas-Pérez 2013; Guiso et al. 2017), we assume that the leak of Dexia toxic loans went hand in hand with a decrease in turnout. Second, as public financial scandals fit into the anti-elite rhetoric, we assume a decrease in vote share for the incumbent and an increase in vote share for populist parties. The electoral outcomes of French municipalities yield several challenges. Even if toxic loans pushed more populist lists to run for office, they represent a small share of candidacies. Focusing only on cities with populist parties would thus excessively reduce the sample. Some mayors moreover do not run for an additional term in office: here again, restricting the sample to cities where an incumbent mayor re-runs for office would be at the cost of reducing our sample. To address these issues, we adopt two strategies which can help providing valuable information on electoral results. We first test whether the revelation induced lower vote shares in favor of party lists being from the same political affiliation as the incumbent mayor.³⁵ We then look at vote shares received by each political block. In both cases, we assign a value of zero to vote shares if no list runs under a specific political affiliation.

The OLS results cannot be interpreted as causal estimates as they are likely to be positively or negatively biased. We thus use our instrumental variable strategy to circumvent this issue. Table 3 and Appendix Table 17 present our findings on turnout and vote shares, both in the IV and in the OLS settings. First, in both specifications, turnout is decreasing. Yet the coefficient is only slightly significant in the IV specification. Second, the incumbent's political party is electorally punished in municipalities with toxic loans. The effect is negative and weakly significant in the OLS but negative and highly significant in the IV specification. Overall, in municipalities affected by the scandal, vote shares for candidates from the same political affiliation as the incumbent are strongly reduced by 20 percentage points. As shown in Appendix Figure 9, it means that the vote share for the incumbent's political party decreases by 33%. Third, both the populist far-right (Pop-XR) and the populist far-left (Pop-XL) obtain better electoral scores in municipalities impacted by the scandal. Their respective increase in vote share is particularly large: 3.35ppt for the populist far-right (i.e., an increase by 7.5 times) and 11.53ppt for the populist far-left (i.e., an increase by 5.5 times). Compared to the incumbent's political party, the vote shares of populist parties remain small, even in municipalities affected by the

³⁵We define political affiliation as being either Extreme-Left, Moderate-Left, Moderate-Right or Extreme-Right.

scandal. The incumbency advantage is particularly strong at French municipal elections: the incumbent's political party receives on average 59.4 percent of the vote in municipalities without toxic loans.³⁶ Nevertheless, municipalities affected by the scandal experience a large and robust increase in populist voting. Appendix Table 18 consistently shows correlation between our instrumental variable and our electoral results. Appendix Tables 19 to 25 confirm that our results are neither particularly sensible to the inclusion of our control variables nor to the choice of Standard-2SLS models (albeit with weaker results for the populist far-left).

Table 3: Turnout and Electoral Results - Probit-2SLS specification

	Turn.	Sh inc. p.	Sh X	Sh XR	Sh Pop-XR	Sh XL	Sh Pop-XL
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
$\mathbb{1}_{Toxic}$	-.017* (.009)	-19.988*** (4.677)	4.042*** (1.326)	3.534*** (.746)	3.345*** (.729)	.509 (1.036)	11.532*** (3.097)
Dep. FE	Y	Y	Y	Y	Y	Y	Y
Urban status	Y	Y	Y	Y	Y	Y	Y
2000 budgets	Y	Y	Y	Y	Y	Y	Y
Incum. char.	Y	Y	Y	Y	Y	Y	Y
Pop. char.	Y	Y	Y	Y	Y	Y	Y
N	9181	8078	9181	9181	9181	9181	9181
R2	.371	.203	.269	.172	.172	.244	.164

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of the immigrant population and its growth rate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Importantly, populist parties are the only political parties experiencing a relative increase in vote shares (Appendix Table 26). These findings are in line with the recent literature on the strong emergence of populist parties in the aftermath of financial crises (Guriev and Papaioannou 2020). It confirms that public financial scandals driven by the financial crisis specifically fuel populism.

4.2 Candidate Entry

We then explore whether our electoral results reflect changes in the electoral supply of political candidates. Precisely, the slight decrease in turnout and the rise of populist voting may mirror the mechanical increase in populist candidacies and the following rise in electoral competition.

Appendix Table 27 shows the results of the OLS estimations, where we respectively explain the number of candidacies, the probability that the incumbent mayor runs again and the presence of at least one extreme candidacy (X C.), one from the populist far-right (Pop-XR C.) and

³⁶In our sample, municipalities as small as 1,000 inhabitants are included.

one from the populist far-left (Pop-XL C.). In municipalities with toxic loans, we find that the number of candidacies is higher by 0.24 (Column 1) and that the probability to observe at least one extreme candidacy is larger by 6 percentage points (Column 3) in municipalities affected by the scandal. In line with the electoral results, the probability for a populist candidate to run at the election is greater by 3.6ppt for the populist far-right (Column 5) and by 2.7ppt for the populist far-left (Column 7).

Looking at Table 4, we find similar results using the IV identification strategy. We find that the number of candidacies is higher by 0.9 in municipalities which contracted toxic loans (Column 1), suggesting overall a larger electoral competition. Appendix Figure 10 shows that the number of candidacies in municipalities affected by the scandal increases by 48%. The likelihood of observing an extreme candidacy is 26ppt higher (Column 3). The presence of the populist far-right (Column 5) and of the populist far-left (Column 7) is also more likely - with a respective increase by 16ppt for the populist far-right and by 12ppt for the populist far-left. These coefficients are particularly large (Appendix Figure 10) because populist parties are not well established in French local politics. Incumbents are as likely to run for their reelection in municipalities impacted by the scandal.

In Appendix Tables 28 to 34, we run several sensitivity analyses. We document that overall, while expanding the set of controls slightly diminishes our estimates, the results remain similar across all specifications. There are also quite robust to the Standard-2SLS setting, even if the results are weaker for the populist far-left.

Our results show that populist candidacy is enhanced by the disclosure of a public financial scandal. Due to data limitation, we cannot assert on the entire sample that the populist candidates were running for the first time. Municipal electoral results have been only digitalized and centralized since the 2001 election. Looking at the *National Registry of Representatives*, we know that a large share of populist candidates was neither in office nor former municipal councilor between 2001 and 2013 in the municipalities which contracted toxic loans (51% for the populist far-left party and 89% for the populist far-right). We then compute the probability that a candidate runs at the election *and* had never been a mayor or a municipal councilor over the last two electoral terms. Table 5 and Appendix Table 35 show that our results on populist candidacies are consistent and that nothing similar is happening for the mainstream political class and for the Greens. It implies that public financial scandals particularly increase the likelihood of populist parties to enter in the political arena – either by increasing their chance of electoral success or by decreasing their entry cost in politics.

4.3 Heterogeneity results

Economic and social conditions are common explanations for the rise of populist parties (Algan et al. 2017; Becker, Fetzer, and Novy 2017) and could even reinforced the role played by public financial scandals on the rise of populism. Appendix Table 36 shows heterogeneous instrumental variable estimates with simultaneous interactions between the treatment and the

Table 4: Number of candidates and Likelihood of having an extreme candidate - Probit-2SLS specification

	Nb C.	Inc. C.	X C.	XR C.	Pop-XR C.	XL C.	Pop-XL C.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1_{Toxic}	.916*** (.150)	-.037 (.057)	.256*** (.049)	.163*** (.039)	.158*** (.038)	.191*** (.041)	.115*** (.031)
Dep. FE	Y	Y	Y	Y	Y	Y	Y
Urban status	Y	Y	Y	Y	Y	Y	Y
2000 budgets	Y	Y	Y	Y	Y	Y	Y
Inc. char.	Y	Y	Y	Y	Y	Y	Y
Pop. char.	Y	Y	Y	Y	Y	Y	Y
N	9181	9181	9181	9181	9181	9181	9181
R2	.406	.158	.307	.222	.223	.298	.164

Note: C. refers to candidacies. Nb C. is the number of candidates. Inc. C. is the likelihood of having the incumbent as candidate. X C. is the likelihood of having an extreme candidate. XR C. (resp. XL C.) is the likelihood of having an extreme-right (resp. extreme-left) candidate. Pop-XR C. (resp. Pop-XL C.) is the likelihood of having a populist extreme-right (resp. populist extreme-left) candidate.

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of the immigrant population and its growth rate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 5: Entry of Populist Candidates - Probit-2SLS specification

	XR C.	Pop-XR C.	XL C.	Pop-XL C.
	(1)	(2)	(3)	(4)
1_{Toxic}	.129*** (.036)	.126*** (.035)	.119*** (.031)	.053** (.023)
Dep. FE	Y	Y	Y	Y
Urban status	Y	Y	Y	Y
2000 budgets	Y	Y	Y	Y
Inc. char.	Y	Y	Y	Y
Pop. char.	Y	Y	Y	Y
N	9181	9181	9181	9181
R2	.206	.207	.221	.114

Note: C. refers to candidacies. XR C. (resp. XL C.) is the likelihood of having an extreme-right (resp. extreme-left) candidate. Pop-XR C. (resp. Pop-XL C.) is the likelihood of having a populist extreme-right (resp. populist extreme-left) candidate.

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of the immigrant population and its growth rate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

2001 median household income, the 2000 amount of local tax revenues per capita and the 2000 capital expenditure per capita. We prefer using budgetary variables from the early 2000s as they cannot be impacted by the public financial scandal. Yet the correlations between the 2000 and the 2013 variables are particularly strong (98% for median income, 61% for equipment expenditure and 93% for local taxation) and can be used as a result to look at the cumulative impact of social and economic conditions on populism. Our results foremost indicate that the increase in the number of candidacies and in the likelihood of observing the populist far-right as candidate is reinforced in municipalities characterized by low median income, high local taxation per capita and low municipal equipment expenditure. These results are particularly robust. Looking at vote shares (Appendix Table 37), we find a similar cumulative impact of local socioeconomic conditions on the vote share for the far-right and for the populist far-right. Replacing the 2001 median income by the 1999 unemployment rate, as we do in Appendix Table 38, yields similarly consistent results : the populist far-right is even more likely to enter in municipalities with high unemployment rates. These findings are in line with [Algan et al. \(2017\)](#) who find a strong relationship between unemployment and voting for populist parties. Appendix Tables 39 and 40 finally show that our results are robust when we consider local tax rates on households instead of local taxation revenues.³⁷ In France, there are mainly two local taxes on households: the housing tax and the property tax on developed land. We find that a rise in housing tax rate or a rise in property tax rate on developed land (PDL) increases the effect on vote shares of the populist far-right and on the likelihood of having a far-right populist candidate.

Another root cause of populism lies in migration inflows ([Dustmann, Vasiljeva, and Damm 2016](#); [Hangartner et al. 2017](#)). Immigration is usually addressed by populist political parties. In France, immigration is mainly feared by the populist far-right. In contrast, the rhetoric differs for the populist far-left as asylum rights are advocated. In Appendix Table 43, we interact the treatment with the immigrant share of the municipality in 2013, as well as the growth rate of this share during the last electoral term. We find that the municipalities impacted by the scandal face a larger entry of extreme candidacies (whether on the right or on the left) when migration inflows have been high during the last electoral term. Interestingly, in the absence of toxic loans, we find a weakly negative correlation between the growth rate of the immigrant share and the entry of such candidacies. These results call for two comments. On the one hand, they suggest that while immigration is a topic of particular interest for both extreme-right and extreme-left parties (albeit for opposite reasons), it is not enough to observe the presence of extreme candidacies locally - potentially because it is a dividing topic and the electoral uncertainty of exploiting migratory pressure is too high. On the other hand, being in a municipality with toxic loans might lower this uncertainty for extreme parties and make it easier for them to exploit migratory pressure. Overall, the combination of toxic loans and increasing immigration seems therefore to be a particularly polarizing one. Yet, immigrant shares play a different

³⁷In contrast with the housing tax and the property tax on developed land, the property tax on undeveloped land less concerns households. The interaction with the dummy on toxic loan is non-significant (Appendix Tables 41 and 42).

role. We indeed find that the impact on the probability of having a populist far-right candidacy is dampened when immigration share is high. For far-left candidacy, the interaction effect remains non-significant. For the populist far-right, the expected gains of running in an intoxicated municipality might be decreasing when the share of foreign-born inhabitants is already high, as an electorate located in a multicultural context might be less likely to vote for them.³⁸ In contrast, for a far-left populist candidacy, the expected gain is unlikely to be negatively affected by immigrant shares, probably because the far-left rhetoric is more immigrant-friendly.

Overall, these interaction effects suggest a positive feedback loop between the toxic loan scandal and the economic or social factors affecting the rise of populism in politics. While economic and social conditions are likely to play a role independently, the disclosure of public financial scandals amplified their effects.

4.4 Robustness tests

In this section, we perform two robustness checks. First, we investigate whether there are any potential effects of toxic loans on the 2008 municipal elections (i.e. before the revelation of the scandal). Second, we test the robustness of our main results using a different identification strategy.

In Appendix Table 44, we show that the presence of toxic loan(s) did not significantly impact political entry in 2008. We then look in Appendix Table 45 at turnout and vote shares for the incumbent political block. While the coefficient for turnout is weakly significant, we do not find any effect on vote shares in favor of the incumbent political affiliation.³⁹ Note that the results presented here are not entirely comparable to the ones obtained from the main estimation since the sample we use is smaller. In 2008, only municipalities with more than 3,500 inhabitants were indeed subjected to a runoff proportional list ballot. This divides our sample size by four and provides us with larger standard errors. Even if the 2008 results are not entirely comparable, these results suggest that toxic loans were unlikely to impact the 2008 electoral race in the same way. Furthermore, the absence of consistent effects in 2008 may imply that what we observe in 2014 is unlikely to represent a form of reversal to the mean.

Second, as our main estimation relies on IV estimates, we complement our analysis with a diff-in-diff approach. Importantly this latter estimation provides similar findings. A limitation of the diff-in-diff is that we can only test the effects of toxic loans on the number of candidacies⁴⁰ and on their extreme political affiliation.⁴¹ A second caveat is that data availability is limited

³⁸In some cities, immigration can be particularly large and has indeed an impact on the electorate. More specifically, 25% of French municipalities have more than 6.2% of immigrants, with a maximum reached of 21%.

³⁹This result differs from Pérignon and Vallée (2017). They indeed find that toxic loans increased the probability of election of the lists from the incumbent party in 2008. However, our results are not directly comparable as we are considering a more restrictive sample and our instrumental variable strategy differs.

⁴⁰The results on the number of candidacies should be considered with caution, as in 2001 the Ministry of Interior did not record separately the results for different lists of the same political affiliation (as it did in 2008 and 2014).

⁴¹The populist far-left was absent from the 2001 election and we cannot perform analyses on separate extreme lists, as their number was even smaller in 2008 than in 2014.

to three electoral rounds: 2001, 2008 and 2014. This implies that we will test for common pre-trends only considering two periods before 2014. In this case, we directly compare cities holding toxic loans with all the other cities in the sample.

In Figure 2, we show that our results are not driven by any discrepancies in pre-trends. To do so, we look at the trends in the number of candidacies and in the likelihood of observing an extreme list. We compare the municipalities over 3,500 inhabitants which had contracted toxic loan(s) between 2001 and 2008 and those which did not. Looking at the outcome variables, we document that both types of municipalities share common trend between 2001 and 2008. Yet their evolution differs between 2008 and 2014, in the aftermath of the scandal disclosure. Compared to the control group, municipalities with toxic loans do experience an increase in electoral competition and an increase in extreme candidacies between 2008 and 2014. Figure 2 plots the raw values over time while Table 6 gives the point estimates for having toxic loan(s) in a diff-in-diff model where we control for time varying characteristics of the municipality, election fixed effects and municipality fixed effects (the effect being normalized to zero in 2001).

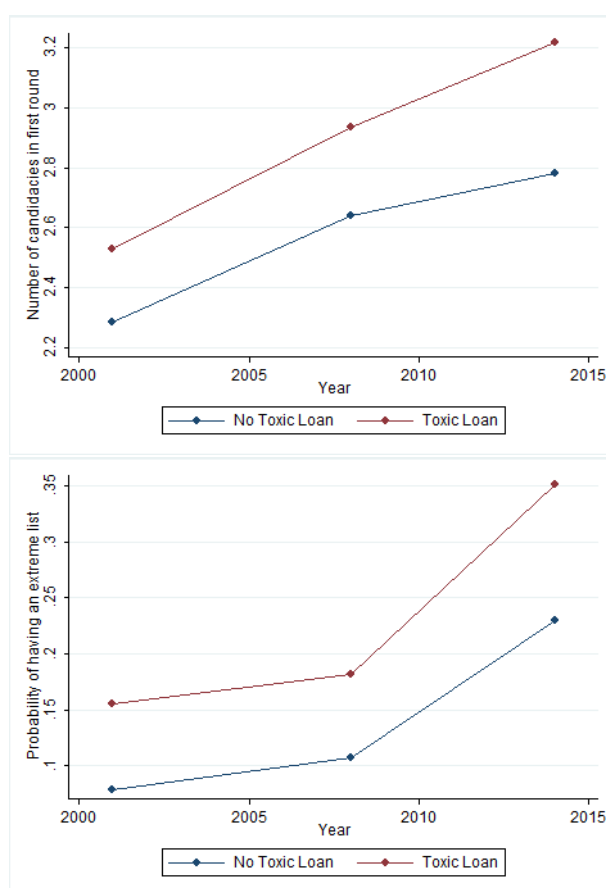


Figure 2: Rise in electoral competition and Entry of populist candidacies over time

Table 6: Fixed-Effect strategy on candidate entry

	Nb C. (1)	Nb C. (2)	X C. (3)	X C. (4)	R C. (5)	R C. (6)	L C. (7)	L C. (8)
2008	.358*** (.028)	.384*** (.093)	.029*** (.009)	.047 (.032)	-.009 (.011)	.015 (.034)	-.055*** (.009)	-.057* (.030)
2014	.497*** (.032)	.585*** (.134)	.150*** (.012)	.199*** (.049)	-.063*** (.012)	-.050 (.049)	-.098*** (.011)	-.106** (.042)
$\mathbb{1}_{Toxic}$	.050 (.056)	.035 (.056)	-.002 (.019)	-.002 (.019)	.017 (.018)	.020 (.018)	-.008 (.015)	-.009 (.015)
$\mathbb{1}_{Toxic} \times 2014$	.146** (.059)	.134** (.059)	.048** (.022)	.047** (.022)	.013 (.020)	.013 (.020)	.023 (.017)	.018 (.017)
Pop. char.	N	Y	N	Y	N	Y	N	Y
N	5691	5691	5691	5691	5691	5691	5691	5691
R2 adj	.114	.121	.084	.092	.011	.016	.035	.046
F	114.423	16.462	70.823	11.149	9.497	2.219	34.807	6.337

Note: C. refers to candidacies. Nb C. is the number of candidates. X C. is the likelihood of having an extreme candidate. R C. is the likelihood of having a moderate right candidate. L C. is the likelihood of having a moderate left candidate.

Control variables: Population characteristics are given by the 1999, the 2006 and 2011 censuses. The 1999 census was the last exhaustive census in France and the closest in time from the 2001 election. The 2006 census is the first census which was conducted through annual surveys. Collected between 2004 and 2008, the 2006 census enables to control for the population characteristics in the 2008 elections. The 2011 Census has been conducted through annual surveys between 2008 and 2013. It is used as controls for the 2014 elections. Controls include population, socio-professional categories, age distribution, level of education and housing market. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

5 Potential Mechanisms

Results so far show an increase in populism in municipalities affected by the scandal, both in terms of entry of populist candidacies and vote shares. In this last section, we seek to understand the mechanisms. Two channels may be at stake. First, the economic aftermath of the scandal could have led to the entry of populism. The economic channel has been well identified in the literature on populism and public financial scandals could affect in the same way populist voting and populist candidacies. Second, public financial scandals could impact *per se* populism by appealing to the populist ideology. Public financial scandals involve public officials and may fuel populist ideology by increasing the divide between the “corrupt elite” and the remaining citizens. To investigate it, we look in particular at the media uproar following the scandal.

5.1 The economic aftermath of the scandal

5.1.1 Local taxation

Public finance mismanagement can lead to a rise in taxation via debt repayment. Considering the toxic loan scandal, we test whether there was any increase in local taxation during the last electoral mandate (i.e., between 2008 and 2013). Appendix Table 46 shows that municipalities affected by the scandal did not experience a relative increase in local tax revenues, in housing tax rate or in property tax rates (both for the property tax on developed land (PDL) and for the property tax on undeveloped land (PNDL)). In contrast, there is a significant decrease in local tax revenues and in local tax rates in municipalities which contracted toxic loans. There may be two reasons. First, following Pérignon and Vallée (2017), mayors could strategically decrease their tax rates in order to enhance their chance of reelection. Second, the toxic loan scandal could have no short-term economic impact on French municipalities as the contracts were challenged in court and debt restructured. These two reasons seem plausible and are difficult to disentangle. Nonetheless, we can affirm that the toxic loan scandal did not cause populism via a short-term rise in taxation.

5.1.2 Firm closure

Public financial scandals could directly impact local activity via a decrease in municipal subsidies or a decrease in public service employment. In this subsection, we look at two outcomes: the growth rate in firm closure during the last electoral mandate and the growth rate in unemployment. Appendix Table 47 shows that municipalities with toxic loans did not experience higher firm closure or higher unemployment growth during the last electoral mandate. It means that public financial scandals can contribute to populism *independently* from short-term adverse economic shocks.

5.1.3 Degree of ex-post toxicity of the loan

Public financial scandals could still increase populism via the expectation of future cost incurred by households. To test this assumption, we look at the impact of the ex-post toxicity of the loan on the rise of populist candidacies and on the rise of populist voting. We interact the treatment variable with the overhead ratio of the loan (i.e. the excess interests paid by municipalities divided by the initial amount of the loan) or with the overhead debt ratio (i.e. the excess interests paid by municipalities divided by annual repayment). Such variables are endogenous to the fact of contracting toxic loan(s). We instrument them by the presence of at least one structured loan indexed on the Swiss Franc exchange rate. The rationale behind this instrument is that, upon contraction of toxic loans, the Swiss Franc was considered as particularly stable and safe because its exchange rate had varied in a narrow bandwidth over the 2000 decade. Between the mid-2008 and the mid-2011, its value had yet increased sharply, trig-

gering a high overhead ratio (and a high overhead debt ratio). Conditionally on contracting toxic loan(s), this sharp variation induced by the financial crisis was therefore unlikely to be anticipated, making the exclusion restriction warranted.

We thus run a specific 2-SLS regression to instrument both the presence of toxic loan(s) (through the log distance to the closest municipality in the CLF capital) and conditionally on it, the overhead ratio (through having a loan based on CHF). More specifically, we instrument our two variables of interest by their predicted values obtained from a Heckman two-step bivariate sample-selection model. In this framework, the predicted value of the treatment variable (i.e. having a toxic loan) is delivered by the same Probit stage as our main identification strategy. The treatment intensity (i.e. the ex-post toxicity) is obtained from an OLS regression of the overhead ratio on a dummy variable (having or not at least one toxic loan indexed on CHF), on additional covariates and on a Mills' ratio of the probit stage.⁴²

Appendix Table 48 shows the coefficients of the Probit and OLS stages of this estimation for our two different measures of toxicity: the overhead ratio and the overhead debt ratio. In both cases, we find that the presence of at least one toxic loan indexed on the Swiss Franc sizably increases the toxicity of the loan, which makes it a relevant instrument. Using this double instrumental variable strategy, we do not find any effect of the ex-post toxicity of the loans on the likelihood of having a populist candidate and on her vote shares. Appendix Table 49 shows that the measured effects of toxic loans are similar to our main effects for an average value of the overhead ratio. They do not differ when the overhead ratio deviates from its average value.⁴³ The degree of ex-post toxicity of the loans does not play a role therefore on the rise of populism. These findings are more likely to reflect a generalized hostile reaction towards mainstream politicians than a reaction to the long-term actual economic consequences of such decisions. Public financial scandals can thus contribute to populism *without* affecting short and long-term economic conditions.

5.2 Information, Press coverage and Populist rhetoric

Information access

In this last section, we test whether public financial scandals appeal to the populist ideology via media coverage. First, we explore any difference in treatment effects among municipalities with weak access to high-speed Internet connection. Our hypothesis is that in such municipalities, the revelation about toxic loans was likely to be discovered by less citizens, thus weakening the incentives for populist lists to enter. Since we do not observe the speed of Internet connection at the municipality level in 2011, we proxy the quality of Internet access in 2011 by the share of premises eligible to an Internet speed of at least 3Mb/s in 2016. Such an Internet speed

⁴²We implement this methodology using the *ctreatreg* package of STATA.

⁴³In Appendix, we show in Table 51 that taking the overhead debt ratio as a measure of toxicity yields a similar absence of heterogeneity.

represented the average Internet speed in France in 2011⁴⁴ and can be therefore considered as low by the standards of 2016 (where the average Internet speed was of about 10Mb/s). A municipality with high shares of premises ineligible to such a speed in 2016 was thus likely to have slow Internet connection in 2011. In Appendix Table 50, we interact the presence of toxic loan(s) with this measure of Internet quality while including all our set of controls. We find that toxic loans have a positive effect on far-right populist candidacies in municipalities with low Internet connection and that this effect is larger when Internet quality increases. This suggests that the populist far-right is more likely to enter where the information is easily accessible and shared within the whole population.⁴⁵

Press coverage and Populist rhetoric

Second, we test whether the disclosure of public finance mismanagement fuels *per se* the populist rhetoric. To do so, we collect all the press articles published between September 2011 and March 2014 which either mention the words "Toxic Loans" and "Mayors" or the words "Toxic loans". In articles including the words "Toxic loans" and "Mayors", the *Factiva* platform delivers several automatic keywords on the content of the articles, like "local taxation", "citizens' initiatives", "municipal elections" and "local officials". These words suggest that citizens should organize themselves to deal with the aftermath of the scandal, including the potential rise in taxation. Such a message favors the populist agenda and highlights the rise of political opponents against the incumbent. We then retrieve the number of articles mentioning local political actors on "Toxic Loans" and identify whether the names mentioned were corresponding to mayors or to opponent candidates. Appendix Table 52 shows that the majority of the local press on "Toxic Loans" mentions the opposition and is not exclusively focused on the mayor.

As local news on "Toxic Loans" are too scarce to point out any further evidence, we decide to collect the number of press articles mentioning each candidate at the 2014 election in the aftermath of the scandal. As outcome variable, we divide the number of press articles mentioning a candidate by the total number of press articles mentioning candidates in the municipality. Our outcome can be interpreted as a measure of relative press coverage in the aftermath of the scandal. Appendix Table 53 shows the effect of toxic loans on the relative press coverage of the incumbent, on the populist far-right and on the populist far-left. On the one hand, we notice that the incumbent enjoys relatively less media coverage in municipalities affected by the scandal. It confirms the descriptive evidence found in Appendix Table 52. On the other hand, we observe that the relative press coverage of populist candidates is increasing in municipalities with toxic loans. This result is in line with the entry of populist candidacy. The more populist candidates enter, the more likely they are to challenge the dominant position of the incumbent in the media. Overall, public financial scandals contribute to populism by fueling

⁴⁴According to a study from Akamai technology. Data on access to high-speed Internet connection at the municipal level were provided by the *Observatoire France Très Haut Débit*.

Source: [Website](#)

⁴⁵Coefficients for the interaction between the dummy variable "having toxic loan(s)" and the Internet quality are large. However, it is only due to the fact that the share of premises eligible to an Internet speed of at least 3Mb/s ranges from 0 to 1 and thus is not expressed in percentage.

criticisms against the elite and by easing the entry of populist candidacies in the political *and* in the media arenas.

6 Conclusion

In this paper, we explore the link between financial crises and the rise of populism by highlighting a new channel: the disclosure of public financial scandals, fueled by financial deregulation and market volatility. Using the leak of Dexia toxic loans by the national newspaper *Libération* in September 2011, we find that affected municipalities had a tougher electoral competition in the subsequent 2014 municipal elections and were more likely to experience populist candidacies. Importantly, we show that this effect was amplified for the populist far-right in municipalities with more fragile economic conditions (lower income or higher unemployment) and where public finance issues were more salient to the taxpayers (i.e. in cities with higher taxation per inhabitant). We document that the economic aftermath of the financial scandal does not seem to play a role: neither via taxation nor via the ex-post toxicity of the loan nor via firm closure and unemployment.

Our results suggest that public financial scandals fuel populist rhetoric, regardless of the degree of ex-post toxicity of the loans, and increase the chance of electoral success for populist parties - especially in places with cumulative co-factors. In turn, public financial scandals have an impact on electoral results, decreasing vote shares of candidacies from the same political affiliation as the incumbent and increasing vote shares of populist parties.

Consequently, this paper emphasizes that the impact of public financial scandals on the rise of populism should not be neglected. Instead, they have the potential to divide society and to reshape the political landscape by easing the entry of populist candidacies. On a policy perspective, it appears particularly relevant to restore confidence in democratic institutions at time of financial crisis. This paper calls for more research on the impact of financial scandals, in general, on the rise of populism and particularly, on the way they undermine trust in political institutions.

Appendix A - Descriptive statistics

Figure 3: Number of municipalities and structured loans contracted with Dexia over time

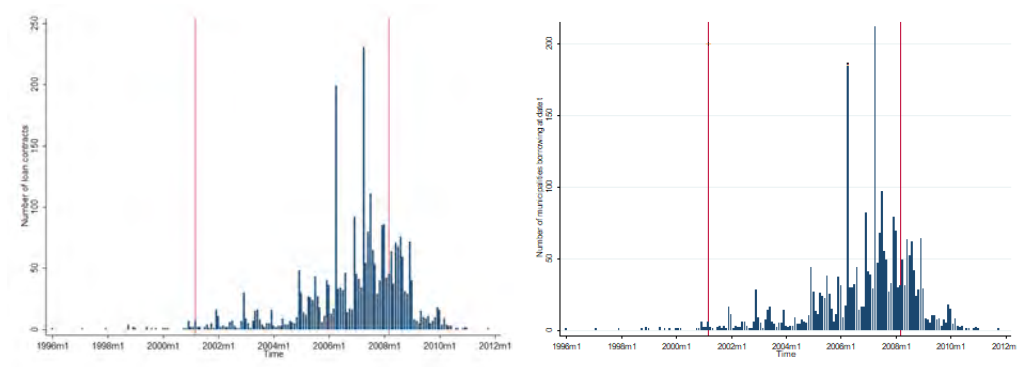


Figure 4: Toxic Loans and their Overhead Ratio

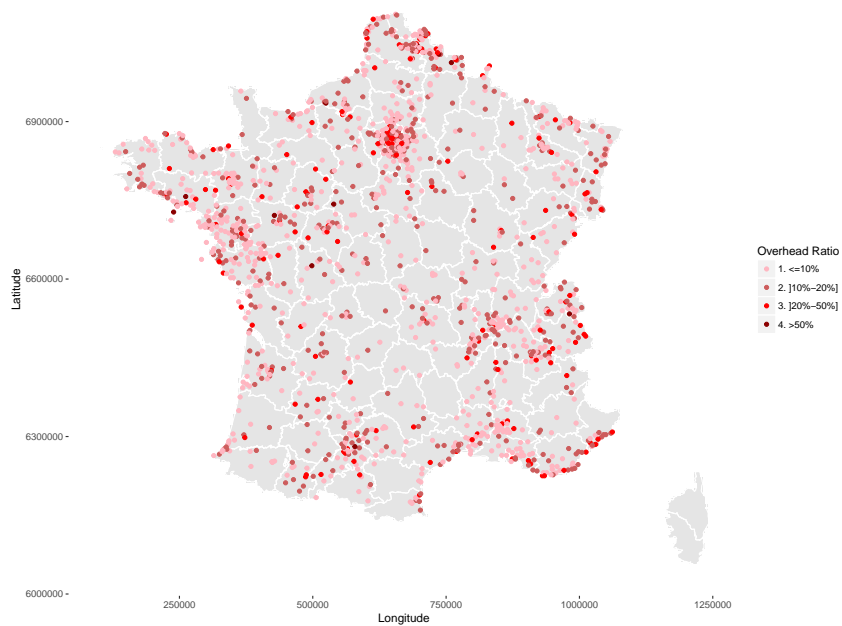


Figure 5: Google Trends for "*Toxic Loans*" and "*Dexia*"

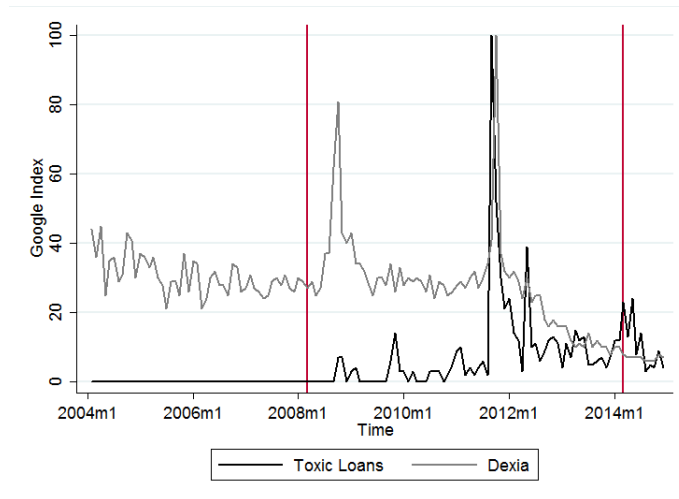


Figure 6: Number of press articles published on "*Toxic Loans*" over time

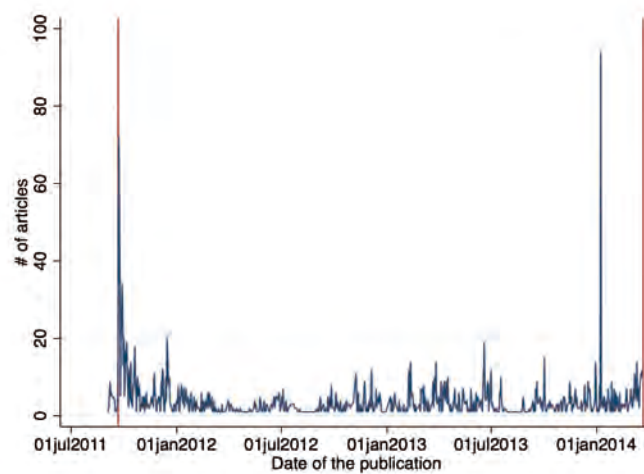


Table 7: Number of loans and municipalities concerned for each financial asset

UNDERLYING ASSETS		PREVALENCE		SHARES
INFLATION	INFLATION France	Nb of loans	15	0,51
		Nb of municipalities	15	0,94
	INFLATION EURO	Nb of loans	7	0,24
		Nb of municipalities	5	0,32
	INFLATION France-INFLATION EURO	Nb of loans	11	0,37
		Nb of municipalities	11	0,69
	INFLATION US	Nb of loans	3	0,1
		Nb of municipalities	3	0,19
INTERBANK OFF. RATE	EURIBOR	Nb of loans	1676	57,10
		Nb of municipalities	1182	74,5
	EURIBOR-TEC 10	Nb of loans	24	0,82
		Nb of municipalities	23	1,45
	LIBOR CHF	Nb of loans	10	0,34
		Nb of municipalities	10	0,63
	LIBOR USD	Nb of loans	231	7,87
		Nb of municipalities	199	12,54
	STIBOR SEK	Nb of loans	12	0,40
		Nb of municipalities	12	0,76
	WIBOR PLN	Nb of loans	1	0,03
		Nb of municipalities	1	0,06
EXCHANGE RATE	EUR CHF	Nb of loans	222	7,56
		Nb of municipalities	203	12,80
	EUR GBP	Nb of loans	9	0,31
		Nb of municipalities	9	0,57
	EUR USD	Nb of loans	1	0,03
		Nb of municipalities	1	0,06
	EUR USD-EUR CHF	Nb of loans	32	1,11
		Nb of municipalities	32	2,02
	GBP CHF	Nb of loans	1	0,03
		Nb of municipalities	1	0,06
	USD CHF	Nb of loans	30	1,02
		Nb of municipalities	30	1,89
	USD JPY	Nb of loans	38	1,29
		Nb of municipalities	32	2,01
CMS spread	CMS EUR 30-CMS EUR 2	Nb of loans	426	14,51
		Nb of municipalities	389	24,53
	CMS GBP 10-CMS GBP 2	Nb of loans	67	2,28
		Nb of municipalities	66	4,16
	CMS GBP 10-CMS EUR 10	Nb of loans	70	2,38
		Nb of municipalities	69	4,35
	CMS EUR 10-CMS EUR 2	Nb of loans	5	0,17
		Nb of municipalities	5	0,32
	CMS GBP 10-CMS CHF 10	Nb of loans	4	0,14
		Nb of municipalities	4	0,25
	-CMS EUR 30	Nb of loans	3	0,1
		Nb of municipalities	3	0,19

Table 8: T-tests (Mayoral characteristics): No toxic loans/ Toxic loans

	No tox. loans	N1	Tox. loans	N2	Diff.	SE.
Gender & Age						
Male	0.887	7892	0.892	1468	-0.005	0.009
Age	62.249	7892	61.318	1468	0.931***	0.237
Socio-professional category						
Agriculture	0.053	7879	0.018	1468	0.035***	0.006
Industry/Trade	0.055	7879	0.050	1468	0.005	0.006
Private-sector	0.125	7879	0.124	1468	0.001	0.009
Professionals	0.066	7879	0.110	1468	-0.043***	0.007
Teaching	0.055	7879	0.078	1468	-0.023***	0.007
Official	0.060	7879	0.073	1468	-0.013*	0.007
Public-sector	0.024	7879	0.029	1468	-0.005	0.004
Various	0.050	7879	0.093	1468	-0.043***	0.007
Retired	0.511	7879	0.426	1468	0.086***	0.014
Political party						
Extreme-right	0.001	7892	0.000	1468	0.001	0.001
Moderate-Right	0.506	7892	0.453	1468	0.053***	0.014
Center	0.055	7892	0.049	1468	0.006	0.006
Moderate-Left	0.348	7884	0.415	1468	-0.067***	0.014
Extreme-Left	0.029	7892	0.063	1468	-0.034***	0.005
Diverse	0.056	7892	0.012	1468	0.044***	0.006
Separatist	0.001	7892	0.001	1468	0.000	0.001

Data: Registre National des Elus (Year 2013)

Table 9: T-tests (Census): No toxic loans/ Toxic loans

	No tox. loans	N1	Tox. loans	N2	Diff.	Std. Error	Obs.
Housing							
Main residence	0.863	7899	0.857	1468	0.005	0.003	9367
Sec. residence	0.068	7899	0.072	1468	-0.004	0.003	9367
Vacant residence	0.069	7899	0.071	1468	-0.002*	0.001	9367
Homeowners	0.684	7899	0.535	1468	0.149***	0.004	9367
Tenants	0.232	7899	0.321	1468	-0.088***	0.003	9367
HLM	0.063	7899	0.124	1468	-0.061***	0.002	9367
SPC							
Farmers	0.013	7899	0.005	1468	0.008***	0.000	9367
Craftsmen/Shopkeepers	0.039	7899	0.034	1468	0.005***	0.000	9367
Professionals /managers	0.068	7899	0.075	1468	-0.007***	0.001	9367
Intermediary professions	0.141	7899	0.138	1468	0.003**	0.001	9367
Employees	0.164	7899	0.168	1468	-0.005***	0.001	9367
Blue-collar workers	0.151	7899	0.140	1468	0.010***	0.001	9367
Retired	0.289	7899	0.283	1468	0.006***	0.002	9367
Other	0.135	7899	0.155	1468	-0.020***	0.001	9367
Population: Age							
0-14	0.192	7899	0.185	1468	0.007***	0.001	9367
15-29	0.151	7899	0.172	1468	-0.021***	0.001	9367
30-44	0.199	7899	0.193	1468	0.006***	0.001	9367
45-59	0.212	7899	0.203	1468	0.009***	0.001	9367
60-74	0.153	7899	0.150	1468	0.003***	0.001	9367
75+	0.093	7899	0.097	1468	-0.005***	0.001	9367
Economics							
Unemployment	0.113	7899	0.150	1468	-0.037***	0.002	9367
Median income	20916.08	8047	20247.53	1518	668.553***	106.826	9565
Education							
No degree	0.163	7899	0.182	1468	-0.019***	0.002	9367
CEP	0.117	7899	0.108	1468	0.009***	0.001	9367
BEPC	0.060	7899	0.064	1468	-0.004***	0.000	9367
CAP-BEP	0.276	7899	0.251	1468	0.025***	0.001	9367
BAC	0.164	7899	0.163	1468	0.001	0.001	9367
BAC+2	0.125	7899	0.120	1468	0.004***	0.001	9367
> BAC+2	0.095	7899	0.111	1468	-0.016***	0.002	9367

Data: French census (Year 2011)

Table 10: T-tests (Budgetary outcomes per capita): No toxic loans / Toxic loans

	No tox. loans	N1	Tox. loans	N2	Diff.	Std. Error	Obs.
Operating account							
Operating revenues	895.911	7894	1343.438	1465	-447.527***	16.498	9359
Local taxation	365.330	7894	562.058	1465	-196.728***	8.729	9359
Operating expenses	737.419	7894	1183.056	1465	-445.637***	14.159	9359
Investment account							
Investment revenues	440.119	7894	531.325	1465	-91.206***	10.862	9359
Investment expend.	458.739	7894	552.444	1465	-93.705***	11.884	9359
Capital expend.	364.011	7894	401.816	1465	-37.805***	10.299	9359
Overall budget result	139.818	7894	139.683	1465	0.135	7.468	9359
Debt							
Debt stock	682.840	7894	1263.979	1465	-581.139***	21.254	9359
Debt repayment + interests	92.900	7894	152.410	1465	-59.509***	3.066	9359
Population							
Population	3391.394	8042	15405.88	1514	-12014.48***	366.7578	9556

Data: Municipalities' account - DGFIP (Year 2013)

Table 11: T-tests (Mayoral characteristics): Degree of toxicity

	Low risk	N1	High risk	N2	Diff.	Std. Error	Obs.
Gender & Age							
Male	0.891	736	0.892	732	-0.001	0.016	1468
Age	59.045	692	59.376	689	-0.331	0.438	1381
Socio-professional category							
Agriculture	0.020	736	0.015	732	0.005	0.007	1468
Industry/Trade	0.049	736	0.051	732	-0.002	0.011	1468
Private-sector	0.132	736	0.116	732	0.016	0.017	1468
Liberal	0.114	736	0.105	732	0.009	0.016	1468
Teaching	0.069	736	0.087	732	-0.018	0.014	1468
Official	0.079	736	0.067	732	0.012	0.014	1468
Public-sector	0.026	736	0.031	732	-0.006	0.009	1468
Various	0.087	736	0.100	732	-0.013	0.015	1468
Retired	0.424	736	0.428	732	-0.004	0.026	1468
Political party							
Extreme-right	0.000	736	0.000	732	0.000	0.000	1468
Moderate-Right	0.470	736	0.436	732	0.034	0.026	1468
Center	0.034	736	0.064	732	-0.030***	0.011	1468
Moderate-Left	0.424	736	0.406	732	0.018	0.026	1468
Extreme-left	0.046	736	0.079	732	-0.033***	0.013	1468
Diverse	0.014	736	0.011	732	0.003	0.006	1468
Separatist	0.001	736	0.000	732	0.001	0.001	1468

Data: Registre National des Elus (Year 2013)

Table 12: T-tests (Census): Degree of toxicity

	Low risk	N1	High risk	N2	Diff.	Std. Error	Obs.
Housing							
Main residence	0.859	736	0.855	732	0.004	0.008	1468
Sec. residence	0.069	736	0.075	732	-0.006	0.008	1468
Vacant residence	0.072	736	0.069	732	0.003	0.002	1468
Homeowners	0.544	736	0.526	732	0.018**	0.009	1468
Tenants	0.318	736	0.323	732	-0.005	0.005	1468
HLM	0.118	736	0.130	732	-0.011***	0.004	1468
Socio-professional category							
Farmers	0.006	736	0.005	732	0.001***	0.000	1468
Craftsmen Shopkeepers Heads	0.034	736	0.035	732	-0.001	0.001	1468
Liberal prof./managers	0.074	736	0.076	732	-0.002	0.003	1468
Intermediary professions	0.137	736	0.139	732	-0.001	0.002	1468
Employees	0.166	736	0.170	732	-0.004**	0.002	1468
Blue-collar workers	0.142	736	0.139	732	0.003	0.003	1468
Retired	0.288	736	0.279	732	0.008**	0.004	1468
Other	0.153	736	0.158	732	-0.005**	0.002	1468
Population: Age							
0-14	0.184	736	0.186	732	-0.002	0.002	1468
15-29	0.172	736	0.172	732	-0.001	0.002	1468
30-44	0.192	736	0.194	732	-0.002	0.001	1468
45-59	0.203	736	0.204	732	-0.001	0.001	1468
60-74	0.151	736	0.149	732	0.002	0.002	1468
75+	0.099	736	0.096	732	0.003	0.002	1468
Unemployment & Income							
Unemployment rate	0.148	736	0.152	732	-0.004	0.004	1468
Median income	20249.75	759	20245.31	759	4.437	211.996	1518
Education							
No degree	0.180	736	0.184	732	-0.004	0.004	1468
CEP	0.110	736	0.107	732	0.003	0.002	1468
BEPC	0.064	736	0.064	732	0.000	0.001	1468
CAP-BEP	0.253	736	0.250	732	0.003	0.003	1468
BAC	0.163	736	0.163	732	-0.001	0.001	1468
BAC+2	0.121	736	0.120	732	0.002	0.002	1468
> BAC+2	0.109	736	0.112	732	-0.003	0.004	1468

Data: French census (Year 2011)

Table 13: T-tests (Budgetary outcomes per capita): Degree of toxicity

	Low risk	N1	High risk	N2	Diff.	Std. Error	Obs.
Operating account							
Operating revenues	1265.693	734	1421.501	731	-155.808***	50.346	1465
Local taxation	533.482	734	590.752	731	-57.271**	24.626	1465
Operating expenses	1105.345	734	1261.086	731	-155.742***	42.779	1465
Investment account							
Investment revenues	515.560	734	547.154	731	-31.594	26.115	1465
Investment expend.	534.820	734	570.139	731	-35.319	27.601	1465
Capital expend.	387.998	734	415.690	731	-27.691	22.551	1465
Overall budget result	141.410	734	137.950	731	3.460	12.897	1465
Debt							
Debt stock	1073.945	734	1454.793	731	-380.848***	66.632	1465
Debt repayment + interests	140.885	734	163.981	731	-23.096***	8.445	1465
Population							
Population	14810.73	757	16001.03	1514	-1190.303	1323.963	1514

Data: Municipalities' account - DGFIP (Year 2013)

Table 14: T-tests (Budgetary outcomes - Change between 2008 and 2013): No toxic loans / Toxic loans

	No tox. loans	N1	Tox loans	N2	Diff.	Std. Error	Obs.
Δ in operating account							
Operating revenues	0.084	8040	0.090	1509	-0.007	0.005	9549
Local taxation	0.194	8038	0.197	1509	-0.003	0.009	9547
Operating expenses	0.097	8040	0.078	1509	0.018***	0.006	9549
Δ in investment account							
Investment revenues	0.489	8037	0.154	1509	0.335***	0.075	9546
Investment expend.	0.489	8040	0.198	1509	0.291***	0.047	9549
Capital expend.	0.884	8036	0.376	1509	0.508***	0.099	9545
Overall budget result	-0.212	8020	-0.524	1508	0.311	0.737	9528
Δ in debt							
Debt stock	2.022	7938	0.033	1509	1.988**	0.980	9447
Debt repayment + interests	0.284	7821	0.039	1507	0.246**	0.123	9328
Population							
Population	0.079	8040	0.042	1509	0.037	0.003	9549

Data: Municipalities' account - DGFIP (Variation between 2008 and 2013)

Table 15: T-tests (Budgetary outcomes - Change between 2008 and 2013): Degree of toxicity

	Low risk	N1	High risk	N2	Diff.	Std. Error	Obs.
Δ in operating account							
Operating revenues	0.091	732	0.089	729	0.001	0.008	1461
Local taxation	0.186	732	0.208	729	-0.022	0.016	1461
Operating expenses	0.078	732	0.078	729	0.000	0.008	1461
Δ in investment account							
Investment revenues	0.195	732	0.114	729	0.081*	0.048	1461
Investment expend.	0.246	732	0.150	729	0.096**	0.044	1461
Capital expend.	0.416	732	0.330	729	0.085	0.072	1461
Overall budget result	1.184	732	-2.222	728	3.407	2.660	1460
Δ in debt							
Debt stock	0.034	732	0.030	729	0.004	0.025	1461
Debt repayment + interests	0.033	731	0.047	728	-0.014	0.027	1459
Population							
Population	0.043	755	0.041	754	0.002	0.005	1509

Data: Municipalities' account - DGFIP (Variation between 2008 and 2013)

Appendix B - Instrumental Variable

Figure 7: Earliest starting year of contracts

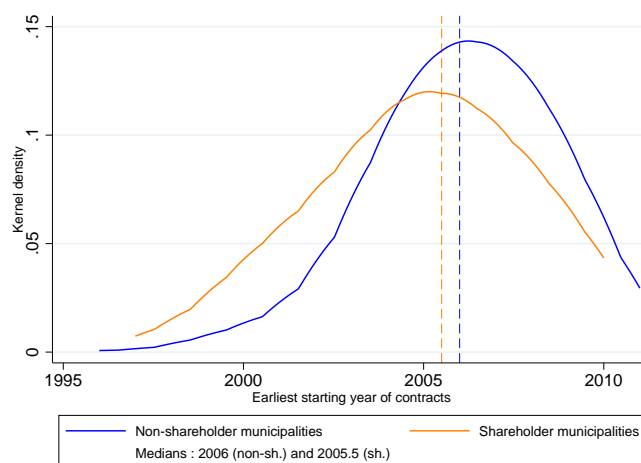


Figure 8: Share of emitted contracts in municipalities within the *CLF* capital

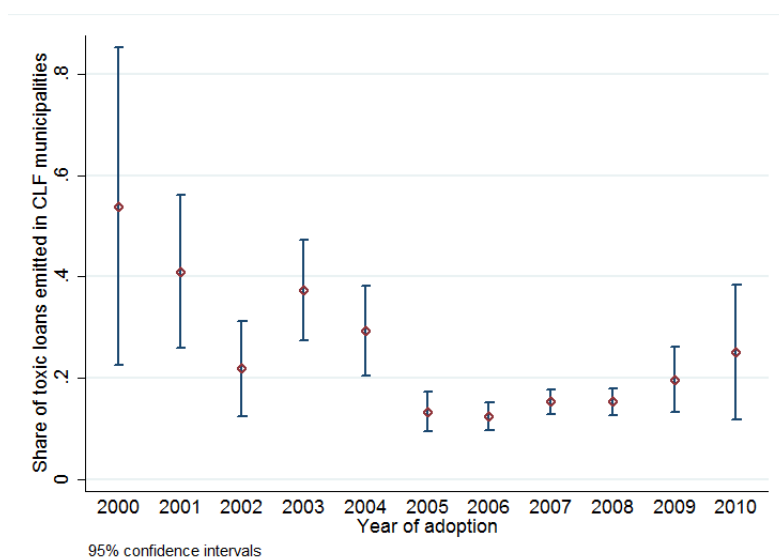


Table 16: IV Regression (Probit Stage)

$\mathbb{1}_{Toxic}$	(1)	(2)	(3)	(4)
Log of distance to closest CLF city	-.158*** (.029)	-.183*** (.032)	-.174*** (.033)	-.145*** (.036)
Marginal effect	-.030*** (.005)	-.028*** (.005)	-.026*** (.005)	-.020*** (.005)
Department FE	Y	Y	Y	Y
Urban Status	Y	Y	Y	Y
2000 Municipal budgets	N	Y	Y	Y
Incumbent Characteristics	N	N	Y	Y
Population Characteristics	N	N	N	Y
N	9181	9181	9181	9181
Chi2	1296.96	2476.32	2603.64	2832.18
P>Chi2	0.000	0.000	0.000	0.000

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of the immigrant population and its growth rate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix C - Main results

Table 17: Turnout and Electoral Results - OLS Regressions

	Turn.	Sh inc.'s party	Sh X	Sh XR	Sh Pop-XR	Sh XL	Sh Pop-XL
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
$\mathbb{1}_{Toxic}$	-.006*** (.002)	-2.174** (1.067)	1.127*** (.355)	.820*** (.198)	.816*** (.196)	.307 (.292)	2.729*** (.914)
Dep. FE	Y	Y	Y	Y	Y	Y	Y
Urban status	Y	Y	Y	Y	Y	Y	Y
2000 budgets	Y	Y	Y	Y	Y	Y	Y
Incum. char.	Y	Y	Y	Y	Y	Y	Y
Pop. char.	Y	Y	Y	Y	Y	Y	Y
N	9181	8101	9181	9181	9181	9181	9181
R2	.372	.222	.278	.211	.207	.244	.183

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of the immigrant population and its growth rate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 18: Turnout and Electoral Results - Reduced form

	Turn.	Sh inc.'s p.	Sh X	Sh XR	Sh Pop-XR	Sh XL	Sh Pop-XL
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
$\ln(\text{Dist to CLF mun})$	.004*** (.001)	-1.151* (.648)	-.449*** (.159)	-.234*** (.074)	-.208*** (.073)	-.215 (.143)	-.288 (.358)
Dep. FE	Y	Y	Y	Y	Y	Y	Y
Urban status	Y	Y	Y	Y	Y	Y	Y
2000 budgets	Y	Y	Y	Y	Y	Y	Y
Inc. char.	Y	Y	Y	Y	Y	Y	Y
Pop. char.	Y	Y	Y	Y	Y	Y	Y
N	9181	8101	9181	9181	9181	9181	9181
R2	.372	.222	.277	.208	.205	.244	.181

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of the immigrant population and its growth rate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 19: Probit-2SLS Sensitivity Analysis - Turnout

	Turnout (1)	Turnout (2)	Turnout (3)	Turnout (4)
$\mathbb{1}_{Toxic}$	-.052*** (.020)	-.047*** (.010)	-.048*** (.009)	-.017* (.009)
Dep. FE	Y	Y	Y	Y
Urban status	Y	Y	Y	Y
2000 budgets	N	Y	Y	Y
Inc. char.	N	N	Y	Y
Pop. char.	N	N	N	Y
N	9181	9181	9181	9181
R2	.285	.295	.299	.371

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of the immigrant population and its growth rate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 20: Probit-2SLS Sensitivity Analysis - Share of the incumbent's political party

	Sh. inc.'s party (1)	Sh. inc.'s party (2)	Sh. inc.'s party (3)	Sh. inc.'s party (4)
$\mathbb{1}_{Toxic}$	-28.093*** (10.891)	-18.938*** (5.115)	-20.614*** (4.705)	-19.988*** (4.677)
Dep. FE	Y	Y	Y	Y
Urban status	Y	Y	Y	Y
2000 budgets	N	Y	Y	Y
Inc. char.	N	N	Y	Y
Pop. char.	N	N	N	Y
N	8078	8078	8078	8078
R2	.107	.142	.192	.203

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of the immigrant population and its growth rate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 21: Probit-2SLS Sensitivity Analysis - Vote share for the far-right

	Sh. XR (1)	Sh. XR (2)	Sh. XR (3)	Sh. XR (4)
$\mathbb{1}_{Toxic}$	3.052*** (1.021)	4.235*** (.659)	4.025*** (.626)	3.534*** (.746)
Dep. FE	Y	Y	Y	Y
Urban status	Y	Y	Y	Y
2000 budgets	N	Y	Y	Y
Inc. char.	N	N	Y	Y
Pop. char.	N	N	N	Y
N	9181	9181	9181	9181
R2	.101	.083	.095	.172

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of the immigrant population and its growth rate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 22: Probit-2SLS Sensitivity Analysis - Vote share for the populist far-right

	Sh. Pop-XR (1)	Sh. Pop-XR (2)	Sh. Pop-XR (3)	Sh. Pop-XR (4)
$\mathbb{1}_{Toxic}$	2.846*** (1.005)	4.052*** (.646)	3.796*** (.612)	3.345*** (.729)
Dep. FE	Y	Y	Y	Y
Urban status	Y	Y	Y	Y
2000 budgets	N	Y	Y	Y
Inc. char.	N	N	Y	Y
Pop. char.	N	N	N	Y
N	9181	9181	9181	9181
R2	.098	.082	.096	.172

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of the immigrant population and its growth rate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 23: Probit-2SLS Sensitivity Analysis - Vote share for the far left

	Sh. X Left (1)	Sh. X Left (2)	Sh. X Left (3)	Sh. X Left (4)
$\mathbb{1}_{Toxic}$	5.833*** (1.808)	2.486** (1.099)	1.712* (.981)	.509 (1.036)
Dep. FE	Y	Y	Y	Y
Urban status	Y	Y	Y	Y
2000 budgets	N	Y	Y	Y
Inc. char.	N	N	Y	Y
Pop. char.	N	N	N	Y
N	9181	9181	9181	9181
R2	.032	.061	.225	.244

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of the immigrant population and its growth rate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 24: Probit-2SLS Sensitivity Analysis - Vote share for the populist far-left

	Sh. Pop-XL (1)	Sh. Pop-XL (2)	Sh. Pop-XL (3)	Sh. Pop-XL (4)
$\mathbb{1}_{Toxic}$	22.695*** (5.537)	17.423*** (2.987)	17.697*** (2.921)	11.532*** (3.097)
Dep. FE	Y	Y	Y	Y
Urban status	Y	Y	Y	Y
2000 budgets	N	Y	Y	Y
Inc. char.	N	N	Y	Y
Pop. char.	N	N	N	Y
N	9181	9181	9181	9181
R2	.03	.072	.079	.164

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of the immigrant population and its growth rate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 25: Turnout and Electoral Results - Standard-2SLS

	Turn.	Sh inc.'s p.	Sh X	Sh XR	Sh Pop-XR	Sh XL	Sh Pop-XL
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
$\mathbb{1}_{Toxic}$	-.203*** (.079)	65.427 (43.489)	21.278** (9.342)	11.083** (4.427)	9.875** (4.192)	10.195 (7.284)	13.636 (17.004)
<i>Dep. FE</i>	Y	Y	Y	Y	Y	Y	Y
<i>Urban status</i>	Y	Y	Y	Y	Y	Y	Y
<i>2000 budgets</i>	Y	Y	Y	Y	Y	Y	Y
<i>Incum. char</i>	Y	Y	Y	Y	Y	Y	Y
<i>Pop. char.</i>	Y	Y	Y	Y	Y	Y	Y
N	9181	8101	9181	9181	9181	9181	9181

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of the immigrant population and its growth rate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 26: Vote share for mainstream political parties - Probit-2SLS specification

	Sh. Left	Sh. Right	Sh. Green	Blank& Null
	(1)	(2)	(3)	(4)
$\mathbb{1}_{Toxic}$	-5.516 (3.438)	-2.761 (3.878)	.379 (.330)	-5.112*** (1.139)
<i>Dep. FE</i>	Y	Y	Y	Y
<i>Urban status</i>	Y	Y	Y	Y
<i>2000 budgets</i>	N	Y	Y	Y
<i>Inc. char.</i>	N	N	Y	Y
<i>Pop. char.</i>	N	N	N	Y
N	9181	9181	9181	9181
R2	.436	.408	.078	.149

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of the immigrant population and its growth rate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 27: Number of candidates and Likelihood of having a populist candidate - OLS specification

	Nb Cand	Inc. Cand	X Cand	XR C.	Pop-XR C.	XL C.	Pop-XL C.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
$\mathbb{1}_{Toric}$	.241*** (.037)	-.003 (.015)	.060*** (.013)	.036*** (.010)	.036*** (.010)	.036*** (.011)	.027*** (.009)
Dep. FE	Y	Y	Y	Y	Y	Y	Y
Urban status	Y	Y	Y	Y	Y	Y	Y
2000 budgets	Y	Y	Y	Y	Y	Y	Y
Inc. char.	Y	Y	Y	Y	Y	Y	Y
Pop. char.	Y	Y	Y	Y	Y	Y	Y
N	9181	9181	9181	9181	9181	9181	9181
R2	.44	.159	.346	.254	.253	.333	.183

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of the immigrant population and its growth rate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 28: Number of candidates and Likelihood of having a populist candidate - Standard 2SLS

	Nb cand.	Inc. Cand	X Cand	XR C.	Pop-XR C.	XL C.	Pop-XL C.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
$\mathbb{1}_{Toric}$	2.582*** (.989)	-.158 (.383)	.752** (.296)	.461** (.213)	.416** (.205)	.276 (.205)	.136 (.170)
Dep. FE	Y	Y	Y	Y	Y	Y	Y
Urban status	Y	Y	Y	Y	Y	Y	Y
2000 budgets	Y	Y	Y	Y	Y	Y	Y
Inc. char.	Y	Y	Y	Y	Y	Y	Y
Pop. char.	Y	Y	Y	Y	Y	Y	Y
N	9181	9181	9181	9181	9181	9181	9181

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of the immigrant population and its growth rate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 29: Probit-2SLS Sensitivity Analysis - Number of Candidacies

	Nb. Cand (1)	Nb. Cand (2)	Nb. Cand (3)	Nb. Cand (4)
$\mathbb{1}_{Toxic}$	1.846*** (.297)	1.453*** (.147)	1.467*** (.141)	.916*** (.150)
Dep. FE	Y	Y	Y	Y
Urban status	Y	Y	Y	Y
2000 budgets	N	Y	Y	Y
Inc. char.	N	N	Y	Y
Pop. char.	N	N	N	Y
N	9181	9181	9181	9181
R2	.13	.213	.224	.406

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of the immigrant population and its growth rate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 30: Probit-2SLS Sensitivity Analysis - Incumbent as Candidate

	$\mathbb{1}_{Incumbent}$ (1)	$\mathbb{1}_{Incumbent}$ (2)	$\mathbb{1}_{Incumbent}$ (3)	$\mathbb{1}_{Incumbent}$ (4)
$\mathbb{1}_{Toxic}$	.053 (.128)	.049 (.062)	-.017 (.056)	-.037 (.057)
Dep. FE	Y	Y	Y	Y
Urban status	Y	Y	Y	Y
2000 budgets	N	Y	Y	Y
Inc. char.	N	N	Y	Y
Pop. char.	N	N	N	Y
N	9181	9181	9181	9181
R2	.033	.036	.156	.158

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of the immigrant population and its growth rate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 31: Probit-2SLS Sensitivity Analysis - The far right

	XR Cand	XR Cand	XR Cand	XR Cand
	(1)	(2)	(3)	(4)
$\mathbb{1}_{Toxic}$	.180*** (.056)	.231*** (.033)	.219*** (.031)	.163*** (.039)
Dep. FE	Y	Y	Y	Y
Urban status	Y	Y	Y	Y
2000 budgets	N	Y	Y	Y
Inc. char.	N	N	Y	Y
Pop. char.	N	N	N	Y
N	9181	9181	9181	9181
R2	.096	.082	.096	.222

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of the immigrant population and its growth rate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 32: Probit-2SLS Sensitivity Analysis - The populist far-right

	Pop-XR Cand	Pop-XR Cand	Pop-XR Cand	Pop-XR Cand
	(1)	(2)	(3)	(4)
$\mathbb{1}_{Toxic}$	.173*** (.055)	.225*** (.033)	.212*** (.031)	.158*** (.038)
Dep. FE	Y	Y	Y	Y
Urban status	Y	Y	Y	Y
2000 budgets	N	Y	Y	Y
Inc. char.	N	N	Y	Y
Pop. char.	N	N	N	Y
N	9181	9181	9181	9181
R2	.096	.081	.097	.223

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of the immigrant population and its growth rate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 33: Probit-2SLS Sensitivity Analysis - The far left

	X-Left Cand (1)	X-Left Cand (2)	X-Left Cand (3)	X-Left Cand (4)
$\mathbb{1}_{Toxic}$	.334*** (.067)	.294*** (.037)	.295*** (.036)	.191*** (.041)
Dep. FE	Y	Y	Y	Y
Urban status	Y	Y	Y	Y
2000 budgets	N	Y	Y	Y
Inc. char.	N	N	Y	Y
Pop. char.	N	N	N	Y
N	9181	9181	9181	9181
R2	.072	.105	.15	.298

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of the immigrant population and its growth rate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 34: Probit-2SLS Sensitivity Analysis - The populist far-left

	Pop-XL Cand (1)	Pop-XL Cand (2)	Pop-XL Cand (3)	Pop-XL Cand (4)
$\mathbb{1}_{Toxic}$	.227*** (.055)	.174*** (.030)	.177*** (.029)	.115*** (.031)
Dep. FE	Y	Y	Y	Y
Urban status	Y	Y	Y	Y
2000 budgets	N	Y	Y	Y
Inc. char.	N	N	Y	Y
Pop. char.	N	N	N	Y
N	9181	9181	9181	9181
R2	.03	.072	.079	.164

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of the immigrant population and its growth rate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 35: Mainstream candidate entry - Probit-2SLS specification

	Left cand.	Center cand	Right cand	Green cand
	(1)	(2)	(3)	(4)
$\mathbb{1}_{Toxic}$	.022 (.049)	-.009 (.023)	.052 (.053)	.015 (.012)
<i>Dep. FE</i>	Y	Y	Y	Y
<i>Urban status</i>	Y	Y	Y	Y
<i>2000 budgets</i>	Y	Y	Y	Y
<i>Inc. char.</i>	Y	Y	Y	Y
<i>Pop. char.</i>	Y	Y	Y	Y
N	9181	9181	9181	9181
R2	.106	.054	.099	.04

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of the immigrant population and its growth rate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 36: Heterogeneity with median income and tax revenues - Number of candidates and Likelihood of having a populist candidate

	Nb. Cand	Inc. C.	X C.	XR C.	Pop-XR C.	XL C.	Pop-XL C.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
$\mathbb{1}_{Toxic}$	.813*** (.150)	-.008 (.057)	.176*** (.046)	.105*** (.036)	.103*** (.036)	.157*** (.039)	.079** (.033)
Med. inc.	-.009 (.010)	.0009 (.005)	-.004 (.003)	.010*** (.002)	.010*** (.002)	-.011*** (.002)	-.003* (.002)
$\mathbb{1}_{Toxic} \times$ Med inc	-.042** (.021)	.008 (.008)	-.024*** (.007)	-.020*** (.006)	-.019*** (.006)	-.013** (.006)	-.0005 (.006)
Tax rev.	.046*** (.012)	.007 (.006)	.002 (.003)	.0006 (.003)	.001 (.003)	-.002 (.003)	-.004 (.003)
$\mathbb{1}_{Toxic} \times$ Tax rev	.061 (.046)	-.014 (.015)	.047*** (.014)	.033*** (.012)	.031*** (.012)	.021 (.013)	.022* (.012)
Exp.	-.016 (.014)	.007 (.006)	.005 (.004)	.002 (.003)	.002 (.003)	.004 (.003)	-.0007 (.002)
$\mathbb{1}_{Toxic} \times$ Exp	-.076 (.056)	.001 (.019)	-.052*** (.014)	-.034*** (.012)	-.032*** (.012)	-.028** (.012)	-.020* (.011)
Dep. FE	Y	Y	Y	Y	Y	Y	Y
Urban status	Y	Y	Y	Y	Y	Y	Y
2000 budgets	Y	Y	Y	Y	Y	Y	Y
Inc. char.	Y	Y	Y	Y	Y	Y	Y
Pop. char.	Y	Y	Y	Y	Y	Y	Y
N	9181	9181	9181	9181	9181	9181	9181
R2	.413	.158	.325	.24	.24	.307	.172

Tax revenues and equipment expenditure, both defined per capita, are found in the 2000 municipal budget. Historical median income per capita was collected in 2001.

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, share of the immigrant population and its growth rate during the last electoral mandate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 37: Heterogeneity with median income and tax revenues - Turnout and Vote shares

	Turn. (1)	Sh inc's p. (2)	Sh X (3)	Sh XR (4)	Sh Pop-XR (5)	Sh XL (6)	Sh Pop-XL (7)
$\mathbb{1}_{Toxic}$	-.013 (.009)	-20.843*** (4.664)	3.019** (1.334)	2.469*** (.691)	2.400*** (.684)	.551 (1.120)	7.863** (3.316)
Med. inc.	-.003*** (.0009)	1.288*** (.428)	-.008 (.080)	.231*** (.041)	.218*** (.041)	-.239*** (.068)	-.337* (.191)
$\mathbb{1}_{Toxic} \times$ Med inc	.005*** (.001)	.924 (.571)	-.793*** (.211)	-.575*** (.116)	-.548*** (.113)	-.218 (.181)	-.053 (.585)
Tax rev.	.0003 (.001)	-.411 (.490)	.071 (.122)	-.011 (.052)	-.002 (.051)	.083 (.109)	-.375 (.253)
$\mathbb{1}_{Toxic} \times$ Tax rev	-.002 (.002)	.400 (1.239)	.624 (.445)	.627*** (.232)	.563** (.224)	-.003 (.397)	2.169* (1.168)
Exp.	.004*** (.001)	.645 (.533)	.258* (.156)	.067 (.057)	.062 (.056)	.192 (.144)	-.065 (.246)
$\mathbb{1}_{Toxic} \times$ Exp	.004 (.003)	1.113 (1.503)	-1.151** (.452)	-.882*** (.234)	-.855*** (.232)	-.269 (.384)	-2.027* (1.095)
Dep. FE	Y	Y	Y	Y	Y	Y	Y
Urban status	Y	Y	Y	Y	Y	Y	Y
2000 budgets	Y	Y	Y	Y	Y	Y	Y
Inc. char.	Y	Y	Y	Y	Y	Y	Y
Pop. char.	Y	Y	Y	Y	Y	Y	Y
N	9181	8078	9181	9181	9181	9181	9181
R2	.369	.202	.269	.187	.184	.242	.172

Tax revenues and equipment expenditure, both defined per capita, are found in the 2000 municipal budget. Historical median income per capita was collected in 2001.

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, share of the immigrant population and its growth rate during the last electoral mandate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 38: IV Regressions: Electoral entry and heterogeneous effects (Unemployment rate, Local taxation, Capital municipal expenditure)

	Nb. Cand	Inc. C.	X C.	XR C.	Pop-XR C.	XL C.	Pop-XL C.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
$\mathbb{1}_{Toxic}$	.685*** (.152)	.0002 (.062)	.128*** (.045)	.037 (.036)	.036 (.035)	.148*** (.039)	.075** (.034)
Unemp.	1.188*** (.321)	.357** (.165)	.190** (.096)	-.164** (.068)	-.156** (.067)	.293*** (.083)	.133* (.069)
$\mathbb{1}_{Toxic} \times$ Unemp.	2.677*** (.997)	-.503 (.357)	1.463*** (.338)	1.767*** (.297)	1.744*** (.295)	.504* (.294)	.144 (.252)
Tax rev.	.049*** (.012)	.007 (.006)	.003 (.003)	.004 (.003)	.004 (.003)	-.003 (.003)	-.004 (.003)
$\mathbb{1}_{Toxic} \times$ Tax rev.	.051 (.046)	-.010 (.015)	.042*** (.014)	.025** (.012)	.023** (.011)	.021 (.013)	.022* (.012)
Exp.	-.015 (.015)	.008 (.007)	.005 (.004)	.002 (.003)	.002 (.003)	.005 (.003)	-.0004 (.003)
$\mathbb{1}_{Toxic} \times$ Exp.	-.075 (.060)	-.004 (.020)	-.050*** (.016)	-.030** (.013)	-.029** (.013)	-.028** (.013)	-.021* (.012)
Dep. FE	Y	Y	Y	Y	Y	Y	Y
Urban status	Y	Y	Y	Y	Y	Y	Y
2000 budgets	Y	Y	Y	Y	Y	Y	Y
Inc. char.	Y	Y	Y	Y	Y	Y	Y
Pop. char.	Y	Y	Y	Y	Y	Y	Y
N	9181	9181	9181	9181	9181	9181	9181
R2	.422	.159	.331	.244	.243	.307	.174

Tax revenues and equipment expenditure, both defined per capita, are found in the 2000 municipal budget. Historical undemployment rate is delivered by the 1999 Cenus.

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, share of the immigrant population and its growth rate during the last electoral mandate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 39: Heterogeneity with median income and housing tax rates - Number of candidates and Likelihood of having an populist candidate

	Nb. Cand	Inc. C.	X C.	XR C.	Pop-XR C.	XL C.	Pop-XL C.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
$\mathbb{1}_{Toxic}$	.914*** (.148)	-.0005 (.058)	.213*** (.046)	.116*** (.037)	.109*** (.036)	.131*** (.039)	.086*** (.031)
Med. inc.	-.006 (.010)	.002 (.005)	-.004* (.003)	.010*** (.002)	.009*** (.002)	-.011*** (.002)	-.004** (.002)
$\mathbb{1}_{Toxic} \times$ Med. inc.	-.030 (.021)	.008 (.008)	-.019*** (.007)	-.017*** (.005)	-.016*** (.005)	-.010 (.006)	.003 (.006)
Housing τ	.015*** (.003)	-.0003 (.002)	.002** (.001)	.0004 (.0007)	.0005 (.0007)	.0008 (.0009)	.0001 (.0008)
$\mathbb{1}_{Toxic} \times$ Housing τ	-.001 (.014)	-.002 (.005)	.013*** (.004)	.012*** (.004)	.012*** (.004)	.015*** (.004)	.008* (.004)
Exp.	-.022* (.013)	.009 (.006)	-.001 (.004)	-.002 (.003)	-.002 (.003)	.0006 (.003)	-.003 (.002)
$\mathbb{1}_{Toxic} \times$ Exp.	-.015 (.034)	-.008 (.014)	-.011 (.009)	-.006 (.008)	-.006 (.008)	-.006 (.006)	-.003 (.006)
Dep. FE	Y	Y	Y	Y	Y	Y	Y
Urban status	Y	Y	Y	Y	Y	Y	Y
2000 budgets	Y	Y	Y	Y	Y	Y	Y
Inc. char.	Y	Y	Y	Y	Y	Y	Y
Pop. char.	Y	Y	Y	Y	Y	Y	Y
N	9181	9181	9181	9181	9181	9181	9181
R2	.407	.158	.317	.233	.233	.314	.172

Data on equipment expenditure per capita are found in the 2000 municipal budget. Historical median income per capita was collected in 2001. Housing tax rate is given by the 2002 fiscal record. Note that 2002 is the first year the record has been made publicly available.

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, share of the immigrant population and its growth rate during the last electoral mandate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 40: Heterogeneity median income and property tax rates on developed land - Number of candidates and Likelihood of having a populist candidate

	Nb. Cand	Inc. C.	X C.	XR C.	P-XR C.	XL C.	P-XL C.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
$\mathbb{1}_{Toxic}$	.932*** (.164)	-.023 (.061)	.211*** (.050)	.127*** (.040)	.118*** (.040)	.154*** (.041)	.093*** (.032)
Med Inc.	-.006 (.010)	.002 (.005)	-.004* (.003)	.010*** (.002)	.009*** (.002)	-.011*** (.002)	-.004** (.002)
$\mathbb{1}_{Toxic} \times$ Med Inc.	-.027 (.021)	.007 (.008)	-.015** (.007)	-.015*** (.005)	-.014*** (.005)	-.006 (.006)	.004 (.006)
Property τ (DL)	.008*** (.002)	.001 (.001)	.003*** (.0006)	.0003 (.0005)	.0003 (.0005)	.002*** (.0006)	.0006 (.0005)
$\mathbb{1}_{Toxic} \times$ Property τ (DL)	-.002 (.010)	.0002 (.003)	.007** (.003)	.005* (.003)	.005** (.003)	.006** (.003)	.003 (.003)
Exp.	-.023* (.013)	.009 (.006)	-.0007 (.004)	-.001 (.003)	-.001 (.003)	.001 (.003)	-.003 (.002)
$\mathbb{1}_{Toxic} \times$ Exp.	-.017 (.036)	-.007 (.015)	-.012 (.009)	-.010 (.009)	-.010 (.009)	-.006 (.007)	-.002 (.006)
Dep. FE	Y	Y	Y	Y	Y	Y	Y
Urban status	Y	Y	Y	Y	Y	Y	Y
2000 budgets	Y	Y	Y	Y	Y	Y	Y
Inc. char.	Y	Y	Y	Y	Y	Y	Y
Pop. char.	Y	Y	Y	Y	Y	Y	Y
N	9181	9181	9181	9181	9181	9181	9181
R2	.405	.159	.321	.234	.235	.311	.171

Data on equipment expenditure per capita are found in the 2000 municipal budget. Historical median income per capita was collected in 2001. Property tax rate on builded land is given by the 2002 fiscal record. Note that 2002 is the first year the record has been made publicly available.

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, share of the immigrant population and its growth rate during the last electoral mandate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 41: Heterogeneity median income and property tax rates on undeveloped land - Number of candidates and Likelihood of having an extreme candidate

	Nb. C	Inc. C	X C	XR C	P-XR C	XL C	P-XL C
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
$\mathbb{1}_{Toxic}$	.961*** (.156)	-.018 (.057)	.255*** (.052)	.156*** (.041)	.151*** (.040)	.183*** (.042)	.095*** (.031)
Med Inc.	-.006 (.010)	.002 (.005)	-.005* (.003)	.009*** (.002)	.009*** (.002)	-.011*** (.002)	-.004** (.002)
$\mathbb{1}_{Toxic} \times$ Med Inc.	-.035* (.021)	.006 (.008)	-.021*** (.007)	-.017*** (.006)	-.017*** (.006)	-.012** (.006)	.001 (.006)
Prop. τ (NBL)	.002*** (.0007)	.0002 (.0003)	.0006*** (.0002)	.00003 (.0002)	.00003 (.0002)	.0005*** (.0002)	.0001 (.0002)
$\mathbb{1}_{Toxic} \times$ Prop. τ (NBL)	-.002 (.002)	-.0004 (.0008)	.0004 (.0008)	.0003 (.0007)	.0004 (.0007)	.0008 (.0007)	.002** (.0007)
Exp.	-.025* (.013)	.008 (.006)	-.001 (.004)	-.001 (.003)	-.001 (.003)	.001 (.003)	-.004 (.002)
$\mathbb{1}_{Toxic} \times$ Exp.	-.014 (.038)	-.008 (.015)	-.015 (.010)	-.011 (.009)	-.011 (.009)	-.010 (.007)	-.004 (.006)
Dep. FE	Y	Y	Y	Y	Y	Y	Y
Urban status	Y	Y	Y	Y	Y	Y	Y
2000 budgets	Y	Y	Y	Y	Y	Y	Y
Inc. char.	Y	Y	Y	Y	Y	Y	Y
Pop. char.	Y	Y	Y	Y	Y	Y	Y
N	9181	9181	9181	9181	9181	9181	9181
R2	.402	.158	.308	.225	.225	.303	.168

Data on equipment expenditure per capita are found in the 2000 municipal budget. Historical median income per capita was collected in 2001. Property tax rate on non-built land is given by the 2002 fiscal record. Note that 2002 is the first year the record has been made publicly available.

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, share of the immigrant population and its growth rate during the last electoral mandate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 42: Heterogeneity with median Income and property tax rate on undeveloped land - Turnout and Electoral Results

	Turn.	Sh inc.'s p.	Sh X	Sh XR	Sh P-XR	Sh XL	Sh P-XL
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
$\mathbb{1}_{Toxic}$	-.018* (.009)	-19.061*** (4.553)	4.204*** (1.322)	3.329*** (.739)	3.151*** (.723)	.875 (1.025)	9.520*** (3.074)
Med. inc	-.003*** (.0009)	1.266*** (.425)	-.011 (.080)	.211*** (.039)	.200*** (.039)	-.222*** (.068)	-.441** (.191)
$\mathbb{1}_{Toxic} \times$ Med. inc	.005*** (.001)	.797 (.552)	-.795*** (.207)	-.526*** (.111)	-.506*** (.109)	-.269 (.173)	.099 (.582)
Prop τ (NBL)	.00003 (.00006)	.004 (.030)	.030*** (.008)	-.0003 (.003)	-.0004 (.003)	.030*** (.007)	.013 (.015)
$\mathbb{1}_{Toxic} \times$ Prop τ (NBL)	-.0001 (.0001)	-.071 (.058)	.013 (.020)	.019 (.013)	.021 (.013)	-.006 (.016)	.150** (.066)
Exp.	.004*** (.001)	.718 (.495)	.173 (.145)	-.016 (.050)	-.015 (.050)	.189 (.136)	-.356 (.224)
$\mathbb{1}_{Toxic} \times$ Exp.	.002 (.002)	.828 (1.096)	-.555* (.301)	-.407** (.159)	-.422*** (.158)	-.148 (.269)	-.393 (.648)
Dep. FE	Y	Y	Y	Y	Y	Y	Y
Urban status	Y	Y	Y	Y	Y	Y	Y
2000 budgets	Y	Y	Y	Y	Y	Y	Y
Inc. char.	Y	Y	Y	Y	Y	Y	Y
Pop. char.	Y	Y	Y	Y	Y	Y	Y
N	9181	8078	9181	9181	9181	9181	9181
R2	.369	.204	.268	.174	.173	.245	.168

Data on equipment expenditure per capita are found in the 2000 municipal budget. Historical median income per capita was collected in 2001. Property tax rate on non-built land is given by the 2002 fiscal record. Note that 2002 is the first year the record has been made publicly available.

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, share of the immigrant population and its growth rate during the last electoral mandate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 43: Heterogeneity with Migration rate - Number of candidates and Likelihood of having an extreme candidate (with controls)

	Nb C.	Inc. C.	X C.	XR C.	Pop-XR C.	XL C.	Pop-XL C.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
$\mathbb{1}_{Toxic}$	.842*** (.143)	-.025 (.058)	.225*** (.045)	.172*** (.037)	.168*** (.036)	.152*** (.037)	.092*** (.029)
Migr. rate	-.083 (.551)	.096 (.281)	.204 (.161)	.043 (.116)	.034 (.114)	.227 (.142)	.072 (.116)
$\mathbb{1}_{Toxic} \times \text{Migr. rate}$	1.408 (2.090)	.867 (.691)	-1.223* (.634)	-2.287*** (.513)	-2.402*** (.511)	-.150 (.622)	.143 (.612)
Migr. Δ	.132* (.071)	.030 (.041)	-.025 (.017)	-.026** (.012)	-.025** (.012)	-.021 (.014)	-.006 (.012)
$\mathbb{1}_{Toxic} \times \text{Migr. } \Delta$	.346 (.533)	-.376* (.196)	.680*** (.171)	.590*** (.137)	.598*** (.137)	.445*** (.154)	.202 (.144)
Dep. FE	Y	Y	Y	Y	Y	Y	Y
Urban status	Y	Y	Y	Y	Y	Y	Y
2000 budgets	Y	Y	Y	Y	Y	Y	Y
Inc. char.	Y	Y	Y	Y	Y	Y	Y
Pop. char.	Y	Y	Y	Y	Y	Y	Y
N	9181	9181	9181	9181	9181	9181	9181
R2	.41	.158	.306	.213	.213	.3	.168

Migration rate is computed from the 2011 Census. Growth rate of the immigrant population correspond to the evolution of the migration rate between the 2006 and 2011 Census. Note that the 2006 Census was conducted between 2004 and 2008 while the 2011 Census was conducted between 2008 and 2013.

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market and the 2001 median income value. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 44: Falsification Test - Entry of Candidates in 2008

	$\mathbb{1}_{Toxic}$	Nb Cand	Inc Cand	X Cand	Pop-XR Cand	XL Cand
	(1)	(2)	(3)	(4)	(5)	(6)
$\mathbb{1}_{Toxic}$		.039 (.728)	-.024 (.272)	.155 (.213)	-.153 (.106)	.241 (.213)
ln(Dist. to CLF cities)	-.117** (.054)					
Dep. FE	Y	Y	Y	Y	Y	Y
Urban status	Y	Y	Y	Y	Y	Y
2000 budgets	Y	Y	Y	Y	Y	Y
Inc. char.	Y	Y	Y	Y	Y	Y
Pop. char.	Y	Y	Y	Y	Y	Y
N	2138	2138	2138	2138	2138	2138

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2006 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value and the share of the immigrant population. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 45: Falsification Test - Electoral Results in 2008

	$\mathbb{1}_{Toxic}$	Turn.	Sh. inc's party	Sh. Pop-XR	Sh XL	Sh R	Sh L
		(1)	(2)	(3)	(4)	(5)	(6)
$\mathbb{1}_{Toxic}$		-.094** (.046)	-3.342 (14.738)	-1.239 (.907)	.805 (5.981)	2.156 (13.633)	6.640 (14.294)
ln(Dist. to CLF cities)	-.117** (.054)						
Dep. FE	Y	Y	Y	Y	Y	Y	Y
Urban status	Y	Y	Y	Y	Y	Y	Y
2000 budgets	Y	Y	Y	Y	Y	Y	Y
Inc. char.	Y	Y	Y	Y	Y	Y	Y
Pop. char.	Y	Y	Y	Y	Y	Y	Y
N	2138	2138	1938	2138	2138	2138	2138

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2006 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value and the share of the immigrant population. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 46: Toxic loans and Rise in taxation -Probit/2SLS

	$\Delta\tau$ rev.	$\Delta\tau$ rev.	$\Delta\tau_{Hous.}$	$\Delta\tau_{Hous.}$	$\Delta\tau_{PDL}$	$\Delta\tau_{PDL}$	$\Delta\tau_{PNDL}$	$\Delta\tau_{PNDL}$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\mathbb{1}_{Toxic}$	-.029 (.058)	-.015 (.031)	-.628*** (.122)	-.157** (.065)	.003 (.034)	-.026 (.021)	-.095*** (.033)	-.052*** (.019)
Dep. FE	Y	Y	Y	Y	Y	Y	Y	Y
Urban status	Y	Y	Y	Y	Y	Y	Y	Y
2000 budgets	N	Y	N	Y	N	Y	N	Y
Inc. char.	N	Y	N	Y	N	Y	N	Y
Pop. char.	N	Y	N	Y	N	Y	N	Y
N	9175	9175	9179	9179	9179	9179	9178	9178
R2	.073	.135	.003	.142	.021	.048	.	.048

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of immigrants and its growth rate during the last electoral mandate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 47: Toxic loans and Employment - Probit/2SLS

	Δ Firm closure	Δ Firm closure	Δ Unemployment	Δ Unemployment
	(1)	(2)	(3)	(4)
$\mathbb{1}_{Toxic}$	.300 (.300)	-.054 (.160)	-.002 (.087)	-.066* (.036)
Dep. FE	Y	Y	Y	Y
Urban status	Y	Y	Y	Y
2000 budgets	N	Y	N	Y
Inc. char.	N	Y	N	Y
Pop. char.	N	Y	N	Y
N	8281	8281	9181	9181
R2	.055	.071	.046	.142

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of immigrants and its growth rate during the last electoral mandate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 48: IV Regressions: Intensity of treatment - Heckman two-step bivariate sample-selection model (with controls)

	$\mathbb{1}_{Toxic}$	Overhead ratio	$\mathbb{1}_{Toxic}$	Overhead debt ratio
	(1)	(2)	(3)	(4)
Log of distance to closest CLF city	-.147*** (.036)		-.148*** (.036)	
$\mathbb{1}_{CHF \quad Toxic \quad loan}$		.147*** (.006)		.690*** (.029)
Dep. FE		Y		Y
Urban status		Y		Y
Hist. budgets		Y		Y
Inc. char.		Y		Y
Pop. char.		Y		Y
N		9187		9186
Wald Chi 2		1063.47		998.04
P > Chi 2		.000		.000

The overhead ratio is the total overhead (due to the increased in the interest rate) divided by the initial amount of the loan. The overhead debt ratio is the total overhead divided by annual replacements. These variables (i.e. the intensity of treatment) are instrumented by the presence of structured loan(s) based on the Swiss Franc exchange rate.

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of immigrants and its growth rate during the last electoral mandate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 49: IV Regressions: Electoral supply and continuous treatment (Overhead ratio)

	Nb Cand	X C.	Inc C.	Sh inc's p.	Sh Pop-XR	Sh Pop-XL
	(1)	(2)	(3)	(4)	(5)	(6)
$\mathbb{1}_{Toxic}$	1.130*** (.165)	.285*** (.048)	.004 (.085)	-24.331*** (6.983)	3.251*** (.705)	12.966*** (3.398)
$\mathbb{1}_{Toxic}$ X Overhead ratio	-1.523** (.615)	-.211 (.178)	-.250 (.318)	40.569 (25.215)	1.015 (2.634)	-10.733 (12.696)
Dep. FE	Y	Y	Y	Y	Y	Y
Urban status	Y	Y	Y	Y	Y	Y
Hist. budgets	Y	Y	Y	Y	Y	Y
Inc. char.	Y	Y	Y	Y	Y	Y
Pop. char.	Y	Y	Y	Y	Y	Y
N	9187	9187	9187	8104	9187	9187
F	41.87	28.667	10.883	15.126	14.656	12.536

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of immigrants and its growth rate during the last electoral mandate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 50: Candidate entry and the information channel

	Nb Cand	Inc C.	X C.	XR C.	Pop-XR C.	XL C.	Pop-XL C.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
$\mathbb{1}_{Toxic}$	.868*** (.158)	-.044 (.057)	.231*** (.049)	.144*** (.038)	.139*** (.037)	.178*** (.041)	.116*** (.031)
Share 3Mb+	-.070* (.041)	-.035 (.023)	-.017* (.010)	-.010 (.007)	-.007 (.006)	-.011 (.008)	-.002 (.006)
$\mathbb{1}_{Toxic}$ x Share 3Mb+	.458 (.531)	.024 (.141)	.294** (.131)	.226** (.100)	.223** (.099)	.134 (.117)	-.021 (.094)
Dep. FE	Y	Y	Y	Y	Y	Y	Y
Urban status	Y	Y	Y	Y	Y	Y	Y
2000 budgets	Y	Y	Y	Y	Y	Y	Y
Inc. char.	Y	Y	Y	Y	Y	Y	Y
Pop. char.	Y	Y	Y	Y	Y	Y	Y
N	9181	9181	9181	9181	9181	9181	9181
R2	.408	.158	.31	.226	.226	.301	.164

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of immigrants and its growth rate during the last electoral mandate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 51: Ex-post toxicity of the loan - Overhead Debt ratio (with controls)

	Nb C.	Inc C.	Sh inc's p.	P-XR C.	Sh P-XR	P-XL C.	Sh P-XL
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
$\mathbb{1}_{Toxic}$	1.067*** (.148)	.018 (.077)	-22.535*** (6.285)	.169*** (.032)	3.232*** (.635)	.126*** (.031)	12.625*** (3.060)
$\mathbb{1}_{Toxic}$ X Over. debt rat.	-.301** (.126)	-.094 (.065)	7.489 (5.203)	-.021 (.028)	.238 (.541)	-.020 (.026)	-2.036 (2.606)
Dep. FE	Y	Y	Y	Y	Y	Y	Y
Urban status	Y	Y	Y	Y	Y	Y	Y
Hist. budgets	Y	Y	Y	Y	Y	Y	Y
Inc. char.	Y	Y	Y	Y	Y	Y	Y
Pop. char.	Y	Y	Y	Y	Y	Y	Y
N	9186	9186	8103	9186	9186	9186	9186
F	42.098	10.893	15.138	18.867	14.674	12.51	12.51

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of immigrants and its growth rate during the last electoral mandate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 52: Press - The mayor vs. the opposition

	Freq.	Percent
# of art. where only the mayor is mentioned	146	26.12
# of art. where the opposition is mentioned	413	73.88

Among the 559 articles where the status of the participants is mentioned, 73% concern the opposition while 26% concern the mayor only.

Table 53: Toxic loans and Press Coverage - Probit/2SLS

	Cov Inc (1)	Cov XR (2)	Cov Pop-XR (3)	Cov XL (4)	Cov Pop-XL (5)
$\mathbb{1}_{Toxic}$	-.095** (.044)	.025*** (.007)	.022*** (.006)	.018 (.014)	.140*** (.027)
Dep. FE	Y	Y	Y	Y	Y
Urban status	Y	Y	Y	Y	Y
2000 budgets	Y	Y	Y	Y	Y
Inc. char.	Y	Y	Y	Y	Y
Pop. char.	Y	Y	Y	Y	Y
N	6631	9180	9180	9181	9181
R2	.394	.043	.041	.247	.183

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of immigrants and its growth rate during the last electoral mandate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure 9: Magnitude of Coefficient values - Electoral results

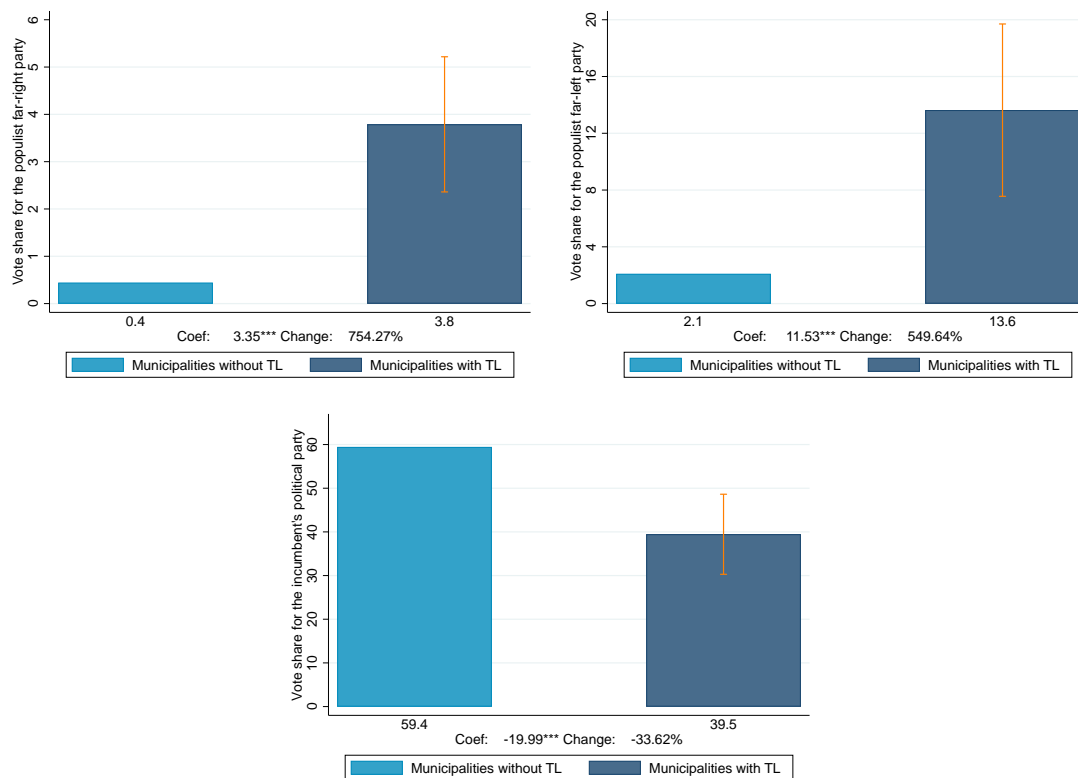
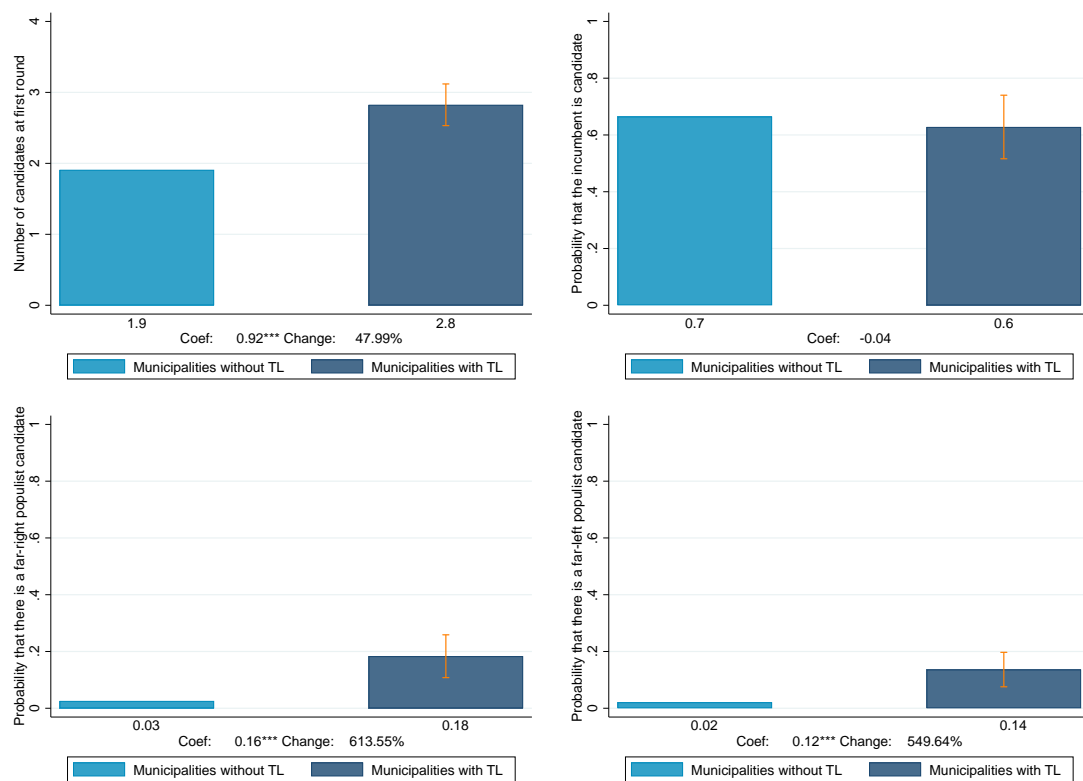


Figure 10: Magnitude of Coefficient values - Number of candidates and Likelihood of having a populist candidate



Appendix D - The role of information: Layout of the *Libération* map

Since the treatment is based on information released through an online map, its effect on the political arena might be channeled through the specific features of the map.

In this section, we test whether the layout of the *Libération* map itself plays a role on populism and populist candidacies. Municipalities with toxic loan(s) were represented by dots of different colors depending on the amount of the overhead ratio: green for a few negative ones, yellow for ratios between 0% and 10%, orange for ratios between 10% and 20%, red for ratios between 20% and 50%, and brown for ratios above 50%. While we do not find any effect of the overhead ratio, it might have been that the color of the dot influenced *per se* the entry decision of politicians (especially since the overhead ratios were available only after clicking on the dots). To test this hypothesis, we run Regression Discontinuity Designs where our treatment is the discontinuous change of color around the two most important thresholds of the overall overhead ratio: 10% (from yellow to orange) and 20% (from orange to red). Figures 11 and 12 show graphically how the main outcome variables vary respectively at the 10% and 20% thresholds of the overhead ratio. We graphically find no evidence of discontinuous variations of the number of candidacies, the entry of extreme lists and the presence of the incumbent, neither at the 10% nor at the 20% threshold.⁴⁶ We confirm this absence of effect in Table 54, where we estimate the discontinuity of the outcome variables at both thresholds, following optimal bandwidth computation developed by Calonico et al. (2014) and using a fourth-order polynomial and a triangular kernel.

⁴⁶Our graphical results suggest as well the absence of clear trends of these outcome variables depending on the overhead ratio.

Table 54: Regression Discontinuity Design: Color of the dots

	(1)	(2)	(3)	(4)	(5)
10% Threshold	Nb. cand.	X list	FN list	X-Left list	$\mathbb{1}_{Incumbent}$
10% Threshold - Yellow to Orange	0.288 (0.452)	-0.111 (0.153)	-0.021 (0.124)	-0.146 (0.125)	0.240 (0.148)
Bandwidth	0.073	0.060	0.061	0.062	0.061
N (Left)	789	726	731	736	735
N (Right)	430	391	396	397	396
	(1)	(2)	(3)	(4)	(5)
20% Threshold	Nb. cand.	X list	FN list	X-Left list	$\mathbb{1}_{Incumbent}$
20% Threshold - Orange to Red	0.683 (0.943)	0.158 (0.272)	-0.032 (0.257)	0.306 (0.261)	-0.314 (0.213)
Bandwidth	0.127	0.130	0.144	0.122	0.111
N (Left)	875	921	1068	806	630
N (Right)	130	130	142	128	121

The table presents the results of an RD estimation with an optimal bandwidth calculated using the [Calonico et al. \(2014\)](#).

We employ a triangular kernel and control for an order-four polynomial of the overhead ratio.

Robust standard error.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Figure 11: Regression Discontinuity Design: 10% threshold of the overhead ratio (Yellow to Orange)

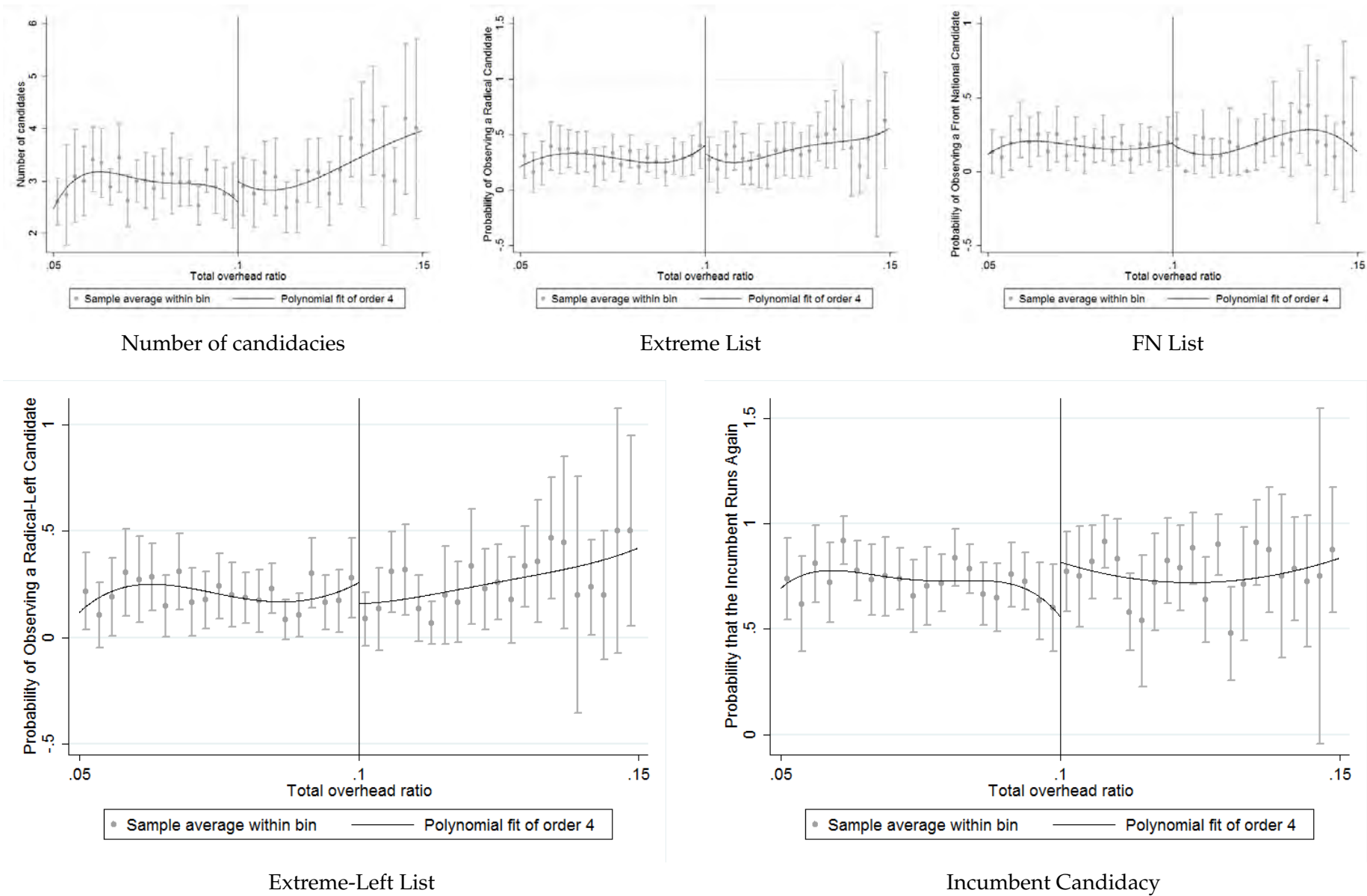
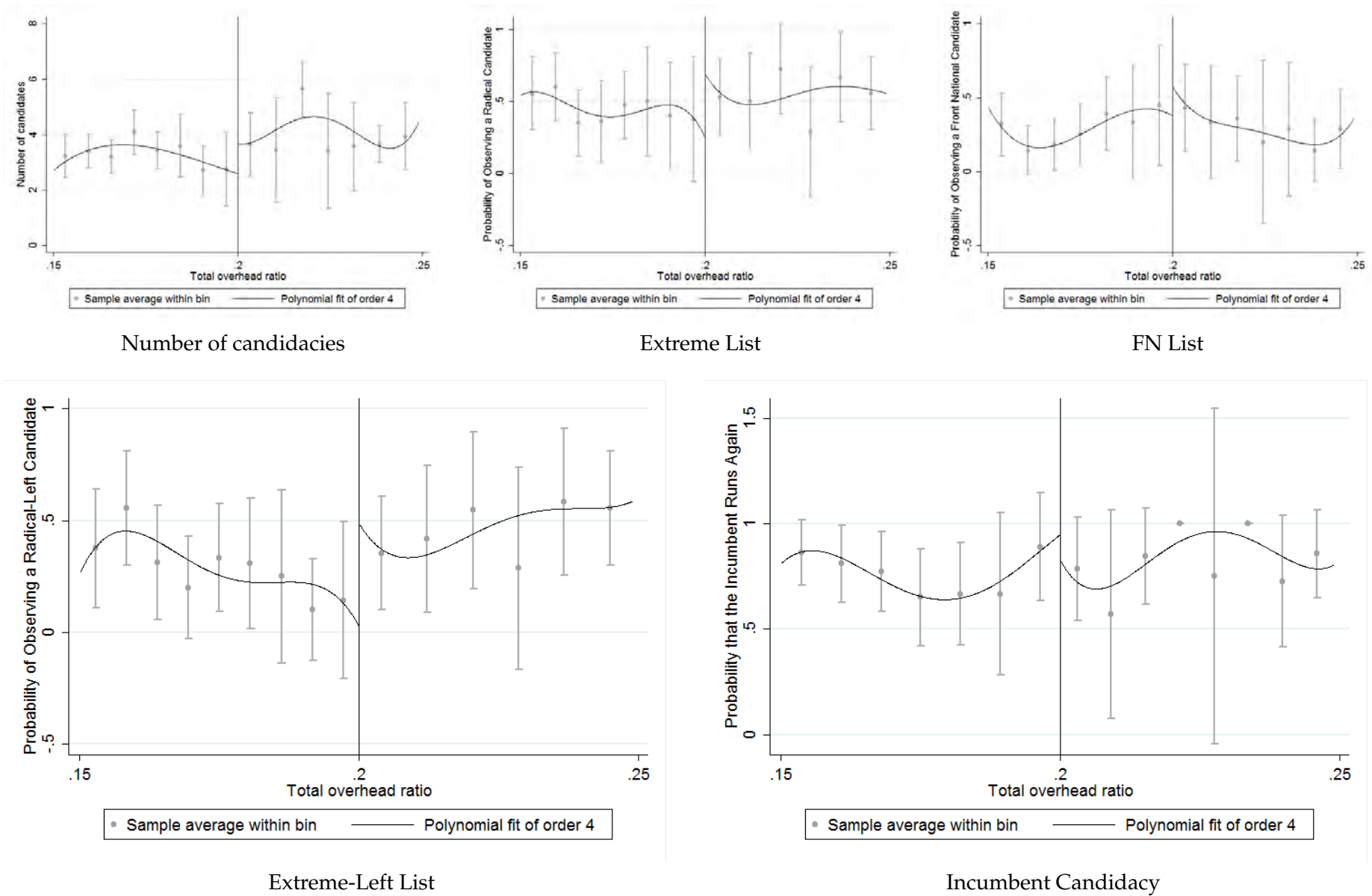


Figure 12: Regression Discontinuity Design: 20% threshold of the overhead ratio (Orange to Red)



Appendix E - The role of the incumbent's characteristics: accountability and gender

Here, we test whether treatment effect differs upon the characteristics of the mayor. More specifically, we investigate the roles of accountability and gender of the incumbent.

First of all, we test whether incumbent mayors who were responsible for contracting toxic loans face tougher electoral competition than those who were not. To answer this question, we focus on loans taken between the municipal elections of 2001 and 2008 (which account for 56% of all toxic loans), and compare them with municipalities with no toxic loans at all. The treatment variable then becomes the fact of having contracted toxic loan(s) between 2001 and 2008, as opposed to not having contracted toxic loan(s). We interact this variable with a dummy variable indicating whether the incumbent of the 2014 election was in office between 2001 and 2008. The results are summarized in Table 55. Overall, while we find similar effects as the ones measured in our main estimation among incumbent who were not accountable (i.e. who were in office between 2008 and 2014 but not between 2001 and 2008), we do not find significant differences of this effect among mayors who could be held accountable (i.e. who were in office between 2008 and 2014 and between 2001 and 2008). However, this effect does not reflect a pure accountability mechanism. As it compares incumbents in their first term to incumbents with at least two terms, it also includes the effects of experience and popularity. Therefore, one potential explanation for this absence of heterogeneity is that accountable mayors - who were also more experienced - were also more effective in addressing the issues arising from toxic loans, for example by trying to break the contract in court. Thus it may have counterbalanced the potential negative impact of being effectively accountable. Due to data availability, this hypothesis is however hard to assess empirically in our setting.

Moreover, we test whether variations due to toxic loans in number of candidacies or entry differ depending on the gender of the incumbent. The results presented in Table 56 show that this is not the case. The rise in number of candidacies or the increased entry of populist lists was not different in municipalities ran by a man or a woman.

Table 55: Toxic Loans, Electoral Results and Accountability

	Sh inc's party	Sh X	Sh XR	Sh Pop-XR	Sh XL	Sh Pop-XL
	(1)	(2)	(3)	(4)	(5)	(6)
$\mathbb{1}_{Toxic}$	-26.113*** (5.923)	2.359 (1.591)	2.513*** (.890)	2.168** (.850)	-.154 (1.283)	10.366*** (3.962)
$\mathbb{1}_{Reelect}$	1.037 (1.083)	.184 (.181)	.073 (.083)	.073 (.077)	.111 (.163)	-.330 (.448)
$\mathbb{1}_{Toxic} \times \mathbb{1}_{Reelect}$	11.043** (4.738)	-.534 (1.463)	-.877 (.938)	-.430 (.887)	.343 (1.134)	2.402 (4.740)
Dep. FE	Y	Y	Y	Y	Y	Y
Urban status	Y	Y	Y	Y	Y	Y
2000 budgets	Y	Y	Y	Y	Y	Y
Inc. char.	Y	Y	Y	Y	Y	Y
Pop. char.	Y	Y	Y	Y	Y	Y
N	7348	8392	8392	8392	8392	8392
R2	.193	.256	.17	.172	.237	.144

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of the immigrant population and its growth rate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 56: Gender of the incumbent, Toxic Loan and Candidacy

	Nb Cand	Inc C.	X C.	XR C.	Pop-XR C.	XL C.	Pop-XL C.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
$\mathbb{1}_{Toxic}$	.916*** (.150)	-.037 (.057)	.256*** (.049)	.163*** (.039)	.158*** (.038)	.191*** (.041)	.115*** (.031)
Female mayor	.127*** (.033)	-.087*** (.019)	-.011 (.008)	-.005 (.005)	-.004 (.005)	-.008 (.007)	-.009 (.006)
$\mathbb{1}_{Toxic} \times \text{Female mayor}$	.016 (.195)	.086 (.065)	.026 (.066)	.037 (.055)	.008 (.055)	.028 (.059)	.027 (.057)
Dep. FE	Y	Y	Y	Y	Y	Y	Y
Urban status	Y	Y	Y	Y	Y	Y	Y
2000 budgets	Y	Y	Y	Y	Y	Y	Y
Inc. char.	Y	Y	Y	Y	Y	Y	Y
Pop. char.	Y	Y	Y	Y	Y	Y	Y
N	9181	9181	9181	9181	9181	9181	9181
R2	.406	.158	.307	.223	.223	.299	.164

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of immigrants and its growth rate during the last electoral mandate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 57: Gender of the incumbent, Toxic Loan and Electoral results

	Turn.	Sh inc's p.	Sh X	Sh XR	Sh Pop-XR	Sh XL	Sh Pop-XL
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
$\mathbb{1}_{Toxic}$	.017* (.009)	-20.010*** (4.672)	4.040*** (1.324)	3.533*** (.745)	3.346*** (.729)	.507 (1.035)	11.528*** (3.094)
Female mayor	.007** (.003)	-2.544* (1.536)	-.108 (.265)	-.052 (.112)	-.023 (.098)	-.055 (.242)	-.902 (.567)
$\mathbb{1}_{Toxic} \times$ Female mayor	.005 (.008)	.912 (4.668)	1.525 (2.080)	.536 (1.095)	-.356 (.979)	.989 (1.760)	2.700 (5.716)
Dep. FE	Y	Y	Y	Y	Y	Y	Y
Urban status	Y	Y	Y	Y	Y	Y	Y
2000 budgets	Y	Y	Y	Y	Y	Y	Y
Inc. char.	Y	Y	Y	Y	Y	Y	Y
Pop. char.	Y	Y	Y	Y	Y	Y	Y
N	9181	8078	9181	9181	9181	9181	9181
R2	.371	.203	.269	.173	.172	.243	.164

Control variables: The *Department* fixed-effects are dummy variables for the 94 metropolitan French departments. Urban status is a categorical variable, indicating the type of urban area in which a municipality is located (i.e., a urban center, a suburb, a remote area or a rural area). Budgetary variables in 2000 are defined per inhabitants and winsorized at the 1% and 99% levels: local taxation, capital expenditure, debt stock and overall budget result. Controls on incumbent characteristics include : gender, age, socio-professional category and political party . Finally, population characteristics are given by the 2011 Census data. We control for population, socio-professional categories, age distribution, level of education, housing market, the 2001 median income value, the share of immigrants and its growth rate during the last electoral mandate. Robust standard errors are indicated in parentheses.

P-values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

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