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The Political Consequences of External Economic Shocks: Evidence from Poland

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Abstract: *How do external economic shocks influence domestic politics? We argue that those materially exposed to the shock will display systematic differences in policy preferences and voting behavior compared to the unexposed, and political parties can exploit these circumstances. Empirically, we take advantage of the 2015 surprise revaluation of the Swiss franc to identify the Polish citizens with direct economic exposure to this exogenous event. Using an original survey fielded prior to the 2015 elections and an embedded survey experiment, we show that exposed individuals were more likely to demand government support and more likely to desert the government and vote for the largest opposition party, which was able to use the shock to expand its electoral coalition without alienating its core voters. Our article clarifies the connection between international shocks, voters' policy preferences, partisan policy responses, and, ultimately, voting decisions.*

Verification Materials: The data and materials required to verify the computational reproducibility of the results, procedures, and analyses in this article are available on the *American Journal of Political Science* Dataverse within the Harvard Dataverse Network, at: https://doi.org/10.7910/DVN/UEOK3H.

International financial crises (Crespo-Tenorio, Jensen, and Rosas 2014; Funke, Schularick, and Trebesch 2016; Guiso et al. 2019; Gyongyosi and Verner 2018; Hernández and Kriesi 2015; Lindvall 2014) and changes in trade patterns (e.g., Autor et al. 2016; Colantone and Stanig 2018; Dippel, Gold, and Heblich 2015) can affect electoral politics in democracies. These external shocks may even help account for the recent success of far right and "populist" parties. But while a link between international shocks and domestic politics is well established, we know less about how this connection operates. In what proportions do voters' responses reflect material interests, ideological commitments, and identity-based concerns? Do government policy responses matter for voting behavior, or do voters simply punish incumbents for bad events outside their control? How much room for electioneering do political parties have?

The conventional approach holds that citizens support policies that serve their personal material interests (Frieden 2015). Recent work contests this notion (Mudde and Rovira Kaltwasser 2018; Mutz 2018; Norris and Inglehart 2019; Sides, Tesler, and Vavreck 2017). Nevertheless, the nature of economic shocks makes reconciling these claims difficult. External economic shocks—whether in the form of financial contagion, sudden currency movements, or drastic changes in trade patterns—affect entire economies in numerous ways, often with significant differences across regions and economic sectors. Because voters may be simultaneously workers, consumers, homeowners, debtors, and investors, material consequences for any particular household are frequently ambiguous. Government policy responses are complex and deal with arcane economic matters unfamiliar to most voters.

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We argue that those for whom a shock produces direct and clear economic consequences will be more politically attentive and react in line with their material interests, whereas unexposed voters will be less attentive, more susceptible to messaging, and more likely to view subsequent policy promises through partisan or ideational lenses. To the extent that the shock produces clearly identified "losers," this creates an opportunity for political parties to win votes by offering policy promises targeted at exposed voters. But these promises will be constrained by the party's existing platform, incumbency status, and, perhaps, the proximity of the next election. In this article, we take advantage of a particular empirical context—the 2015 exchange rate shock and election in Poland—to clarify connections between international economic shocks, partisan policy promises, voters' policy preferences, and, ultimately, voting decisions.

Several empirical challenges have hampered past research: measuring individual exposure to the economic effects of a shock, endogenous elections, and the fact that past government policies often cause economic crises in the first place. The case of 2015 Poland permits us to address these. In October 2015, Poland held parliamentary elections according to its exogenous electoral calendar. Earlier in the year, the Swiss National Bank (SNB)—in a surprise move—abandoned its currency peg, causing the Swiss franc (CHF) to appreciate substantially against the euro and linked currencies, including the Polish zloty. Although the CHF appreciation had little direct impact on the Polish economy, it had serious consequences for a well-defined group of voters. Polish borrowers repaying CHF-denominated mortgages faced soaring repayment costs after the franc revaluation. The surprise nature and large magnitude of the shock, combined with election-induced uncertainty about any policy response, imply that CHF borrowers in Poland were unable to hedge their exposure or unwind their mortgages prior to the October parliamentary election. This, in turn, allows for a clear identification of those voters directly affected by the CHF shock.

The election brought the populist-right PiS ("Law and Justice") to power with 38% of the vote and a narrow absolute majority (235 of 460 parliamentary seats). These elections proved a turning point, as the PiS has since used its majority to challenge the foundations of Poland's liberal democratic order (Markowski 2016; Nalepa 2016) and its relationship with the European Union (Kelemen 2017). Our study exploits the fact that whether the government should intervene in support of the foreign currency (FX) borrowers became a campaign issue in the 2015 Polish elections. The PiS seized on the issue as part of a broader nationalist and anti-immigrant platform, promising to implement a generous bailout scheme for homeowners with CHF mortgages at the expense of largely foreign-owned banks. The incumbent center-right civic platform (PO) followed suit, but it proposed a less generous scheme.

We fielded an original survey immediately before the October elections to study how Polish voters evaluated these different policy proposals and how they voted in the 2015 elections. Using three different strategies to account for self-selection into FX loans, we show that the small group of respondents with these loans had strong and distinct policy preferences in line with their material economic interests, whereas those without FX mortgages were both less interested in and less inclined to support policy measures from which they would not directly benefit. We then used an embedded survey experiment to assess whether simple messages could move opinion about the various policy proposals, something we interpret as evidence of room for electioneering. Our simple informational treatments make unexposed respondents marginally more supportive of government intervention. In terms of vote choice, those directly exposed to the CHF shock—unlikely PiS supporters—became far more likely to shift their support from the incumbent PO to the challenger PiS. This shift likely produced additional parliamentary seats for the PiS. We estimate that there is about a 1 in 3 chance that the PiS would not have won its outright majority absent the electoral effects of the CHF shock.

The Polish case is a rare episode of a country hit by an external financial shock for which the government is not responsible, in which economic consequences unambiguously affect a clearly defined subset of voters, and all immediately before a major, exogenously scheduled election. This presents an extraordinarily useful context for learning about the political spillovers from economic policy as well as how voters' economic interests are reflected in their policy preferences and political behavior. Although the case is unusual, we believe that its insights apply in cases where the nature of the economic shock allows parties to easily craft targeted policy promises. These shocks could take a variety of forms, including exchange rate shocks that hurt FX borrowers, a sudden stop in remittances, or tariffs imposed on a specific product or industry and thus affecting identifiable groups or regions. Where shocks are endogenous or have broader and more complex consequences or when elections are distant or absent altogether, then we may observe different political dynamics. In the conclusion, we reflect on how our findings can inform future research.

External Shocks and Domestic Politics

External Shocks and Preferred Policy Responses

It is traditionally assumed that we can understand the political implications of economic shocks by identifying the material "winners" and "losers." Those harmed by economic shocks push for protection or mitigation, whereas those who benefit or remain unaffected oppose government intervention that they, as taxpayers, must fund (e.g., Margalit 2011; Walter 2017). But recent work shows that things may not be so simple. For example, voters' opinions over trade, monetary, and financial policies are often weakly held and correlate with identity concerns, ideological attitudes, or partisan commitments at least as strongly as with purported material self-interest (e.g., Ahlquist and Levi 2013; Bechtel, Hainmueller, and Margalit 2014; Mansfield and Mutz 2009; Nelson and Steinberg 2018). Studies of policy preferences in the face of economic and financial crisis similarly suggest that both material and nonmaterial factors "matter" (e.g., Fernández-Albertos and Kuo 2016; Goldstein and Peters 2014; Margalit 2013).

This mixed picture arises for two reasons. First, the effects of economic shocks are measured imperfectly (Owen and Walter 2017). Most studies employ proxies to measure individuals' exposure to the international economy, such as workers' regional labor markets (e.g., Margalit 2011), voters' industry or job characteristics (e.g., Fernández-Albertos and Kuo 2016; Owen and Johnston 2016), or self-reports of vulnerability. Identifying the effects of external shocks is not always straightforward. Exchange rate shocks, for example, may affect individuals through multiple channels, such as the relative prices of imports, the competitiveness of exporters, and domestic price levels more generally (Frieden 2015). They also affect those who have taken on debts denominated in foreign currency and those who hold foreign currency assets (Ansell, Broz, and Flaherty 2018; Walter 2013, 2016). Identifying the net effect of an exchange rate shock is therefore difficult, complicating efforts to identify the material consequences, much less establish relationships with politics.

Second, the mixed results in the literature emerge because external economic shocks affect some voters more than others. Individuals whose economic situation is directly and immediately implicated will find material concerns and the details of government policy salient as they evaluate policy responses. For these "exposed" individuals, economic concerns are likely to dominate nonmaterial concerns, especially when they can clearly evaluate which policies are most likely to benefit them (Bearce and Tuxhorn 2015; Citrin and Green 1990; Rho and Tomz 2017). In contrast, voters with—at best—indirect exposure have the luxury of interpreting economic shocks in light of existing ideational or ideological concerns such as sovereignty, identity, or democratic norms. These "unexposed" individuals will have more malleable opinions over policy promises that may be less connected to immediate economic interests.

Analyzing these differences between "exposed" and "unexposed" requires identifying which voters are exposed (see Malhotra, Margalit, and Mo 2013), specification of the channels through which shocks affect voters, and understanding distributional consequences of possible policy responses. We expect that exposed individuals will clearly identify and support policies in line with their material self-interest. Support for remediation policies will be lower among the unexposed and more likely to correlate with other, perhaps unrelated, political concerns. The Polish case offers us a rare opportunity to overcome measurement challenges and questions of distributional impact. Specifically, there is one primary channel through which the CHF shock affected Polish voters: CHF-denominated debt, primarily mortgages.

Political Parties and External Economic Shocks

Economic shocks present an opportunity for political parties to win votes by offering policy promises targeted at exposed voters. We argue that there are good reasons to expect that parties will systematically diverge in the policy promises they make, based on their existing platforms and incumbency status.

Assuming that political parties maximize vote share, economic shocks create incentives for political parties to strategically promise policies that benefit directly exposed voters (e.g., Akhmedov and Zhuravskaya 2004), while at the same time trying to retain the votes of nonexposed supporters. Promising targeted benefits—such as protectionist policies for particular industries or policies aimed at supporting those directly hurt by a financial shock—risks alienating those who might be called upon to finance these policies as well as voters who disagree with such policies for ideological reasons (Somer-Topcu 2015).

Maintaining the balance between attracting new voters with targeted benefits and upsetting core supporters is easier for some political parties than for others. Parties differ in the "ideological costs" incurred by promising

targeted benefits (Adams et al. 2006). For example, promises of subsidies or protection to specific groups is more electorally risky for liberal than for left parties. Connecting the policy promises with the party's overall platform can reduce these risks, but, again, parties differ in how easily this can be achieved. When it comes to international economic shocks, issue linkage is particularly easy for populist parties because they can present their proposals as supporting local citizens against (foreign) elites, rather than implicating domestic distributional conflicts (Ivaldi, Lanzone, and Woods 2017). The party platforms of most populist-nationalist parties emphasize the rejection of foreign agents and global elites (Rooduijn and Akkerman 2015), as well as skepticism toward international cooperation and economic integration (Halikiopoulou, Nanou, and Vasilopoulou 2012; Mudde 2007). Moreover, populist parties are generally in the opposition, which means they have the luxury of proposing policies that may provoke negative reactions from financial markets without having to bear immediate costs, unlike an incumbent (see Guiso et al. 2019). Populist parties are thus well positioned to attract new voters with promises of material support because they can frame these promises in a way that resonates with their core voters: as a support for ordinary, local citizens hurt by the vagaries of foreigners, bankers, and global elites.

We expect that the party's core supporters will accept these positions. Voters are susceptible to new information when they are poorly informed about an issue, or when the effects of a policy are diffuse, opaque, and complex, as is often the case in the context of international economic shocks. Such effects are particularly pronounced for those voters who previously considered such issues as irrelevant to their welfare. Moreover, voters often interpret new information in line with their existing values and identities (Druckman and Lupia 2016). Policy-specific information can change individual political judgments when it clarifies a shock's adverse effects on the domestic population (Ahlquist and Levi 2013; Lü, Scheve, and Slaughter 2012).

Populist parties have particularly strong incentives to use external shocks to simultaneously appeal to both their core supporters and the groups directly and negatively affected. Those directly affected will be able to identify policies in line with their material interest, whereas those without a direct stake will have more weakly held opinions susceptible to informational cues. In this article, we do not directly investigate variation in party strategies and messaging. Rather, we focus on whether voters' reactions to parties' policy promises are consistent with our understanding of partisan incentives.

External Economic Shocks and Voting Behavior

Even if economic shocks shape policy preferences and party strategies, can they affect voting behavior and electoral outcomes? Some express skepticism about voters' ability to effectively distinguish between events for which the government is responsible and international economic developments beyond government control (e.g., Hellwig 2014). Nonetheless, a considerable body of work suggests that exposure to the international economy is, in fact, related to voting behavior (Colantone and Stanig 2018; Rommel and Walter 2018) and aggregate election outcomes (Autor et al. 2016; Funke, Schularick, and Trebesch 2016; Jensen, Quinn, and Weymouth 2017).

Based on our distinction between exposed and nonexposed voters, we distinguish between two ideal types of voter responses. For exposed voters with a clear material stake in the shock and potential government policy responses, we expect material economic concerns to dominate other issues—especially when voters can clearly evaluate which policies will most likely benefit them and when the promised benefits are large (Singer 2011). In contrast, for unexposed voters lacking an immediate material stake in the issue, we expect other concerns may be reflected in their vote choice.

We thus expect that external economic shocks will have clear effects on voting behavior, but these effects will be driven by different factors for different sets of voters. The search for a single answer to the question of whether economic shocks affect domestic politics through material versus nonmaterial channels is unlikely to yield a definitive result. Rather, exposed voters will exhibit systematic differences, not only in policy preferences but also in voting behavior, from those voters who are unexposed.

Poland and the 2015 Swiss Franc Revaluation

On January 15, 2015, the Swiss National Bank (SNB) suspended its exchange rate floor of 1.20 euro/CHF and allowed the Swiss franc to appreciate. The move came in response to strong exchange market pressure on the Swiss franc and growing domestic criticism of the peg.[1] The SNB announcement caught financial market participants and policy makers in Switzerland and abroad by complete surprise. The bank did not give the Swiss government or other international monetary institutions any significant

[1] See https://www.economist.com/the-economist-explains/2015/01/18/why-the-swiss-unpegged-the-franc.

advance warning. In the first hours after the decision, the exchange rate became so volatile that Swiss banks temporarily stopped converting Swiss francs into euros. Several major FX brokers incurred huge losses, and some went bankrupt.[2]

The SNB's decision to abandon the CHF peg had significant consequences beyond Switzerland's borders, even though it had been unrelated to any economic or political developments beyond Switzerland and the eurozone. Following the SNB decision, the Swiss franc soared against the euro and currencies pegged to it, including the Polish zloty. The franc initially gained nearly 25% in value and then stabilized at an approximately 13% higher exchange rate than before (see Figure 1). The large and persistent exchange rate shift had a particularly strong effect in Eastern Europe, where CHF-denominated borrowing was widespread (Fischer and Yesin 2019). In Poland, there were roughly 575,000 households repaying CHF-denominated loans, predominantly mortgages, at the time of the revaluation.[3] Foreign currency–denominated mortgages had been the dominant mortgage type in Poland for over 10 years (Buszko and Krupa 2015; Krogstrup and Tille 2015). Of these mortgages, the vast majority—more than 97% in 2008 and about 80% in 2012—were held in Swiss francs (Buszko 2016). In 2015, Swiss franc loans amounted to about 8% of gross domestic product in Poland,[4] including $38 billion worth of home mortgages denominated in Swiss francs.[5]

Beyond the shock's effect on CHF borrowers, however, the effect of the CHF appreciation on the Polish economy—including individuals' purchasing power—was minimal. Polish public debt and deficit levels were modest, and Poland had enjoyed a period of extended economic growth, outperforming the eurozone, which put the country in a good position to absorb any fallout. Moreover, the real economy consequences of the CHF shock for Poland were small: Exports to Switzerland only accounted for 1% of all Polish exports, and only 0.9% of the country's imports and less than 4% of all inward foreign direct investment in Poland came from Switzerland.[6]

The immediate consequences of the exchange rate shock were thus largely restricted to one channel—CHF-denominated loans—and only materially affected the 4% of Polish households repaying CHF-denominated debts, the so-called *Frankowiczow*. The surprise nature of the shock implies that Polish borrowers were taken off guard, and that they were also unable to unwind their CHF exposure between the January shock and the October election, given the stickiness of mortgage contracts. For the purposes of our study, these borrowers were stuck, and this allows us to examine in detail their policy preferences, how they responded to partisan policy promises, and their vote choice. The CHF shock in Poland is particularly useful because its surprise nature allows us to identify the shock's "victims" more precisely than previous studies—especially those focusing on exchange rates—have been able to do.

Political Reactions

Immediately after the CHF shock, Poland saw some scattered protests by CHF borrowers. Nonetheless, the center-right coalition government was initially reluctant to engage in any meaningful support for CHF borrowers.[7] The issue gained momentum during the May 2015 presidential campaign. However, consistent with our expectations that populist politicians can more easily promise targeted benefits and benefit electorally, the opposition PiS's candidate, Andrzej Duda, advocated for the conversion of Swiss franc loans into Polish zlotys at a preferential exchange rate. Duda's unexpected and narrow victory put pressure on the PO, which had governed for two consecutive terms in coalition with the much smaller agrarian polish people's party (PSL), and transformed policy responses to the CHF shock into a broader issue in Polish domestic politics.

In August 2015, during the summer campaign season for the October elections, the PO introduced a bill that offered the *Frankowiczow* in smaller homes the opportunity to convert their Swiss franc mortgages into zloty-denominated loans. The bill proposed that the resulting adjustment costs would be shared roughly equally between borrowers and lenders (mostly subsidiaries of German, Austrian, and Italian banks). The main opposition parties, the PiS and Democratic Left Alliance, responded by proposing a more generous conversion scheme. In a surprise move, the PiS banded together with the junior government coalition member, PSL, to pass an amended bill in parliament that broadened eligibility for loan conversion and significantly increased the cost for banks.

[2] See https://www.wsj.com/articles/swiss-franc-move-cripples-currency-brokers-1421371654.

[3] See https://www.bloomberg.com/news/articles/2015-01-20/poland-seeks-measures-to-help-swiss-franc-mortgage-loan-holders.

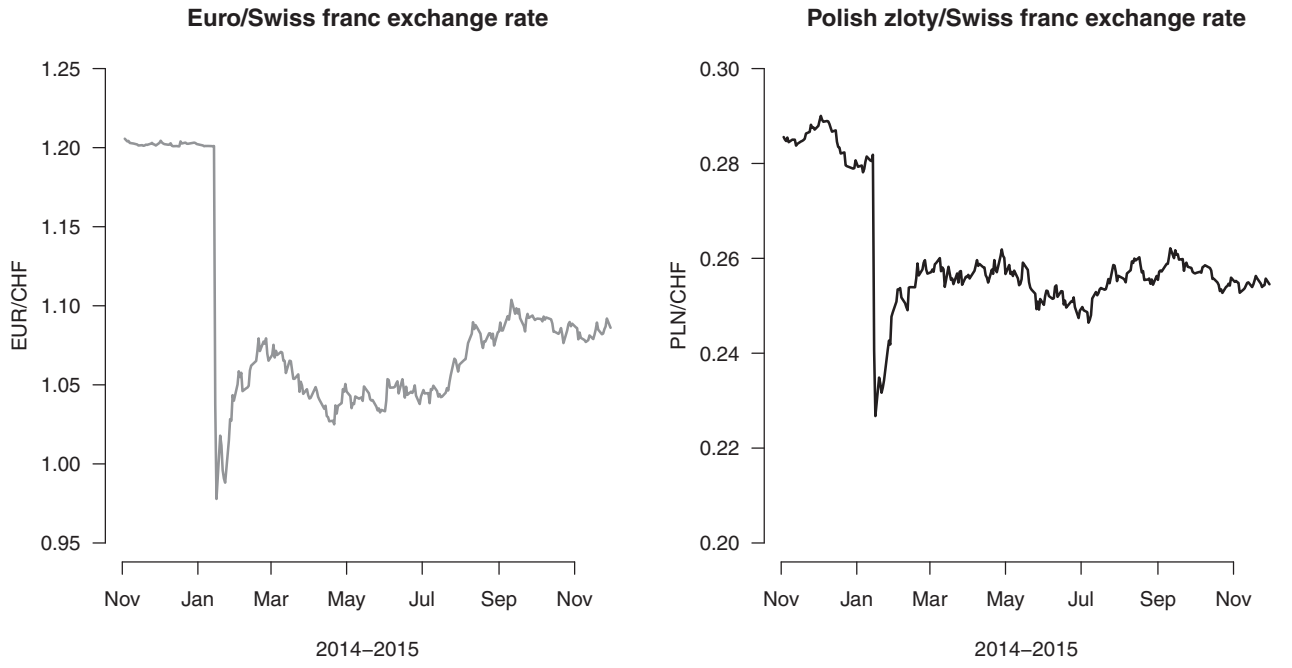
[4] See http://bruegel.org/2015/10/foreign-loan-hangovers-and-macro-prudential-measures-in-central-eastern-Europe/.

[5] See http://www.bloomberg.com/news/articles/2015-09-10/polish-bill-on-swiss-franc-loans-stalls-prolongs-risk-for-banks.

[6] See https://oec.world/en/profile/country/pol/#Destinations.

[7] See https://www.swissinfo.ch/eng/business/ripple-effect_franc-surge-squeezes-eastern-european-homeowners/41244058.

FIGURE 1 The Foreign Exchange Shock



Rather than splitting costs between banks and borrowers 50–50, this new bill proposed an approximate 90–10 split, in favor of borrowers. After lobbying from the financial sector, however, the upper house changed the bill back to its original 50–50 version in early September 2015 and passed it back to the lower house. No final decision was made before the election.

Although foreign currency borrowers were a relatively small part of the electorate, the question of how to respond to this external shock turned into a campaign issue by August 2015. The political parties offered policies that varied in their generosity toward the *Frankowiczow*: Whereas the liberal *Nowoscenza* party did not see any need for government intervention on behalf of CHF borrowers, the incumbent center-right PO took an intermediate stance and the populist-right opposition party PiS offered a very generous package.

The incumbent PO lost the October 25, 2015 elections by a wide margin, with its vote share down by 15 percentage points from the 2011 elections.[8] The PiS came to power with 38% of the popular vote (gaining 8 percentage points relative to 2011), which sufficed for an absolute majority of 235 of the 460 parliamentary seats. The PiS has subsequently used its position to shift Polish politics sharply to the right, challenging the democratic foundations of the state (Kelemen 2017). As such, the elections represented a watershed moment in post–Cold War Polish politics.

Research Design

Immediately before the October 25 elections, we fielded an original survey of Polish voters that elicited respondents' policy preferences about reactions to the Swiss franc shock, their vote intention, and their exposure to CHF-denominated debt. The survey was conducted October 7–21, 2015, by Centrum Badania Opinii Społecznej (CBOS), a Warsaw-based polling firm, and used computer-assisted personal interviews with 2,044 respondents identified as a random sample of adult Polish citizens drawn by the Ministry of Administration from the database of national identification numbers.

Dependent Variables: Policy Preferences and Vote Intentions

We exploit the fact that measures to support CHF borrowers were politically contentious during the election campaign, asking about respondents' preferences over specific policies.[9] The question informed respondents that the

[8] See Table A.3 in the supporting information (SI) for vote and seat shares for the 2011 and 2015 elections.

[9] See the SI (p. 2) for exact wording. We also asked a question about whether the government should intervene to help Polish borrowers

Polish parliament had recently debated two policy proposals on how to help households with CHF mortgages. It then continued: "One proposal ('Proposal A') splits these costs equally between the banks issuing the loans and the households who borrowed the money. The other proposal ('Proposal B') forces the banks to pay 90% of these costs and mortgage borrowers pay 10%. Which of the following do you support?" Respondents could choose between Proposal A, Proposal B, and the options "The government should do nothing, meaning the mortgage borrowers bear all the costs," "The government should do something but I do not support either Proposal A or Proposal B," or "don't know." We were careful to avoid associating either proposal with a particular party or politician so that we can examine how other cues may affect respondents' support for the competing plans. Finally, we recorded respondents' stated intention to participate in the upcoming parliamentary election and, if so, which party list they planned to vote for in the lower house, the *Sejm*.

Independent Variable: Exposure to the Exchange Rate Shock

An important component of our survey's novelty is the inclusion of questions asking respondents about their own foreign exchange borrowing. To identify exposure to foreign currency mortgages, we categorize a respondent as *exposed* if the individual reports having a bank loan denominated in a foreign currency that is currently in repayment. In line with external estimates that roughly 4% of Polish households had Swiss franc debts in 2015, this is a relatively small group, comprising only 3.4% of our sample, of which nearly all (86%) had Swiss franc–denominated loans. We expect that the exposed should have clear policy preferences in line with their material interest (more intervention) and may be tempted to vote for the party that makes the most generous policy promise (in this case, the PiS).

There are legitimate concerns about selection into FX loans. Attributes leading someone to borrow in Swiss francs might also predict policy preferences or voter behavior. We take a three-pronged approach to mitigate selection concerns. First, we pursue a "condition on observables" strategy: In the main text, we present models with politically relevant covariates that predict FX borrowing.[10] Second, there may be questions about the functional form or other manner in which we condition on observables. We use coarsened exact matching to produce a balanced data set of exposed and unexposed respondents. Although this approach sharply reduces the data available and restricts our ability to generalize to the Polish population, our core relationships remain among this subset of matched respondents.[11]

There may nevertheless be unobservable attributes that correlate with both willingness to borrow and our outcomes of interest. As a third strategy for addressing selection concerns, we identify *past borrowers* in our survey, that is, individuals who had previously borrowed in a foreign currency but are no longer repaying this loan. Past borrowers are not only plausibly better informed about foreign currency–related issues than those who have never had an FX loan, but they also are not directly exposed to the CHF shock at the time of the election. As we show in Figure 4, past borrowers share many observable characteristics with exposed respondents, including the willingness to borrow in a foreign currency. This implies that past borrowers are also likely to share unobservable characteristic associated with FX borrowing, making them an attractive comparison group for the FX-exposed.

Other Covariates

In several of the models below, we condition on a range of demographic factors included in CBOS's standard monthly survey of eligible Polish voters. We include only the covariates that are plausibly "pre-exposure," in that their value is unaffected by or likely determined prior to the January 2015 franc shock. These variables include age, gender, income quintile, education level, whether the respondent is in paid work, marital status, religiosity, whether the respondent lives in an urban area, province, household size, respondents' self-placement on a left–right political scale, and respondents' reported voting behavior (turnout and party list choice) in the previous (2011) parliamentary elections. We divide age into quintiles since borrowing and home buying typically take place at middle age ranges; 32–44 is the reference category in all analyses. The left–right political scale is strongly trimodal, so we construct dummies for Left, Right, and Center, with Center as the reference category.

with Swiss franc loans; this question was the most proximate to the survey experiment described below. Results for this question are consistent with findings for the policy proposal question, but we relegate the analysis and discussion to the SI (pp. 6–8) due to space constraints.

[10] See the SI (p. 4) for models predicting whether someone has an FX loan, as well as models without covariates (pp. 8, 10). Key parameter estimates become larger after conditioning on observables that predict FX borrowing.

[11] For matching results, see the SI (p. 16).

Analysis

Our analysis proceeds in three steps. First, we examine whether those exposed to the CHF shock evaluated the policy proposals differently from others. Second, we use an embedded experiment, described below, to explore how policy framing influences respondents' policy preferences. Third, we explore whether the FX-exposed behaved differently in the election.

All of the regression results use CBOS-generated survey weights to the Polish population. Item nonresponse is not an issue for our policy and FX exposure variables, but there is substantial missingness among important potential confounders, most notably income.[12] Because of small samples among the exposed, we are especially sensitive about exploiting all available data and therefore impute missing values.[13] Results in regression tables represent estimates combined across 20 imputed data sets.[14]

Exposure to Exchange Rate Risk and Policy Preferences

We expect those currently repaying CHF-denominated debt to display clear preferences in favor of government interventions that lower their repayment burden. This is precisely what we see in Figure 2, where we display the proportion of respondents supporting different policy proposals for the exposed, as well as for past borrowers and never-borrowers, with associated 95% confidence intervals.

Three notable findings emerge. First, "no intervention" is the most popular response among all groups except the exposed respondents. Second, notwithstanding the small sample and wide confidence intervals, exposed respondents hold quite different, pro-intervention policy opinions when compared with the unexposed. Those currently paying back an FX loan are far more likely than any other group to support government policies in support of CHF borrowers, especially the most generous. In contrast, past borrowers display policy preferences that are more similar to the never-borrowers than the exposed; in fact, they are the least supportive of intervention. Finally, the proportion of respondents failing to express an opinion about the policy proposals is more than three times higher among those with no experience with FX borrowing than among the exposed or past borrower groups (although confidence intervals are wide). This suggests that the unexposed tend to be more poorly informed about the issue.

Messaging and Policy Preferences

In this section, we investigate whether simple informational messages about the CHF shock can induce voters—especially those without immediate exposure—to change their evaluation of policy promises. We randomly assigned respondents into one of four groups. Each group received different preambles before answering the questions about policy proposals.[15] We designed our experimental messages to examine the malleability of public opinion around the CHF shock, as opposed to testing the effects of specific partisan campaign messages.

One-fourth of the sample served as the control group and received no additional stimulus. Another fourth received the following preamble that we refer to as the "information treatment": "Several European currencies including the zloty have lost a lot of value against the Swiss franc since January 2015. Some Polish households took out loans in Swiss francs to buy cars and houses. The currency decline has increased debt payments for those borrowers." This treatment aims to evaluate whether the provision of basic factual information about the common external origin of the CHF shock and its consequences in Poland shapes respondents' answers.

The third group received the "history treatment," which contains information identical to the information condition as well as information that the Polish government chose to do nothing when a similar situation occurred in 2008.[16] This treatment is meant to evaluate whether cuing respondents about past events—the government's lack of response when the Swiss franc appreciated against the zloty in 2008—alters opinions. The history treatment represents a framing of the problem that casts doubt on the need for intervention, given that Poland weathered the last CHF appreciation without a major policy response. We expect this treatment to produce smaller effects (if any) compared to the information condition.

The remaining respondents also received a preamble identical to the information condition, but with

[12] In the sample, 26% of our respondents failed to report income.

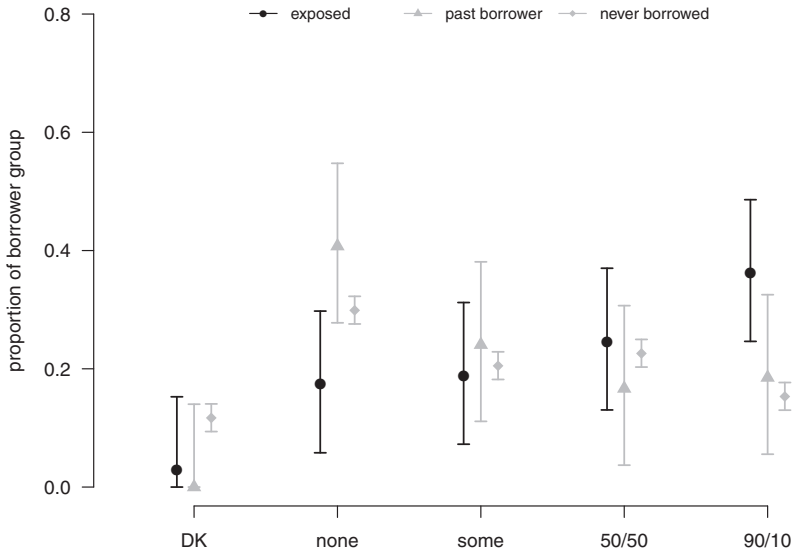
[13] We create 20 complete data sets using Amelia II (Honaker, King, and Blackwell 2011). Overimputation diagnostics indicate that the imputation model performed adequately. Details and imputed data sets are available in the replication archive.

[14] The SI (pp. 8, 10) reports models fit to observed data only; core results remain.

[15] Several questions separated the policy opinion and voter behavior questions, with no evidence of any treatment effects on the latter.

[16] See the SI (p. 3) for exact wording for the preambles.

FIGURE 2 Preferences over Policy Proposals by FX Loan Exposure



Note: Points denote proportions of each borrower group responding in each category. Vertical bars are 95% multinomial confidence intervals.

additional text saying that the Hungarian government had intervened by forcing banks to convert foreign currency loans, whereas the Polish government had not yet acted. We refer to this as the "Hungary treatment." By enabling "benchmarking across borders" (Kayser and Peress 2012), the Hungary treatment indicates that government intervention is feasible and has been implemented in a neighboring country. We expect that the Hungary treatment should enhance the information-only effect (if any).

In Table 1, we analyze the policy proposal question. The table displays coefficient estimates and standard errors for weighted multinomial logistic regression across 20 imputed data sets, with "none" as the reference category. For the sake of brevity, we only report results from models that include covariates. Model 1 includes the experimental quantities, and Model 2 adds in the FX exposure variables. Experimental results are not affected by the inclusion of the FX exposure variables.[17]

Two important results emerge from the table: We see some evidence that our treatments can move opinion, and, reinforcing the findings in Figure 2, those currently repaying an FX loan are far more supportive of a bailout—especially the most generous option.[18] To interpret the models, Figure 3 displays the difference in predicted probabilities (relative to unexposed control) that an average[19] respondent supports the least generous (left) or the most generous option (right) as a function of treatment status and FX exposure. Model 2 predicts that a control group respondent who is currently paying back an FX loan *will be over three times more likely to prefer the 90/10 policy and 60% less likely to say "do nothing"* than an identical respondent who is not exposed to FX debt in any way. Past borrowers, on the other hand, are indistinguishable from those never having taken out an FX loan. Our treatments uniformly move respondents out of the "do nothing" category. The most consistent finding for this question is for the "do something" response and for the Hungary treatment. We also see that the point estimate for the Hungary treatment is larger than for the information treatment, although the difference is not significant.

When comparing the policy options against one another, our treatments have relatively weak and mixed effects. For an average respondent, the ratio of the predicted probabilities of preferring 50/50 to 90/10 declines from 2.1 under control to 1.7 in the Hungary treatment, implying a small relative shift into 90/10. But the ratio

[17]We report full results in the SI (pp. 9–10), along with a model excluding covariates and fit only to observed data. There is no evidence of heterogeneous effects with respect to FX exposure in the government intervention question (SI Table A.4). We do not investigate heterogeneous effects for policy preferences due to small samples/perfect separation.

[18]SI Models A2, A3, A3.i, A5, and Tables A.4 and A.10 confirm that the FX-exposed are more supportive of more generous intervention, even conditioning on covariates.

[19]An "average" respondent is one taking sample median or modal values on all covariates in the model and with a survey weight of 1.

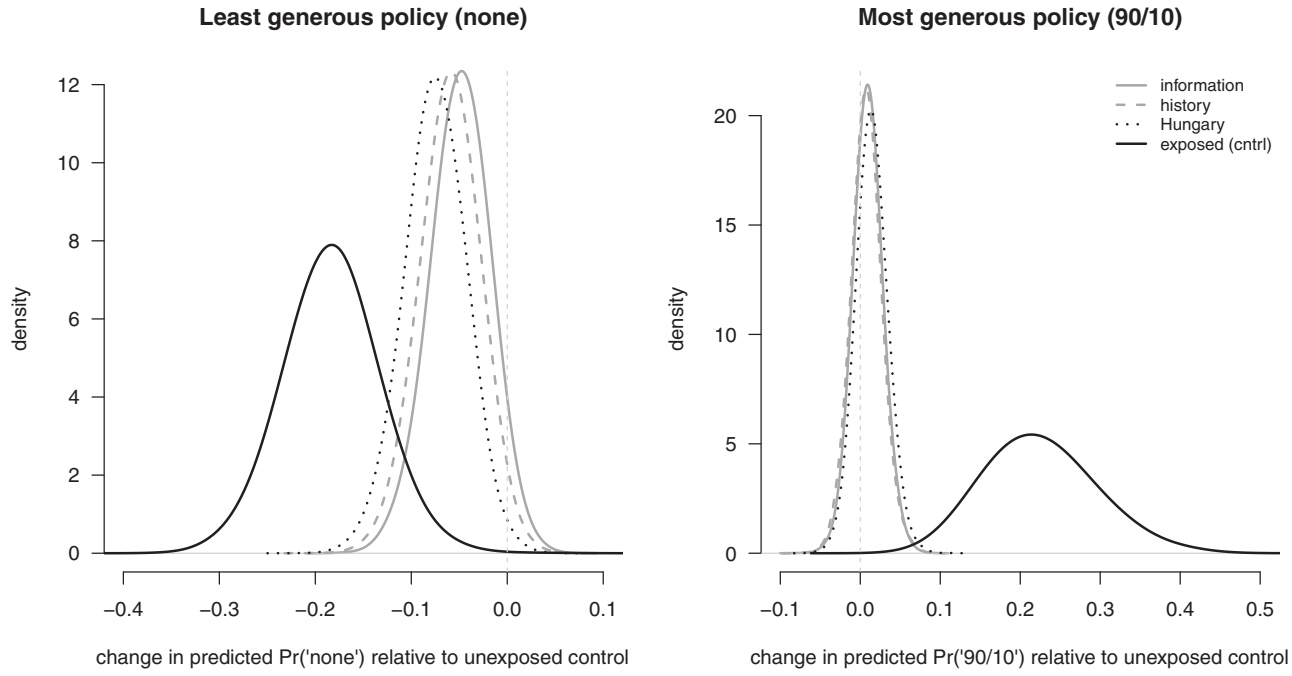
TABLE 1 Preferences over Policy Proposals

	Model 1				Model 2			
	DK	**Some**	**50/50**	**90/10**	**DK**	**Some**	**50/50**	**90/10**
Information	0.17	0.33*	0.15	0.25	0.17	0.33*	0.15	0.26
	(0.23)	(0.19)	(0.18)	(0.20)	(0.23)	(0.19)	(0.18)	(0.20)
History	0.30	0.40**	0.11	0.25	0.31	0.41**	0.13	0.29
	(0.23)	(0.19)	(0.18)	(0.21)	(0.24)	(0.19)	(0.19)	(0.21)
Hungary	0.35	0.52**	0.23	0.43**	0.33	0.51**	0.21	0.41**
	(0.24)	(0.19)	(0.19)	(0.21)	(0.24)	(0.19)	(0.19)	(0.21)
FX-Exposed					0.37	0.68	1.13**	2.09**
					(0.76)	(0.44)	(0.40)	(0.40)
Past Borrower					–6.55	–0.03	–0.41	0.25
					(14.11)	(0.38)	(0.43)	(0.43)
Covariates?	Yes				Yes			
N	2,044				2,044			

Note: Multinomial logistic regression coefficients are averaged over 20 imputed data sets and employ survey weights. "None" is the reference category. Standard errors are in parentheses. Intercept estimated but not reported. Covariates include those listed in the main text along with indicators for province.
**p < .05, *p < .1.

of the predicted probabilities that a respondent prefers "something" to 90/10 actually *increases* for all treatments, going from 2.6 under control to 3.0 in the history treatment. As Figure 3 shows, no treatment caused an overall shift into or out of the 90/10 category. Our treatments do not, on average, induce a change in the ordering of relative support for the specific policy proposals on offer in 2015.

FIGURE 3 Difference in Predicted Probabilities of Supporting the most Generous and Least Generous Bailout Policies, Relative to an Average Unexposed Control Respondent



Note: Simulations are from Model 2.

Figure 3 highlights two main takeaways for understanding voters' receptivity to messaging around the CHF shock. First, the FX-exposed are much more supportive of generous bailout terms: Those with a direct material interest in a generous bailout supported such a policy, whereas those without such an interest were much less inclined to do so. Second, simple informational cues led to marginal shifts in favor of general government intervention and against a policy of leaving CHF borrowers to fend for themselves. Our findings provided evidence that messaging about the nature of the shock certainly did not provoke increased opposition to pro-borrower policy. That said, FX exposure dwarfs any effect we generate with our experimental treatments.

What about other motivations? Immigration was arguably the primary issue in the 2015 election, with the European refugee crisis at its height and the PiS party leader warning that Muslim migrants bearing "very dangerous diseases long absent from Europe" threatened Poland.[20] Part of our sample was asked a battery of migration-related questions, from which we calculate a summary measure of anti-immigrant sentiment. Although this variable is "posttreatment" with respect to the CHF shock, we show in the SI (p. 11) that unexposed respondents who are less tolerant of immigrants are also significantly more likely to support government intervention, including the most generous (90/10) policy proposal.[21] At the time of the election, policy preferences around immigration and support for CHF borrowers were correlated among the unexposed. All this suggests that a party advocating for government intervention could win support from those with direct exposure and reduce any negative reactions among its supporters with appropriate messaging.

FX Exposure, Voting Behavior, and the Electoral Outcome

Did policy preferences around the CHF shock translate into voting behavior in the 2015 Polish election? We first show that current and past FX borrowers are an unlikely constituency for the PiS. We then examine individual voting behavior and close with an analysis of how the Swiss franc appreciation shock may have affected the election outcome.

We operationalize "core" supporters using reported voting behavior in the previous (2011) election, that is, those voting for the incumbent PO/PSL bloc or PiS, respectively. We then compare FX borrowers (current and past) alongside "core" PiS and incumbent (PO/PSL) supporters who have never taken out FX loans on a variety of politically salient attributes: income, urban location, education, self-placement on a left–right scale, level of religious observance, and anti-immigrant sentiment. Figure 4 presents the unweighted observed data sample median values and 95% bootstrapped confidence intervals.

We see that current and past FX borrowers are similar to one another and notably different from the core PiS voters on a variety of politically salient dimensions. They have higher incomes and more education and are less conservative, less religious, and more tolerant of immigration than PiS voters. Both current and past FX borrowers are notably more similar to PO/PSL supporters than PiS voters. In fact, in the 2011 elections, FX borrowers disproportionately supported the PO/PSL coalition. In our sample, 53% of current FX borrowers who recall voting in 2011 reported voting for PO or PSL, compared to 35% in the full sample. The *Frankowiczow* were thus not a "natural" constituency for the PiS going into the 2015 election.

Voting Behavior

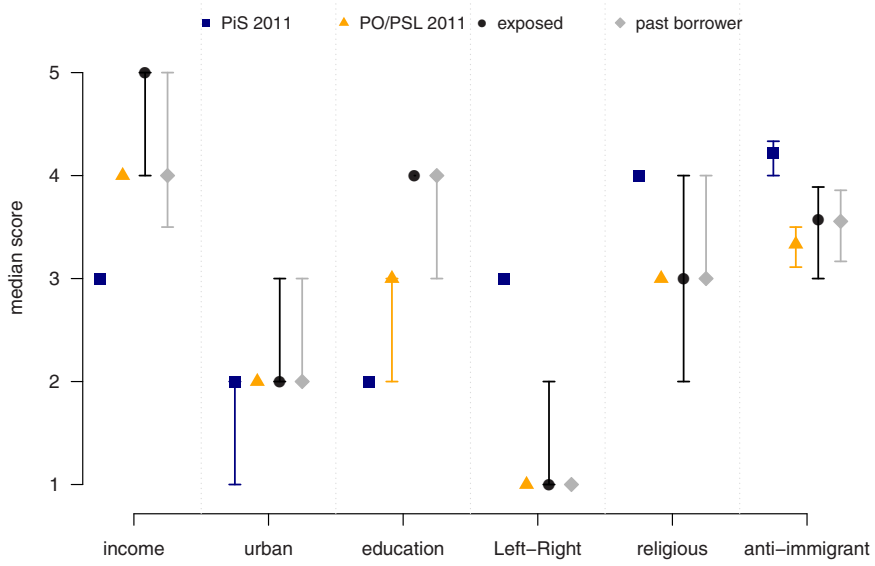
In Figure 5, we display the raw, unweighted vote intention among the FX-exposed, past borrowers, and those never borrowing in foreign currency. We focus on the choice to support one of the two major groupings (PiS and the incumbent PO/PSL coalition), endorse other "third" parties, or abstain altogether. Two things stand out. First, we see big differences in turnout: Those exposed to the FX shock are 45% more likely to vote than unexposed voters. Second, the proportion of the FX-exposed planning to support the PiS and third parties is higher than among either past borrowers or never-borrowers. Since a majority of exposed voters had voted for the incumbent PO or PSL in 2011 and the PO/PSL vote share among exposed voters stood at only 28% (less than the 33% in the overall sample), it appears that exposed voters were particularly prone to defect from the incumbent coalition.

This comparison may be too facile since politically relevant covariates predict current and past FX borrowing. We construct two multinomial regression models with outcomes corresponding to those in Figure 5.

[20] See https://www.politico.eu/article/migrants-asylum-poland-kaczynski-election/.

[21] An unexposed control group respondent with anti-immigrant attitudes equal to the mean among PiS supporters has a 5 percentage point lower probability of answering "none" and a 4 percentage point greater probability of preferring the 90/10 option when compared to a respondent with anti-immigrant attitudes equal to the mean among incumbent voters.

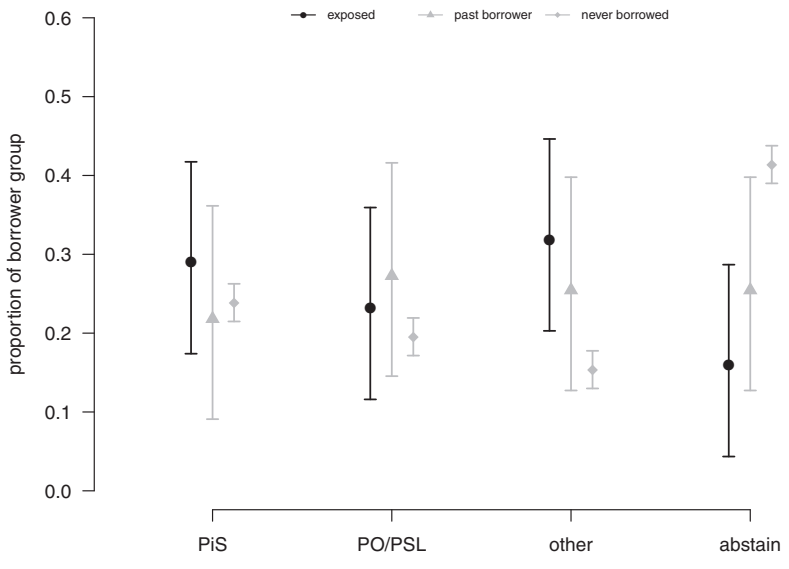
FIGURE 4 Comparing PiS and Incumbent Supporters to Current and Past FX Borrowers



Note: Unweighted observed data sample medians are shown, with bootstrapped 95% confidence intervals (no error bar means 95% intervals at the median). The quantities for core voters *exclude* current and past FX borrowers.

Results appear in Table 2; voting for the incumbent PO/PSL is the reference category, so the results show defection away from the former government parties that had not managed to implement a policy supporting CHF borrowers by the time of the election. We include our slate of covariates in both models; full results appear in the SI (p. 12). We also include an indicator for whether the respondent recalls voting in the last (2011) election,

FIGURE 5 Vote Intention by FX Borrowing Exposure



Note: Unweighted proportions of each group responding in each category are shown, with 95% multinomial confidence intervals.

Table 2 FX Exposure and Voting Behavior in the 2015 Polish Parliamentary Election

	Model 3			Model 4		
	Abstain	**Other**	**PiS**	**Abstain**	**Other**	**PiS**
FX-exposed	–0.48	0.59	0.63*	–1.16*	–0.91	–0.73
	(0.44)	(0.37)	(0.39)	(0.65)	(0.74)	(0.70)
Past FX Borrower	–0.63	–0.11	–0.43	–0.37	0.25	–0.58
	(0.42)	(0.40)	(0.44)	(0.91)	(1.01)	(1.01)
Past Turnout	–2.06**	–0.28	–0.48**	0.02	2.33**	2.74**
	(0.19)	(0.23)	(0.23)	(0.36)	(0.38)	(0.39)
PO/PSL 2011				–2.57**	–3.47**	–5.52**
				(0.36)	(0.37)	(0.41)
Exposed × 2011 PO/PSL				0.50	2.04**	2.54**
				(0.99)	(0.89)	(0.93)
Past × 2011 PO/PSL				–0.43	–0.40	0.30
				(1.20)	(1.18)	(1.52)
Covariates?		Yes			Yes	
N		2,044			2,044	

Note: Multinomial logistic regression coefficients are averaged over 20 imputed data sets and employ survey weights. "PO/PSL" is the reference category. Standard errors are in parentheses. Intercept is estimated but not reported. Covariates include indicators for province. **$p < .05$, *$p < .1$.

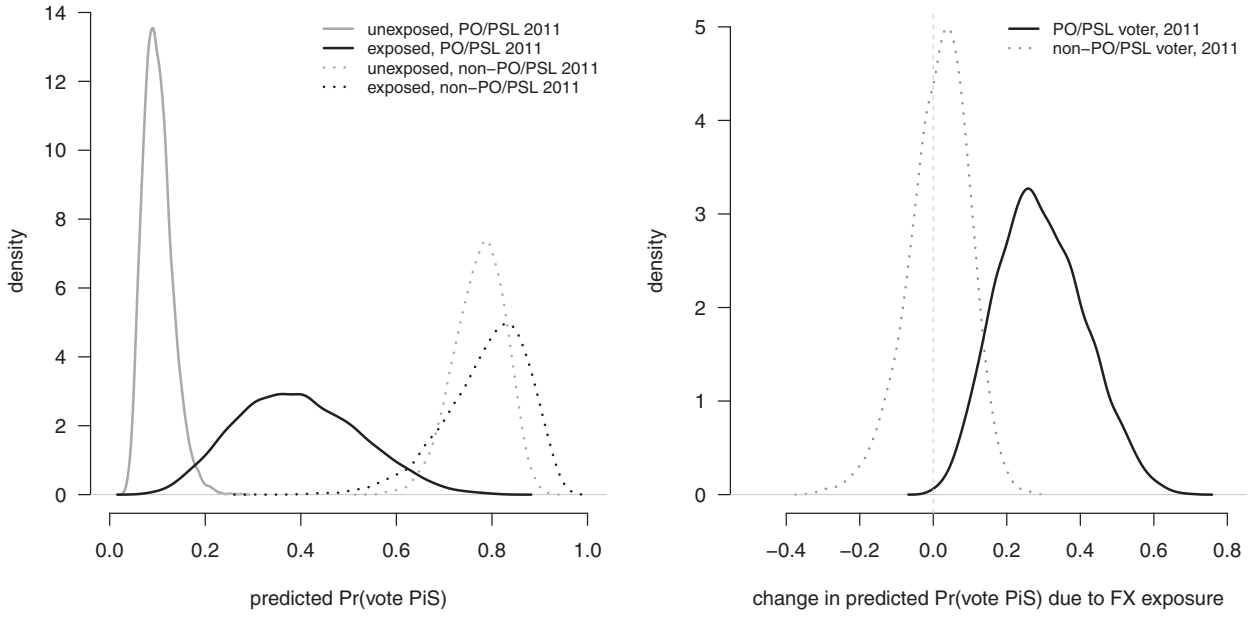
capturing the possibility of "habitual voting" (e.g., Plutzer 2002).

In Model 3, we see that habitual voters are much more likely to vote in 2015 and that the large difference in turnout intentions between exposed and unexposed voters shrinks once we condition on past voting and other covariates. As we have seen throughout, past borrowers do not behave like the FX-exposed. Consistent with Figure 5, past borrowers are more likely to support the incumbent than either the exposed or never-borrowers, although we cannot distinguish past borrowers from never-borrowers at traditional thresholds. Among the covariates, we find that younger, male, urban, more educated, and more leftist voters were more likely to vote for third parties relative to the incumbent, whereas older, more religious, and more conservative voters went for PiS relative to the incumbent PO/PSL. Importantly, Model 3 shows that exposed respondents, while not traditional PiS voters, were more likely to support the PiS and third parties, although only the coefficient for the PiS achieves significance at the .1 level.

As discussed, there is some evidence that the exposed were more likely to defect from the incumbent. To examine this more rigorously, Model 4 includes an indicator for whether the respondent had voted for the current incumbent (PO or PSL) in 2011 and its interaction with the FX exposure indicators. This analysis reveals a large and significant defection of exposed voters away from the PO/PSL going beyond the party's overall vote loss between the two elections. The PiS was the main beneficiary of these defections.

Figure 6 illustrates the magnitude of these relationships. The left panel displays the distributions of the predicted probabilities that a sample-average respondent who voted in 2011 would vote for the PiS in 2015 as a function of past voting behavior and FX exposure. The right panel highlights the distribution of differences in the predicted probabilities for exposed compared to unexposed voters. For a hypothetical average voter who did not support the PO or PSL in the 2011 election, FX exposure induces a small shift toward the PiS. This difference is not distinguishable from zero, in part because this hypothetical voter is already likely to vote for PiS. Among past incumbent voters, however, we see that FX exposure induces a large pro-PiS shift. Former PO or PSL voters with no exposure to FX borrowing were most likely to vote for these parties again in 2015 (predicted probability 0.52), whereas their probability of voting for PiS was only 0.1. If that same respondent were instead repaying an FX loan, the model predicts her to be about *four times* more likely to vote for PiS ($Pr = 0.4$) and twice as likely to support at third party, while the probability of abstention collapses to 0.11 and the probability of supporting the incumbent goes down by a third to 0.35. This shift is sufficient to move the expected vote to the PiS. Voters with a direct material stake responded as expected in terms of policy preferences and appear willing to change their voting behavior.

FIGURE 6 Predicted Probability of Supporting PiS in 2015 as a Function of FX Exposure and Prior Support for the Incumbent



Note: Simulations are based on Model 4 in Table 2, holding covariates as sample median/modal values.

Are exposed voters simply punishing the incumbent for a negative shock or are they prospectively considering policy promises? In additional analyses (see the SI, pp. 14–15), we replace voters' FX exposure in Model 4 with reported policy preferences. Voters preferring government intervention were much less likely to vote for the incumbent—and much more likely to vote for the PiS—than voters preferring no intervention. We interpret this as evidence that voters with strong policy preferences were thinking prospectively.

Finally, how many fewer seats would the PiS have won had there been no CHF shock? Would this difference have been large enough to prevent the PiS from winning a majority in the *Sejm*? We cannot answer this question definitively, but we can make an informed conjecture. Although the number of FX-exposed was too small to change the relative vote-share ordering of the top two parties, it is conceivable that the shock could have pushed the PiS over the threshold for its outright majority. In the SI (pp. 13–14), we describe how we use Model 4 to generate counterfactual PiS vote shares, had there been no FX-exposed voters. Using our admittedly rough approach, we find that the CHF shock produced a 0.4% increase in the PiS share of the vote, or about two parliamentary seats under our assumptions, averaged over our counterfactuals. The predicted shift in the PiS vote share would have been sufficient to prevent a PiS majority in about one-third (34%) of the counterfactuals. From a policy perspective, it appears that the CHF revaluation did have cross-border political spillovers and carried a nontrivial risk of altering the election outcome.

Conclusion

Using the case of Poland in 2015, we have examined the political effects of economic shocks. Circumventing some of the challenges hampering past research, we showed how political parties can exploit external economic shocks, how voters form preferences over the parties' policy promises, and how this translates into voting behavior. Our contribution thus moves beyond the question of whether external shocks affect politics to a better understanding of *how* international financial and economic events connect to political outcomes. Distributional conflict between borrowers (Polish households) and lenders (banks, mostly foreign-owned) in the aftermath of the surprise CHF revaluation became a salient issue in the Polish election campaign, embedded in a larger debate about Poland's place in the European Union and the global economy. Polish voters repaying FX-denominated loans were directly exposed to the CHF shock, favored generous bailout policies, and were more likely to switch their vote to the opposition party that offered it: the PiS. This contrasts with the policy preferences

of a demographically similar group—those who formerly but no longer had an FX loan—who were far less supportive of government intervention. Those without any exposure to FX borrowing were less likely to offer an opinion and less supportive of government intervention. Nevertheless, using simple information experiments, we found that voters' opinions were malleable at the margin in ways that increased support for pro-borrower intervention. Among the unexposed, those supporting most government intervention also tended to support the populist-right PiS and hold more anti-immigrant views.

To what extent do these findings from Poland travel? The negative consequences of the CHF revaluation shock were concentrated among a clearly identifiable group. Parties explicitly campaigned for debt relief targeted at FX borrowers. In cases where economic shocks are more complex and have more ambiguous distributional consequences, it will be harder for parties to pursue strategies similar to the PiS's. Where "losers" are harder to identify, the proposed policy remedies might be more broadly applicable and the opportunity for electoral gain may be attenuated. Investigating partisan responses to shocks as a function of existing platforms, incumbency status, proximity of elections, and the identifiability of losers is an open area for research.

The Polish case focuses on foreign exchange lending as the link between the global economy and domestic politics. Although rare in the United States, FX lending is common and factors into macroeconomic policy considerations (Walter 2008, 2013). The Polish case illustrates a broader pattern that also links exchange rates and FX lending to domestic electoral politics. But Poland is not unique: In line with our findings, Gyongosi and Verner (2018) show that a large exchange rate shock in Hungary significantly increased the vote share of the far right in areas where foreign currency borrowing was widespread. It may be the case that FX lending is particularly likely to provoke partisan responses, as FX borrowers tend to be richer and more educated than average as well as highly attuned to financial matters, all factors associated with increased political participation. This, too, is an area for future work.

More broadly, our analysis contributes to a growing literature on financialization and mass politics in open economies (Ansell and Adler 2019; Tertytchnaya et al. 2018), and it furthers our understanding of how political parties exploit economic shocks. Recent research in this vein has focused mainly on large, complex events (e.g., the "China Shock" or the Great Recession) and the electoral fortunes of governing parties (De Vries and Solaz 2019; Kosmidis 2018). We focus on how parties can benefit by making policy promises targeted at directly affected voters. PiS's and Jobbik's promises to help domestic borrowers against foreign, elite bankers are one example of such a strategy. Donald Trump's promise to bail out American farmers in the trade war with China is another. In Poland, we see how a party can cobble together winning coalitions from the stable support of an ideologically motivated base and by attracting members of groups adversely affected by economic events. This suggests that the search for a winner in the "economic anxiety" versus "resentment" debate is misguided. Rather, different voters gravitated toward populist and nationalist parties for different reasons.

Finally, the Polish case highlights how integrated global financial markets serve as a transmission belt carrying national economic policy choices beyond borders. In this case, the Swiss National Bank's domestically focused shift in monetary policy had cross-border *political* externalities in Poland, via the substantial franc-denominated mortgage lending. The nature of such cross-border economic linkages is another promising avenue for future research.

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Supporting Information

Additional supporting information may be found online in the Supporting Information section at the end of the article.

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