

Violent Conflict and Cross-Border Lending

RALPH DE HAAS* MIKHAIL MAMONOV† ALEXANDER POPOV‡ ILIRIANA SHALA§

March 18, 2025

Abstract

How do violent conflicts shape cross-border lending? Using comprehensive data on syndicated loans by 14,021 creditors to firms in 179 countries (1989–2020), we document a dual effect when violent conflict erupts: cross-border lenders reduce overall lending relative to domestic banks but significantly increase their financing of firms in military and dual-use industries. This credit reallocation occurs across both state-owned and privately-owned foreign banks, with stronger effects among lenders with less prior specialization in the conflict country or military sectors and those domiciled in politically non-aligned nations. The effect is both geographically contained (not spilling over to neighboring countries) and temporally limited (dissipating soon after conflicts end). Our findings reveal how global lenders strategically redirect credit to military sectors during armed conflicts, facilitating defense mobilization despite reducing overall country exposure.

JEL classification: D74, F34, F40, F50, G15, G20

Keywords: Armed conflict, cross-border lending, syndicated loans, geopolitical fragmentation

*European Bank for Reconstruction and Development, KU Leuven, and CEPR (dehaasr@ebrd.com).

†TBS Business School (m.mamonov@tbs-education.fr).

‡European Central Bank and CEPR (alexander.popov@ecb.europa.eu).

§Deutsche Bundesbank and Goethe University (iliriana.shala@bundesbank.de).

¶The authors are grateful to Karin Hobelsberger for outstanding research assistance and thank Puriya Abbassi, Thorsten Beck, Reint Gropp, Rajkamal Iyer, Sotirios Kokas, David Le Bris, Karsten Müller, Steven Ongena, Glenn Schepens, and participants of the Federal Reserve Board Summer Workshop (Washington, D.C.), the EUI “Finance in the Tuscan Hills” Workshop, and the research seminar at the Deutsche Bundesbank (Frankfurt) for useful comments. The views expressed are the authors’ and not necessarily those of the Deutsche Bundesbank, EBRD, ECB, or Eurosystem.

1 Introduction

Although the world has enjoyed a relatively peaceful period since the carnage of World War II ([Pinker, 2011](#)), peace has been the exception rather than the rule throughout human history. Russia’s war on Ukraine, escalating tensions in the Middle East, and protracted civil wars in Sudan and Yemen serve as sobering reminders of this reality and have thrust geopolitical conflict back to the fore.

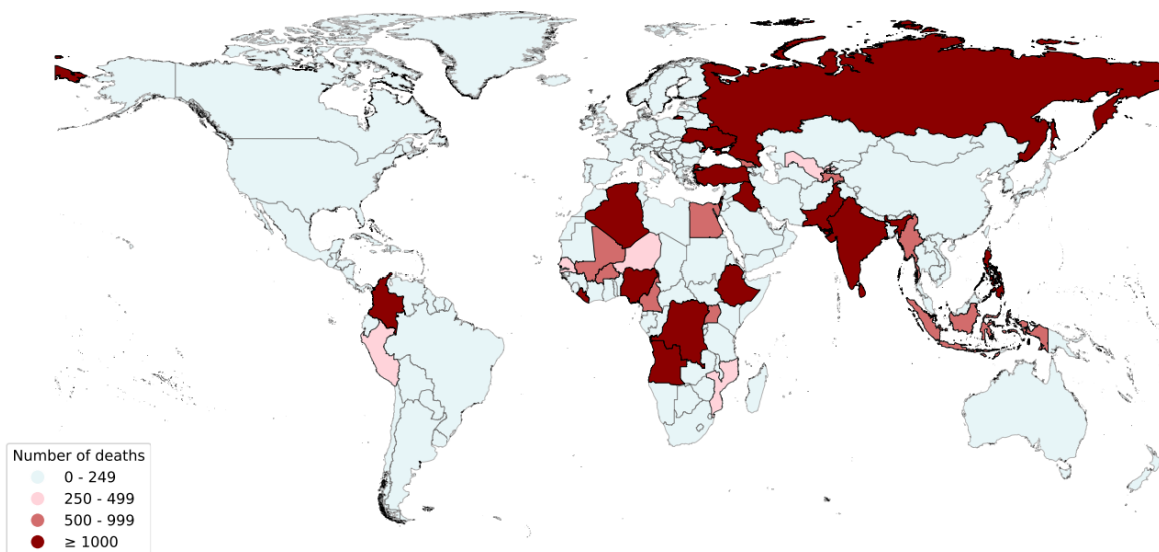
While economists have thoroughly examined the direct and indirect economic consequences of war ([Barro and Lee, 1994](#); [Davis and Weinstein, 2002](#); [Abadie and Gardeazabal, 2003](#); [Acemoglu, Johnson and Robinson, 2005](#); [Poast, 2005](#); [Tooze, 2006](#); [Glick and Taylor, 2010](#)) and how states leverage sovereign debt to support their military endeavors ([Kremer and Jayachandran, 2006](#); [Reinhart and Rogoff, 2009](#); [Zielinski, 2016](#)), the relationship between private finance and armed conflict remains underexplored. We examine this relationship through the lens of cross-border bank lending during violent conflicts.

Two opposing hypotheses guide our empirical analysis. On the one hand, existing literature shows how cross-border lenders tend to “run for the exit” when faced with negative shocks to the local economy, such as systemic banking crises. This holds especially in the absence of strong relationships between creditors and borrowers ([Giannetti and Laeven, 2012](#); [De Haas and Van Horen, 2013](#)). Historical and contemporary evidence also indicates that banks are typically wary of war’s destabilizing economic effects ([Kirshner, 2007](#)), particularly when a conflict seriously damages corporate assets, diminishing firms’ ability to pledge collateral ([Shpak, Earle, Gehlbach and Panga, 2023](#)). Consistent with this narrative, we expect cross-border lending to countries experiencing military conflict to decline.

Conversely, countries experiencing armed conflict may exhibit heightened credit demand in defense-related sectors. Foreign banks, less directly impacted by local hostilities, may be better positioned to accommodate this demand compared to domestic banks facing immediate conflict-related constraints. Cross-border lenders can then emerge as critical financiers of military production in conflict zones. Some anecdotal evidence supports this idea. A

notorious case involves the Italian Banca Nazionale del Lavoro, which used its US branch to grant \$3 billion in unauthorized credits to Iraq (1988-1989), with about \$600 million funding military technology (CIA, 1989). More recent and systematic estimates indicate that during 2020–2022 alone, financial institutions provided \$1 trillion to the defense industry globally (Longo, Meggiolaro and Felipe, 2024), with Europe’s 15 largest banks lending €88 billion to arms companies selling to conflict zones (Oudes, Slijper and Uiterwaal, 2022).

Figure 1. Conflict Countries by Annual Battlefield Deaths



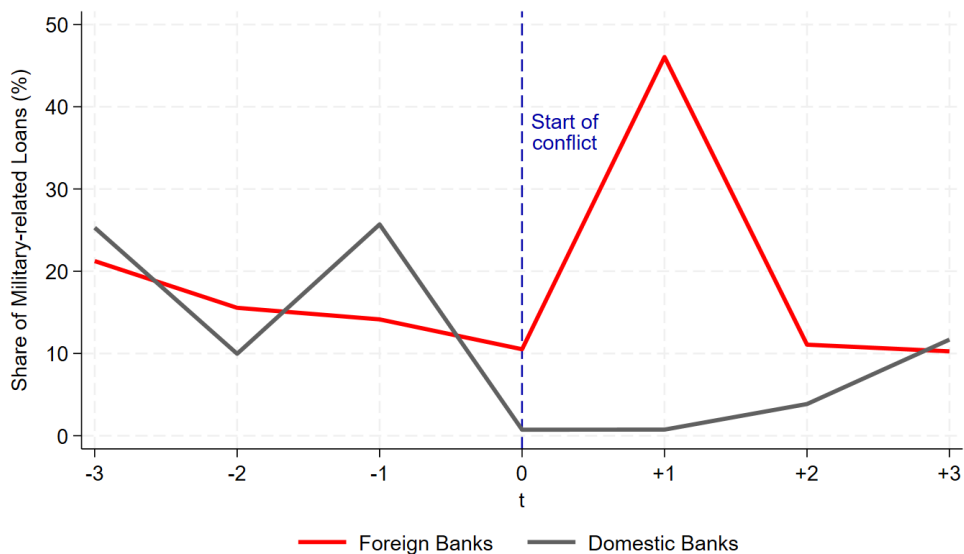
Note: This figure shows countries where annual battle-field related deaths exceeded 250, 500, or 1,000 at least once during 1989-2020 and where at least one firm received a syndicated loan during this period. The nature and timing of each conflict is described in Appendix Table A.I. Data sources: Uppsala Conflict Data Program and DealScan.

Our aim is to move beyond historical and anecdotal evidence by systematically analyzing how foreign credit flows respond to violent conflicts. To do so, we leverage comprehensive syndicated loan data from DealScan, covering 1.3 million loans by 14,021 banks to 97,169 firms across 179 countries during 1989–2020. Cross-border credit is a key component of global capital flows, and almost three-quarters of all cross-border lending to both developed and emerging countries comes in the form of syndicated loans (Doerr and Schaz, 2021).

We merge this information with data from the Uppsala Conflict Data Program (UCDP), which provides detailed and complete information on armed conflicts and violence, including battlefield death counts. In the three decades studied, civil wars and other intrastate hostilities comprise the majority of violent conflicts. Figure 1 shows that in our combined DealScan–UCDP dataset, 25 countries experienced at least one year with more than 500 battlefield deaths, and 16 countries saw at least one year exceeding 1,000 battlefield deaths.

Our empirical analysis establishes two main findings. First, foreign lending to the overall economy decreases relative to domestic lending when a country experiences a major conflict. Second, in crisis times cross-border lenders *increase* their lending to firms in the military sector, compared to domestic banks. These results indicate that geopolitical conflicts trigger both a contraction in overall credit provision and a reallocation of cross-border lending from non-military to defense-related sectors.

Figure 2. Military-Related Lending Shares Before and During Violent Conflicts



Note: This figure shows the share of military-related lending in all newly originated cross-border syndicated lending (red) and in all newly originated domestic syndicated lending (black) to conflict countries before and during a violent conflict (1989–2020). Data sources: Uppsala Conflict Data Program and DealScan.

This pattern is remarkably robust across sample specifications and methodological approaches, persisting even in models with stringent bank and firm fixed effects and home- and host-country trends. Figure 2 illustrates this pattern in the raw data, showing a sharp increase in relative cross-border lending to military sectors at the beginning of a typical conflict. This spike in military-related lending by foreign banks is also observed in absolute terms and does not merely reflect a decrease in non-military loans (Appendix Figure B.I).¹ Our analysis furthermore reveals that foreign banks most likely to increase cross-border lending to the military sector during violent conflicts are those without substantial prior lending specialization in either the conflict country or military sectors, as well as those domiciled in politically non-aligned nations.

Related literature. This paper contributes to three strands of the literature. First, we extend research on international private capital flows. Prior work has analyzed how investors allocate capital abroad (Lane and Milesi-Ferretti, 2007; Coeurdacier and Rey, 2013; Bruno and Shin, 2015; Maggiori, Neiman and Schreger, 2020; Coppola, Maggiori, Neiman and Schreger, 2021), how this allocation affects recipient economies (Calvo, Leiderman and Reinhart, 1993), and how private capital flows co-move as part of a global cycle (Rey, 2015). Several papers examine how cross-border credit flows, especially in the form of syndicated lending, can transmit financial and real-economic shocks across borders.² Our analysis extends this literature by revealing a contrasting lending dynamic during violent conflicts: while cross-border lenders significantly reduce overall lending, they simultaneously redirect capital toward sectors positioned to benefit from local instability, particularly the military-industrial complex. This pattern confirms existing evidence about distance constraints on cross-border lending, while revealing a new mechanism through which foreign banks reallo-

¹The normalization in the second year reflects that our dataset captures new loan originations. With the average loan maturity at 4.5 years, banks typically concentrate their defense-related lending at conflict onset when demand is highest.

²E.g., Cetorelli and Goldberg (2011); Giannetti and Laeven (2012); Popov and Udell (2012); De Haas and Van Horen (2013); Cerutti, Hale and Minoiu (2015); Hale, Kapan and Minoiu (2020); Doerr and Schaz (2021).

cate credit toward military sectors during armed conflicts.

Second, we contribute to an emerging literature that examines how financial markets interact with military conflict. Previous research has primarily focused on sovereign borrowing. [Horn, Reinhart and Trebesch \(2024\)](#) document how wars trigger dramatic financial changes as government-to-government lending increases while overall private capital flows shrink. [DiGiuseppe \(2015\)](#) find that sovereign credit enables states to simultaneously finance military and civilian spending, circumventing budgetary constraints, while [Federle, Rohner and Schularick \(2025\)](#) demonstrate how financial access can drive military success: countries experiencing commodity windfalls significantly improve their chances of victory as they can ramp up military expenditures. Our contribution is to document how cross-border credit flows can create a financing channel for military build-up during violent conflicts, when domestic credit markets are often constrained ([Mamonov, Ongena and Pestova, 2024](#)).

Third, we shed light on the financial repercussions of geopolitical fragmentation. Recent papers document how global trade, investment, and supply chains have fragmented along geopolitical lines since the onset of Russia’s invasion of Ukraine and escalating US-China trade tensions. These studies reveal a progressive fragmentation of economic connections between rival geopolitical blocs, partially mitigated by emerging “connector” countries.³

An emerging literature has begun to explore how geopolitical tensions affect financial markets. [Niepmann and Shen \(2025\)](#) show that internationally active US banks respond to heightened geopolitical risk by reducing cross-border and domestic lending, while maintaining credit supply through local affiliates in risky countries, a dynamic that generates significant economic spillovers. [Danisewicz, Park, Schaeck and Zheng \(2025\)](#) demonstrate how cross-border lenders strategically responded to Russia’s counter-sanctions on the EU’s agricultural sector by increasing lending and offering more favorable loan terms to this sector. They also find that banks with sector-specific expertise can mitigate economic disruptions in sanctioned

³See [Alfaro and Chor \(2023\)](#); [Chupilkin, Javorcik and Plekhanov \(2023\)](#); [Aiyar, Malacrino and Presbitero \(2024\)](#); [Chupilkin, Javorcik, Peeva and Plekhanov \(2024\)](#); [Gopinath, Gourinchas, Presbitero and Topalova \(2025\)](#).

industries. [Efing, Goldbach and Nitsch \(2023\)](#) find that while German banks reduced cross-border lending to sanctioned countries, their foreign affiliates in less regulated jurisdictions expanded credit. Similarly, [Besedeš, Goldbach and Nitsch \(2017\)](#), also for Germany, show that direct financial transactions with sanctioned countries decline but are partially replaced by flows through intermediary nations. Thus, both studies demonstrate how regulatory gaps allow private capital flows to adapt to and partially circumvent geopolitical restrictions. Our study extends this literature by examining a different mechanism: how banks strategically reallocate lending during violent conflicts. We show that cross-border lenders systematically redirect credit toward military and dual-use industries in conflict zones, revealing a financial channel through which banks influence war economies despite broader lending contractions.

Lastly, our results also speak to those of [Kempf, Luo, Schäfer and Tsoutsoura \(2023\)](#), who find that the ideological alignment of US institutional investors with foreign governments affects their cross-border capital allocation, with both banks and mutual funds investing less in countries when they become ideologically distant from the governing party after elections. By analyzing differential lending patterns from politically aligned versus non-aligned countries to conflict zones, we identify a previously unexamined financial channel through which ideological affinities can sustain military activities.

2 Data

2.1 Data sources

Our analysis requires us to merge the data from the Uppsala Conflict Data Program (UCDP) with the Loan Pricing Corporation’s (LPC) DealScan data. The UCDP provides comprehensive and harmonized information on armed conflicts and organized violence over nearly four decades. We focus on state-based armed conflicts, which cause most battle-related fatalities ([Melander, Pettersson and Themnér, 2016](#)). These are conflicts between two parties, of which at least one is a state government, resulting in at least 25 fatalities within a year.

We aggregate battle deaths at the country-year level.

From DealScan, we collect comprehensive data on syndicated lending to corporations globally over a 31-year period (1989-2020). This extensive data set allows us to observe the universe of syndicated loan transactions, capturing lending relationships between financial institutions and borrowers across different countries, industries, and time periods. We split each loan into syndicate member shares to create our unit of observation: a syndicated loan share by an individual bank to an individual borrower in a given year. Since DealScan provides loan share distributions for only 26% of loans, we impute missing shares using each bank’s historical average share from loans with known allocations and then re-weigh these shares so that they add up to 100%.⁴ We convert amounts to US dollars and date each observation to the loan’s origination year. DealScan provides the countries of both lenders and borrowers (we manually double check bank headquarters locations) and classify a loan as foreign when the bank and firm are incorporated in different countries.

2.2 Identifying military and dual-use sectors

We categorize military-related sectors into two types: primary military and dual-use. Primary military sectors exclusively produce goods and technologies for military and defense purposes, such as missiles and tanks. In contrast, dual-use sectors produce goods, technologies, or services intended for civilian use but with a clear capability to perform military functions. For example, commercial aircraft engine technology can be readily adapted for fighter jets, with the same advanced materials, propulsion systems, and engineering principles serving both civilian transportation and military aviation needs.

Because the export of dual-use products can pose national security concerns, many countries create lists of items that require export authorization. We use the UK’s Strategic Export Control List from the Department for Business and Trade (specifically the “Military

⁴Our results are robust to alternative imputation methods, such as allocating 50% to lead banks and non-lead banks each and then splitting shares equally across banks with the same role in the syndicate (De Haas and Van Horen, 2013). See Appendix Table L.I.

List” and “Dual-Use List”) to identify military and dual-use industries. From the first list, we collect key terms such as ‘weapon’, ‘gun’, ‘artillery’, ‘tank’, ‘bomb’, ‘torpedo’, ‘missile’ and ‘explosives’. We then identify all 4-digit SIC codes on the NAICS/SIC website that mention these goods. This yields 10 primary military SIC codes.

For the dual-use list, we apply a similar approach. We extract keywords from the UK’s dual-use category titles (such as ‘nuclear’ and ‘aircraft’) and search for these terms on the NAICS/SIC website. This generates 115 potential dual-use SIC codes. We then evaluate each sector’s likelihood of military association by asking ChatGPT to assess the probability of military production involvement for all 125 codes (10 primary military plus 115 dual-use sectors). We perform 50 iterations, randomly reordering the 125 SIC codes each time, and calculate the average probability for each sector (Appendix E describes this approach in more detail). The Spearman rank correlation in Figure E.I demonstrates very high consistency across iterations. Notably, ChatGPT consistently assigns 95-100% probability to the 10 primary military sectors. We ultimately retain these 10 sectors plus 79 dual use sectors that exceed 50% average military-use probability.⁵ Across our sample, these 89 sectors account for 17% of total syndicated lending volume.⁶

An example of a syndicated loan in our data set that was disbursed to a firm in a dual use sector during a violent conflict is the 2014 facility by Bank of America, Merrill Lynch, ING, and UBS to Israel’s Delek Group. Although this conglomerate has diversified interests, primarily in the energy sector, several of its activities have intersected with military and defense sectors, including providing fuel supply to military entities and operating fuel and service stations in occupied territories. Another example would be the 2015 syndicated loan arranged by a consortium of 15 African, American, Chinese, and European banks to INT Towers in Nigeria, a company specializing in telecommunications infrastructure. After

⁵Our results are robust to different thresholds as shown in Figure G.I.

⁶Panel A (B) of Appendix Table D.I lists the 10 (79) SIC codes of the primary (dual use) military sectors. Each code links to at least one of the predefined categories of the UK dual use list in Annex I. See <https://www.gov.uk/government/publications/uk-strategic-export-control-lists-the-consolidated-list-of-strategic-military-and-dual-use-items-that-require-export-authorization>.

receiving this syndicated loan, INT’s parent company—IHS Towers Nigeria—donated an Information Communication Technology Center to the 6th Division of the Nigerian Army.

2.3 Descriptive statistics

Our starting sample spans the period 1989–2020 and contains 1,322,944 observations at the bank-firm-year level, reflecting 861,437 distinct bank-firm relationships, 14,021 unique creditors, and 97,169 unique borrowers.⁷ Appendix Table F.I contains variable definitions while Appendix Table F.II presents summary statistics for all variables used in our analysis.

Our dependent variable, the logarithm of the loan amount at the bank-firm-year level, has a mean of 16.48 or \$46.2 million. The average loan maturity is 54 months, while the average loan spread is 209 basis points. Foreign (cross-border) loans, in which banks lend money to firms in a different country, comprise 46% of all loans. Loans to dual-use military-related sectors represent 16.8% of our sample, while another 0.3% are for primary military applications. In terms of broader sector classifications, the services sector and the industry and manufacturing sector represent the largest shares at 34% and 24% of total loan recipients, respectively. The wholesale trade sector represents the smallest share, 6% of all loans. The mean distance between bank and firm headquarters is 2,674 km.

Regarding conflict exposure, 2% of the loans are extended to firms in countries experiencing a conflict with more than 500 battlefield deaths, while 1% go to firms in countries with conflicts exceeding 1,000 battlefield deaths. Appendix Figure C.I displays the leading sources of syndicated loans to military and dual-use sectors in conflict zones. While the United Kingdom, United States, and Germany top this ranking, it also includes countries such as Singapore, the United Arab Emirates, and China.

⁷In the analysis, we drop banks that provide only one loan, which removes roughly 7,000 unique creditors from the initial number of about 21,000 banks.

3 Empirical strategy

3.1 Aggregate-level analysis

We first explore aggregate cross-border lending to military-related sectors during violent conflicts. Our goal is twofold: to explore whether these effects are economically significant at the level of the aggregate economy and to understand how these effects compare to those stemming from domestic bank lending. We aggregate all bank-firm-year observations to the bank group-sector-country-year level, where ‘bank group’ refers to either all foreign or all domestic banks, and ‘sector’ to all borrowing firms operating in either military- or non-military-related sectors of an economy. We specify the following regression equation:

$$\begin{aligned} Loan_{gsct} = & \beta_0 \cdot Foreign_{gc} \\ & + \beta_1 \cdot Foreign_{gc} \times Conflict_{ct} \\ & + \beta_2 \cdot Foreign_{gc} \times Military_s \\ & + \beta_3 \cdot Foreign_{gc} \times Conflict_{ct} \times Military_s \\ & + \alpha_c + \gamma_r + \delta_{gs} + \theta_{vs} + \phi_{gt} + \chi_{st} + \varepsilon_{gsct} \end{aligned} \tag{1}$$

where $Loan_{gsct}$ is the inverse hyperbolic sine (IHS) transformation of total loans by bank group g (foreign or domestic) to sector s (military-related or not) in country c in year t , where IHS is computed as $\ln(y + \sqrt{y^2 + 1})$. $Conflict_{ct}$ is a dummy variable equal to one if the country experiences a violent conflict in year t . By construction, β_1 captures changes in aggregate credit by foreign banks to non-military firms in countries that encounter violent conflicts, relative to domestic banks, while β_2 reflects the differential lending by foreign banks to military sectors relative to domestic banks, regardless of conflict status. β_3 , our main coefficient of interest, captures changes in lending to the military sector by foreign lenders in response to violent conflict, relative to domestic banks.

The specification also includes the following base and high-dimensional fixed effects.

First, α_c and γ_r are host-country and foreign-bank region fixed effects that net out all time-invariant factors common to a destination country and the region where the foreign credit comes from, respectively.⁸ Second, δ_{gs} are interactions of foreign and military fixed effects which remove time-invariant differences between foreign and domestic creditors in their propensity to lend to particular sectors. Third, θ_{vs} are violent conflict \times military fixed effects that absorb general changes in the expansion of the military sector during conflicts. Fourth, ϕ_{gt} and χ_{st} are bank group \times year and sector \times year fixed effects, respectively. The former capture overall trends in syndicated lending by foreign vs. domestic banks over time. The latter account for changes in the relative importance of military vs. non-military sectors over time, regardless of which bank group is lending. Because the data are aggregated over lender types and firms, we cannot hold constant background forces at the level of individual borrowers and creditors. We therefore view this specification as suggestive, though useful, to gauge whether any effects are meaningful in the aggregate.

Consistent with the earlier discussion, two hypotheses emerge. First, previous evidence suggests that cross-border lenders reduce credit to the corporate sector more than domestic banks in response to negative economic shocks (Giannetti and Laeven, 2012; De Haas and Van Horen, 2013). In this scenario, a violent conflict should lead cross-border lenders to “run for the exit” more than domestic lenders, in which case we expect $\beta_1 < 0$. In contrast, armed conflict can increase credit demand in military sectors, which domestic banks can struggle to meet, causing cross-border lenders to step in. Thus, cross-border lending to military-related sectors in conflict zones could increase, in which case we expect $\beta_3 > 0$.

3.2 Loan-level analysis

At the bank-firm-year level, we are interested in potential sectoral credit reallocation by cross-border lenders between firms in different sectors during times of violent conflict in a

⁸We consider the following regions: *ECA* is Europe and Central Asia, *EAP* is East Asia and Pacific; *Americas* are North America, Latin America, and the Caribbean; *MENA* is Middle East and North Africa; *SAR* is the South Asia region; *SSA* is Sub-Saharan Africa.

particular destination country. To that end, we specify the following regression equation:

$$\begin{aligned}
Loan_{bfsect} &= \beta_0 \cdot Foreign_{bf} & (2) \\
&+ \beta_1 \cdot Foreign_{bf} \times Conflict_{ct} \\
&+ \beta_2 \cdot Foreign_{bf} \times Military_s \\
&+ \beta_3 \cdot Foreign_{bf} \times Conflict_{ct} \times Military_s \\
&+ \alpha_b + \theta_f + \mu_{ht} + \nu_{ct} + \delta_{\bar{c}s} + \phi_{foreign,t} + \chi_{st} + \varepsilon_{bft}
\end{aligned}$$

where $Loan_{bfsect}$ denotes total loans by bank b to firm f in sector s in country c (the borrowing firm's country of incorporation) in year t . As before, $Conflict_{ct}$ is a dummy equal to one if the country experienced a violent conflict in year t . $Military_s$ is a dummy equal to one if firm f 's primary, secondary, or tertiary SIC code is part of the sector list in Table D.I.

In this specification, β_1 captures changes in cross-border credit to a firm in a non-military sector in a country experiencing violent conflict, relative to domestic lending. β_2 reflects the differential lending by foreign banks to military sectors relative to domestic banks, regardless of conflict status. β_3 captures how much the same cross-border lender changes lending to a firm in the military sector in response to violent conflict, relative to domestic banks.

Equation (2) is fully saturated with a battery of base and interactive fixed effects. Bank fixed effects α_b control for time-invariant differences in risk appetite, capital constraints, and lending policies across creditors that may have an independent effect on sectoral credit allocation. Firm fixed effects θ_f absorb time-invariant differences in credit demand or creditworthiness across firms which may not be related to the military conflict. Both these fixed effects are crucial because variations in loan volumes could otherwise simply reflect persistent differences between banks and firms, rather than meaningful changes over time. Next, we include bank incorporation ('home') country $h \times$ year fixed effects (μ_{ht}) and firm incorporation country \times year fixed effects (ν_{ct}). These absorb shocks common to all banks or firms, respectively, in their country of incorporation.

Finally, we include three types of sectoral interactive fixed effects. First, conflict \tilde{c} \times sector fixed effects ($\delta_{\tilde{c}s}$) absorb sectoral lending differences during conflicts that are common to domestic and cross-border lenders. Second, foreign \times year fixed effects ($\phi_{foreign,t}$) capture global trends in the propensity to extend loans abroad. Finally, sector \times year fixed effects (χ_{st}) capture time-varying sector shocks that are again common to both lender groups. The variables *Conflict*, *Military*, *Foreign*, and *Conflict* \times *Military* are not included on their own as they would be absorbed by the various fixed effects.

Our prior hypotheses extend to the disaggregated analysis. In line with the existing literature on cross-border versus domestic lending during crises, cross-border lenders may reduce their credit exposure to firms more strongly in response to local demand shocks, in which case we expect $\beta_1 < 0$. Alternatively, violent conflict could increase demand for military products, raising military firms' credit demand. Foreign banks, with a greater spare capacity and access to deeper internal capital markets, may be better positioned to increase lending to these firms, in which case $\beta_3 > 0$.

4 Baseline results

This section presents our main empirical results at the aggregate level (Section 4.1) and loan level (Section 4.2). Section 4.3 discusses several robustness tests, after which Sections 4.4 and 4.5 investigate the role of geopolitical (mis)alignment and bank specialization, respectively.

4.1 Aggregate results

Table 1 presents results from various specifications of Equation (1), using a balanced panel data set containing 179 countries, 32 years, information on whether lending stems from a foreign or domestic bank group and on whether it is directed to firms in military or non-military sectors. This data structure results in 22,912 country \times year \times bank group \times sector observations. In column (1), we include the variable *Foreign* and its interaction

with *Conflict*, controlling for host country, foreign region, and year fixed effects, as well as the level *Conflict* effect. The evidence suggests that foreign lending typically exceeds domestic lending during non-conflict times, underscoring the importance of the cross-border segment of the syndicated loans market. At the same time, foreign lending declines relative to domestic lending when a country experiences a violent conflict, although this effect is not precisely estimated.

In column (2), we add the interaction of *Foreign* and *Military*, as well as the triple interaction of *Foreign*, *Conflict*, and *Military*. The negative point estimate of β_1 is now significant at the 1% statistical level. This indicates that, relative to non-conflict times, foreign banks significantly reduce non-military lending to countries experiencing a conflict. This is consistent with the running-for-the-exit that the literature has documented in a number of past crisis episodes (Giannetti and Laeven, 2012; De Haas and Van Horen, 2013). Importantly, the positive point estimate of β_3 reveals that this general pattern does not hold for lending to military-related sectors. Compared to domestic banks, cross-border lenders in fact *expand* their lending for defense-related projects.

This contrasting pattern is confirmed in column (3), where we add interactions of *Military* and year fixed effects; *Foreign* and year fixed effects (as well as *Foreign* \times *Military* fixed effects). This absorbs the independent effect on lending of sector and foreign (potentially nonlinear) trends. The estimated coefficients β_1 and β_3 continue to be negative and positive, respectively, and significant at the 5% and 1% statistical level, respectively. Numerically, the point estimates imply that relative to non-conflict times, lending by foreign banks to the non-military sector slumps by $e^{-1.334} - 1$ during conflict times, or by 74 percent more than lending by domestic banks.⁹ In contrast, lending by foreign banks to the military sector increases substantially by around $e^{0.899} - 1$ during conflict times, or by around 146 percent more than lending by domestic banks.

We examine the robustness of these findings by varying the classification of dual-use

⁹Recall that the dependent variable is the inverse hyperbolic sine (IHS) transformation of loans y , which behaves as $\ln(2y)/2$, and thus $\Delta y/y = e^\beta - 1$, as in the case of the dependent variable being $\ln y$.

Table 1. Cross-Border Lending to Military Firms During Violent Conflicts: Aggregate-Level Analysis

	Dependent variable: $Loan_{gsct}$		
	(1)	(2)	(3)
Foreign	2.840*** (0.177)	3.924*** (0.253)	
Foreign \times Conflict	-0.451 (0.517)	-1.340** (0.528)	-1.334** (0.557)
Foreign \times Military		-2.162*** (0.239)	
Foreign \times Conflict \times Military		2.408*** (0.878)	2.233*** (0.827)
Conflict	✓	✓	✓
Host-country FE	✓	✓	✓
Foreign Region FE	✓	✓	✓
Year FE	✓	✓	✓
Conflict \times Military FE		✓	✓
Foreign \times Military FE			✓
Military \times Year FE			✓
Foreign \times Year FE			✓
N obs	22,912	22,912	22,912
N of clusters	179	179	179
R^2 (adj.)	0.598	0.643	0.648

Note: This table shows the results from estimating Equation (1). The dependent variable is the inverse hyperbolic sine (IHS) transformation of total loans y by bank group g to sector s in country c and year t , where IHS is computed as $\ln(y + \sqrt{y^2 + 1})$. $Foreign_{gc}$ is a dummy equal to one (zero) when indicating aggregate cross-border (domestic) lending to country c . $Conflict$ is a dummy variable equal to one if the country in which the firm is domiciled, experienced more than 1,000 battle-field related deaths in a calendar year. $Military$ is a dummy equal to one if the loan is to a firm in a military-related SIC sector which is either primary or dual (see Table D.I for the relevant SIC codes). All regressions include fixed effects as specified. *Foreign Region FE* capture the following source regions of foreign credit: East Asia and Pacific; North America, Latin America, and the Caribbean; Middle East and North Africa; South Asia; and Sub-Saharan Africa. Data sourced from UCDP and DealScan. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors are clustered at the destination country level and reported in parentheses.

sectors. Specifically, we increase the AI-estimated probability threshold for military use from 50% to 90% in 10 percentage point increments and check how the estimate of β_3 responds. As Figure G.I in Appendix G illustrates, this estimate remains robust across thresholds, yet it increases at the strictest thresholds (80% and 90%), where both the number of military sectors and their share of syndicated lending are nevertheless considerably smaller.

In addition, we check the robustness of our inference to different clustering approaches. Figure H.I in Appendix H compares the baseline approach—clustering at the level of 170 host countries—to six alternatives: (i) host-country \times year clusters; (ii) host-region \times year clusters; (iii) home-region \times year clusters; (iv) host region \times conflict \times military sector clusters; (v) home region \times conflict \times military sector clusters; and (vi) foreign \times conflict \times military sector clusters. Given that we have only eight clusters in the latter case, we apply a Wild cluster bootstrap procedure (Cameron and Miller, 2015). As Figure H.I indicates, our β_3 estimate remains statistically significant at the 1% level in each case.

Finally, to address the fact that two thirds of the observations of our dependent variable are zero, we switch from a linear to a Tobit model. Appendix Table I.I shows that the estimate of β_1 remains negative and is significant at the 1% level while β_3 is positive and significant at the 5% level.

4.2 Loan-level results

In Table 2, we present the estimates from Equation (2). As in Table 1, we start with a parsimonious model and then gradually add fixed effects. In column (1), we only use bank fixed effects, firm fixed effects, and interactions of home-country and host-country dummies with year dummies. The evidence suggests that in non-conflict times, the average foreign loan is smaller than the average domestic loan, and that in times of conflict cross-border loans shrink even further, by $e^{-0.224} - 1$, or by about 20.1 percent.

In column (2), we include all double interactions and the triple interaction of *Foreign*, *Conflict*, and *Military*. The evidence is consistent with what we documented in Table 1 at the aggregate level: while foreign lending to the non-military sector declines when a country experiences a violent conflict, lending to the military increases significantly.

We continue to obtain very similar effects, both in terms of statistical significance and in terms of economic magnitude, once we add the double interactions of the *Military* dummy and the *Foreign* dummy with year dummies (column 3). In this most saturated and preferred

Table 2. Cross-Border Lending to Military Firms During Violent Conflicts:
Loan-Level Analysis

Dependent variable	<i>Loan_{bf sct}</i>		
	(1)	(2)	(3)
Foreign	-0.085*** (0.010)	-0.090*** (0.010)	
Foreign × Conflict	-0.224* (0.116)	-0.319*** (0.115)	-0.310*** (0.115)
Foreign × Military		0.027*** (0.008)	
Foreign × Conflict × Military		0.509*** (0.105)	0.522*** (0.105)
Bank FE	✓	✓	✓
Firm FE	✓	✓	✓
Home Country × Year FE	✓	✓	✓
Host Country × Year FE	✓	✓	✓
Conflict × Military FE		✓	✓
Foreign × Military FE			✓
Military × Year FE			✓
Foreign × Year FE			✓
<i>N</i> obs	1,308,048	1,308,048	1,308,048
<i>N</i> of banks	14,021	14,021	14,021
R ² (adj.)	0.868	0.868	0.868

Note: This table shows the results from estimating Equation (2). The dependent variable is the natural logarithm of the loan amount. *Foreign* is a dummy equal to one if the bank lends to a firm in a foreign country. *Conflict* is a dummy equal to one if the firm’s country experienced more than 1,000 battle-field related deaths in a calendar year. *Military* is a dummy equal to one if the loan is to a firm in a military-related SIC sector which is either primary or dual (see Table D.I for the relevant SIC codes). All regressions include fixed effects as specified. Data sourced from UCDP and DealScan. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors clustered by bank are shown in parentheses.

specification, we find that relative to domestic lending, foreign lending to a firm in the non-military sector declines by $e^{-0.310} - 1$, or by about 26.7 percent, while foreign lending to a firm in the military sector increases by $e^{0.212} - 1$, or by 23.6 percent, again relative to domestic banks. We note that the explanatory power of the regression is quite high, at about 87%.

Our findings reveal two contrasting effects of violent conflicts on cross-border lending. While foreign lending declines to countries experiencing conflict—consistent with the “flight home” effect documented in the empirical banking literature—this overall reduction stems

exclusively from a retrenchment in lending to non-military firms. Notably, cross-border lending to military-related firms increases substantially, suggesting that lenders strategically accommodate credit demand from firms potentially benefiting from local conflicts.

4.3 Robustness

In this section, we verify whether our baseline findings are robust to the use of different sample selections and data specifications.

Conflict definition. In Appendix Table J.I, we re-run Equation (2) while defining the variable *Conflict* using different casualty thresholds. Recall that our baseline specification, reproduced in column (6), applies a relatively high cut-off point of at least a 1,000 deaths per year. We now reconstruct this variable using different thresholds: more than 0, 100, 250, 500, or 750 annual deaths (columns 1-5). We find no difference in the response of domestic and foreign banks' lending to non-military firms when *Conflict* is defined using a relatively low threshold (less than 500 violent deaths, columns 1-4). It is only when conflicts get more violent (i.e., for a threshold of 750 violent deaths), that we start to observe a larger decline in lending by foreign banks to non-military firms in a country in conflict, relative to domestic banks. That is, cross-border lenders initiate broad-based capital retrenchment only when hostilities intensify to high-casualty levels.

In contrast, we find a statistically significant increase in foreign lending to military firms, relative to domestic lending, for *all* conflict intensities (columns 1-5). Importantly, however, the magnitude of this effect increases with the death threshold used, suggesting that the more violent the conflict, the more likely foreign banks are to increase lending to military firms. Numerically, when we use a threshold of 500 deaths to define the variable *Conflict*, the effect is already in the ballpark of the estimate from the preferred specification in Table 2, column (3)—which we replicate in column (6) of Appendix Table J.I. The estimates reported in Appendix Table J.I thus imply that both the “running for the exit” effect and the propensity

to support military firms increase with the severity of the violent conflict.

In Appendix Table J.II, we run a version of the same exercise by replacing the dummy variable *Conflict* with the continuous measure of fatalities, conditional on fatalities being higher than a pre-defined threshold. We confirm the findings from Appendix Table J.I, namely that foreign lending to military firms increases with the severity of the conflict, with the largest increase observed beyond a threshold of 500 violent deaths.

Defining military sectors. In Appendix Table K.I, we check whether our main results do not depend on a particular classification of firms into “military” versus “non-military”. Recall that in our main test, we classify firms as “military” if their primary, secondary, or tertiary SIC code belongs to the list of 89 military sectors in Table D.I (we replicate these results in column 1). However, most of these sectors produce dual purpose goods. We therefore now split these sectors into “dual-use” and “primary military use” (79 and 10 sectors, respectively). We find that during violent conflicts, cross-border lenders start to lend relatively more to both producers of dual-use goods (column 2) and of primary military goods (column 3). The latter column shows that the main effect we document is not an artifact of cross-border lending increasing to firms that produce mostly non-military goods.

Imputing missing loan shares. In Appendix Table L.I, we impute missing loan shares in two other ways. Column (1) shows our baseline approach, in which we impute missing shares using each bank’s historical average share from loans with known allocations and then reweigh these shares so that they add up to 100%. In column (2), following [De Haas and Van Horen \(2013\)](#), the two groups of lead and participant banks are each allocated 50% of the loan. Then these halves are split equally across the banks in each group. In column (3), following [Giannetti and Laeven \(2012\)](#), we assign the full amount of the loan to the lead bank if there is only one. In case of multiple lead banks, the loan amount is divided equally among them. The main result of the paper still is obtained when employing these alternative approaches to calculate loan shares, with the economic magnitude increasing even further.

Country sample. In Appendix Table M.I, we address the potential concern that our results might be driven by a handful of source countries. To that end, we exclude from the sample large and important countries, both economically and in terms of overall number of loans: the United States, Japan, Germany and France, or China. This exercise confirms that our results are not driven by specific countries. We continue to find an economically meaningful and statistically significant increase in foreign lending to the military sector in times of violent conflict when we exclude loans from banks in the United States (32.8% of observations, column 1); Japan (15.3%, column 2); Germany and France (12.4%, column 3); or China (2.7%, column 4).

Keeping only the largest cross-border lenders. In Appendix Table N.I, we demonstrate that even when the sample is drastically reduced to the 575 largest global syndicated lenders, our baseline results remain consistent. This indicates that our results are not driven solely by numerous small lenders that issue only a few loans each.

4.4 Geopolitical alignment and cross-border lending

We now extend our analysis by examining the geopolitical distance between a bank’s headquarters country and destination countries. Our aim is to analyze whether in conflict times, banks align lending practices with their home country’s geopolitical interests, particularly in military-related financing. Anecdotal evidence suggests that while Western banks typically prioritize profit motives, non-Western institutions, often publicly-owned, may emphasize government interests more. We classify countries in two ways: through formal membership in well-defined geopolitical blocs and by using United Nations (UN) General Assembly voting data from [Bailey, Strezhnev and Voeten \(2017\)](#) to identify geopolitical alignments based on shared values. We then replace the variable *Foreign* in Equation (2) with dummies for different types of geopolitical orientation. We do so in two ways, first by simply distinguishing between the countries where banks are domiciled, and then by also accounting for the

geopolitical proximity between these countries and those where borrowing firms are located.

4.4.1 Geopolitical and military country blocs

Table 3 reports the results of tests where we distinguish only between the creditors' countries. The first meaningful way in which countries sort themselves on geopolitical grounds is by their membership in formal geopolitical organizations or more informal forums. These structures may be military or political, but in both cases they reveal, by means of participation in actual treaties, the geopolitical bend of their members.

We use two such groupings. The first is BRICS vs NATO countries. BRICS is a loose organization of important emerging markets representative of the so-called "Global South", namely Brazil, Russia, India, China, and South Africa. NATO, on the other hand, is a western defense alliance encompassing at present 32 countries in Europe and North America (Finland's and Sweden's recent additions are outside of our time period, and for one country, Montenegro, there are no DealScan data). The remaining 122 countries are classified as "Others". The evidence in column (1) suggests that banks from all three groups tend to increase military lending to a foreign country that is experiencing a violent conflict. Although the effect is largest for banks from non-BRICS, non-NATO countries, and smallest for banks from the BRICS, in all three cases the effect is significant at the 1% statistical level.

In column (2), we compare BRICS to the G7 instead of NATO. The G7 was formed in 1975 to include what were at the time the seven largest economies, all of them liberal democracies: the United States, Japan, Germany, the United Kingdom, France, Canada, and Italy. Thus, it represents another bloc of large economies aligned with the west.¹⁰ In this test, a total of 145 countries are classified as "Others". Once again, the evidence indicates that all foreign banks increase lending to military firms in conflict countries. As in column (1), the effect is numerically strongest for banks domiciled in the category "Others", but the effect is again significant at the 1% statistical level for all three groups.

¹⁰Russia was included in the G7 in 1997 and expelled in 2014 following the annexation of Crimea.

Table 3. Geopolitical Origin and Cross-Border Lending During Violent Conflicts

	Dependent variable: $Loan_{bft}$		
	Country bloc B_1 : Country bloc B_2 : Country bloc B_3 :	BRICS NATO Others	BRICS G7 Others
	(1)	(2)	(3)
Conflict $\times B_1$ Foreign	-0.234** (0.111)	-0.231** (0.113)	-0.333*** (0.122)
Conflict $\times B_2$ Foreign	-0.289** (0.114)	-0.297*** (0.115)	-0.349*** (0.121)
Conflict $\times B_3$ Foreign	-0.264** (0.110)	-0.241** (0.109)	-0.294** (0.128)
Conflict \times Military $\times B_1$ Foreign	0.423*** (0.108)	0.423*** (0.106)	0.494*** (0.110)
Conflict \times Military $\times B_2$ Foreign	0.507*** (0.158)	0.498*** (0.158)	0.578*** (0.140)
Conflict \times Military $\times B_3$ Foreign	0.642*** (0.100)	0.617*** (0.107)	0.585*** (0.125)
Bank FE, Firm FE	✓	✓	✓
Home (Host) Country \times Year FE	✓	✓	✓
Military \times Year FE	✓	✓	✓
Conflict \times Military FE	✓	✓	✓
Foreign (B_1, B_2 , or B_3) \times Military FE	✓	✓	✓
Foreign (B_1, B_2 , or B_3) \times Year FE	✓	✓	✓
N obs	1,308,048	1,308,048	1,308,048
N banks	14,021	14,021	14,021
R^2 (adj.)	0.867	0.868	0.868
N countries in bloc B_1	5	5	52
N countries in bloc B_2	29	7	48
N countries in bloc B_3	122	145	86

Note: The dependent variable is the natural logarithm of the loan amount. *Conflict* is a dummy equal to one if the firm's country experienced more than 1,000 battle-field related deaths in a calendar year. *Military* is a dummy equal to one if the loan is to a firm in a military-related SIC sector which is either primary or dual (see Table D.I for the relevant SIC codes). In columns (1), country blocs B_1 , B_2 , and B_3 distinguish between banks headquartered in BRICS vs. NATO vs. all other countries. Column (2) does the same but replaces NATO with G7. In column (3), we use [Bailey et al. \(2017\)](#) to divide countries into a West or East bloc depending on the country's voting behavior on UN Resolutions. *West Foreign* (*East Foreign*) is a dummy variable equal to one if the loan is extended by a bank from a country leaning towards the West (East) bloc to a firm domiciled in a foreign country. Fixed effects as specified. Data sources: UCDP and DealScan. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors clustered by bank in parentheses.

4.4.2 West vs. East political orientation in UN voting

Our second approach is to categorize countries into hypothetical Western, Eastern, or non-aligned blocs without resorting to formal club membership. To do so, we rely on a measure of geopolitical distance derived from voting patterns at the United Nations General Assembly (UNGA). [Bailey et al. \(2017\)](#) construct the ideal point distance, which quantifies countries' foreign policy alignment with the US-led liberal order. One benefit of their measure is its ability to track changes in state preferences over time independent of changes in the UN agenda. Variations in these ideal points highlight whether states' foreign policy positions are converging or diverging.

We analyze the role of geopolitical leaning using the ideal point distance and a time-varying approach. In practice, we take the difference of the ideal points between any country and the US and then assign countries to quartiles based on this difference. Those in the bottom quartile (i.e., closest to the US) are defined as “West UN”, those in the top quartile (i.e., farthest from the US) as “East UN”, and those in the middle two quartiles as “Neutral”.¹¹ This method ensures that the blocs are mutually exclusive at any given point in time while allowing countries to change their geopolitical bend over time (e.g., based on its UN voting pattern, Russia is classified as “West UN” during the 1990s and early 2000s and as “Neutral” after the mid-2000s).

The estimates from this test are reported in column (3) of Table 3. Once again, the evidence strongly suggests that foreign banks are significantly likely to increase lending to military firms in countries in conflict—relative to domestic banks and to non-military firms—regardless of the geopolitical orientation of the country they are domiciled in. At the same time, banks domiciled in “Neutral” countries increase lending by a quarter more than those domiciled in “UN-West” countries (an increase of 79.5 vs. 63.9 percent).

¹¹As an additional robustness check, we construct terciles where the geopolitical alignment of each country is again allowed to vary over time. The results remain consistent.

4.4.3 Geopolitical alignment between countries of creditor and borrower

Table 4 builds on the analysis in column (3) of Table 3 by testing whether the geopolitical alignment between the creditor’s and the borrower’s country plays a role in the credit allocation to military firms in conflict countries. The idea is similar to the approach in [Kempf et al. \(2023\)](#), who find that the ideological alignment of US institutional investors with foreign governments affects their cross-border capital allocation. We modify Equation (2) by replacing the variable *Foreign* with dyadic dummies for different types of geopolitical alignment. We start with the same classification of countries into “UN West”, “UN East”, and “Neutral” that we developed in column (3) of Table 3. We then split both creditor and borrower countries into one of these three groups and create nine different types of dyadic group alignment. Appendix Tables O.I–O.III report the country composition of these dyads based on time-varying UN voting patterns during 1989–2020.

In column (1), we report a version of Equation (2) where we account for whether banks from UN-West countries tend to increase lending to military firms in conflict countries, depending on whether the conflict country is in “West UN”, “East UN”, or “Neutral”. We find that western banks increase lending significantly to military firms in eastern and in neutral conflict countries by 103.0 and 75.8 percent, respectively, while they *reduce* lending to military firms in western conflict countries by 32.2 percent. This contrasting result may reflect geopolitical considerations, where western banks may face regulatory constraints, reputational concerns, or policy pressures that discourage financing military activities in allied nations during conflicts, while having greater flexibility to pursue profit opportunities in non-aligned or politically distant countries.

In column (2), we repeat the same exercise focusing on banks domiciled in neutral countries. We find that they increase lending to military firms in neutral and East UN countries but not in West UN (there are no syndicated military loan deals in the Neutral-to-West dyad during conflicts). Numerically, the largest economic effect pertains to the Neutral-to-Neutral dyad during violent conflicts, in which it reaches 75.8 percent. In the Neutral-to-East dyad,

Table 4. Geopolitical Alignment and Cross-Border Lending During Violent Conflicts

	Dependent variable: $Loan_{bft}$			
	Country bloc dyad B_{i1} :	<i>West</i> to <i>West</i>	<i>Neutral</i> to <i>West</i>	<i>East</i> to <i>West</i>
	Country bloc dyad B_{i2} :	<i>West</i> to <i>Neutral</i>	<i>Neutral</i> to <i>Neutral</i>	<i>East</i> to <i>Neutral</i>
Country bloc dyad B_{i3} :	<i>West</i> to <i>East</i>	<i>Neutral</i> to <i>East</i>	<i>East</i> to <i>East</i>	
	$i = 1$	$i = 2$	$i = 3$	
Conflict $\times B_{i1}$ Foreign	-0.538*** (0.135)	-0.034 (0.149)	-0.238 (0.175)	
Conflict $\times B_{i2}$ Foreign	-0.348*** (0.126)	-0.312** (0.130)	-0.367*** (0.121)	
Conflict $\times B_{i3}$ Foreign	-0.361** (0.150)	-0.259 (0.161)	-0.315** (0.155)	
Conflict \times Military $\times B_{i1}$ Foreign	-0.389*** (0.137)	n/a	n/a	
Conflict \times Military $\times B_{i2}$ Foreign	0.541*** (0.120)	0.564*** (0.134)	0.695*** (0.158)	
Conflict \times Military $\times B_{i3}$ Foreign	0.708*** (0.241)	0.482** (0.215)	-0.028 (0.282)	
Bank FE, Firm FE	✓	✓	✓	
Home (Host) Country \times Year FE	✓	✓	✓	
Military \times Year FE	✓	✓	✓	
Conflict \times Military FE	✓	✓	✓	
Foreign (West, Neutral, or East) \times Military FE	✓	✓	✓	
Foreign (West, Neutral, or East) \times Year FE	✓	✓	✓	
N obs	1,308,048	1,308,045	1,308,047	
N banks	14,021	14,021	14,021	
R^2 (adj.)	0.868	0.868	0.868	
N home/(conflict) host countries in dyad bloc B_{i1}	30/4	17/4	8/4	
N home/(conflict) host countries in dyad bloc B_{i1}	36/10	40/10	24/10	
N home/(conflict) host countries in dyad bloc B_{i2}	19/10	17/10	18/10	

Note: The dependent variable is the natural logarithm of the loan amount. *Conflict* is a dummy equal to one if the firm’s country experienced more than 1,000 battle-field related deaths in a calendar year. *Military* is a dummy equal to one if the loan is to a firm in a military-related SIC sector which is either primary or dual (see Table D.I for the relevant SIC codes). We use Bailey et al. (2017) to divide countries into a West, East, or Neutral bloc depending on the country’s voting behavior on UN Resolutions from 1989 to 2020. We create nine dyads tracing where the credit is coming from (a foreign bank from either West, Neutral, or East) and where it arrives in (a firm in a country that experiences violent conflict in West, Neutral, or East). B_{ij} *Foreign* is a dummy variable equaled to one if the loan is extended by a bank from a country leaning towards bloc i (which is West in column 1, Neutral in column 2, and East in column 3) to a firm domiciled in a country from bloc j ($i, j = 1, 2, 3$; if $i = j$, we additionally require bank and firm to be located in different countries). Each column also contains the estimates on the Conflict \times Foreign and Conflict \times Military \times Foreign variables for the foreign lenders originating from the other country blocs—Neutral and East in column (1), West and East in column (2), and West and Neutral in column (3)—and lending to firms in any of the three blocs. We do not report these coefficients to preserve space. Fixed effects as specified. Data sources: UCDP and DealScan. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors clustered by bank in parentheses.

the effect is also large, reaching 61.9 percent.

Finally, in column (3) we focus on the behavior of banks domiciled in East UN countries. We find that these banks increase their lending to military firms in conflict countries only if these countries are classified as neutral. The underlying economic effect is among the largest across the nine dyads spiking to 101.0 percent. In the other two dyads, there are either no syndicated military loan deals during conflicts (East-to-West) or the estimated effect is close to zero and statistically insignificant (East-to-East).

The evidence in Tables 3 and 4 implies that geopolitical orientation matters in non-trivially for the increase in lending by foreign banks to military firms in conflict countries. On the one hand, banks domiciled in all geopolitical regions engage in this type of lending. On the other hand, the magnitude of the effect depends crucially on the destination country. If the destination country in conflict is classified as neutral, then banks from all three geopolitical clubs tend to significantly increase military lending to military firms in that country. If the destination country in conflict is classified as Western, banks from neither of the three clubs react in terms of military lending. And if the destination country in conflict is classified as Eastern, banks from the West raise military lending there by more than banks from neutral countries do, while lending by banks from the same Eastern club is not affected.

Taken together, these findings reveal a consistent pattern where banks preferentially direct military financing toward non-aligned or politically distant countries during conflicts, while generally avoiding such lending to geopolitically similar nations. This suggests that profit motives may dominate when lending to “out-group” countries, whereas political constraints, coordination among allied nations, or concerns about reputation and regulatory scrutiny appear to constrain military lending to aligned countries experiencing conflict.

4.5 Bank specialization and cross-border conflict lending

A recent literature documents large differences in lending specialization across banks (Paravisini, Rappoport and Schnabl, 2023; Blicke, Parlato and Saunders, 2024) and finds that

these specialization patterns influence banks' lending decisions, especially in times of instability. The possibility therefore arises that our results partly reflect the tendency of some banks to have lending portfolios tilted toward either particular conflict countries or the military sector. To investigate this, we consider two types of specialization (country and sector) and use both absolute and relative specialization measures. More specifically, for each bank b , we compute the share of lending to country c or sector s in year t as a percentage of total lending by bank b across all countries or sectors, respectively, in that year:

$$Country\ Share_{bct} = \frac{\sum_{f=1}^{F_{bct}} Loan_{bct}}{\sum_{c=1}^{C_{bt}} \sum_{f=1}^{F_{bct}} Loan_{bct}}, \quad Sector\ Share_{bst} = \frac{\sum_{f=1}^{F_{bst}} Loan_{bst}}{\sum_{s=1}^{S_{bt}} \sum_{f=1}^{F_{bst}} Loan_{bst}} \quad (3)$$

Empirical frequencies of bank-country shares of foreign and domestic lenders appear in Appendix Figure P.I.(a) and the corresponding frequencies of bank-sector shares in Appendix Figure P.II.(a). These figures illustrate a clear home-bias in syndicated lending. The right tails also show that some banks strategically specialize in specific countries and sectors. However, in both cases, the left tails of the distributions are much fatter than the right tails, indicating that diversification outweighs specialization in cross-border syndicated lending.

We then focus on a subsample of bank-country shares representing foreign banks lending to countries that have ever experienced violent conflicts. Similarly, when it comes to bank-sector shares, we focus on a subsample that corresponds to foreign banks lending to military-related sectors. Furthermore, to address potential downward (upward) shifts in bank-conflict country (bank-military sector) shares during conflicts, we average these shares across the sample period. This fixes the composition of specialized and non-specialized banks. We then use an absolute threshold to discretize these distributions and split banks according to their absolute specialization:

$$AS_{bc} = \begin{cases} 1, & \text{if } Country\ Share_{bc} \geq \alpha_c \\ 0, & \text{if else} \end{cases} \quad AS_{bs} = \begin{cases} 1, & \text{if } Sector\ Share_{bs} \geq \alpha_s \\ 0, & \text{if else} \end{cases} \quad (4)$$

Our baseline approach is to use $\alpha_c = \alpha_s = 75^{\text{th}}$ percentile when computing these absolute specialization measures AS_{bc} and AS_{bs} . In the data, α_c and α_s then correspond to banks whose conflict country and military sector shares equal 3.9% and 19.3%, respectively.¹² To test the specialization hypothesis, we estimate Equation (2) on a subsample of specialized cross-border lenders ($AS=1$) and a subsample of non-specialized cross-border lenders ($AS=0$)—using absolute specialization measures.

Table 5 reports estimates for country and sector specialization in columns 1–2 and columns 3–4, respectively. The first two columns indicate that during violent conflicts, both cross-border lenders specialized in lending to a particular conflict-affected country (column 1) and those that were not (column 2) substantially increase their lending to military firms. This increase is more than twice as large for non-specialized banks, though the difference is not statistically significant at conventional levels (p -value = 0.136). For non-military firms, both bank types curtail lending with minimal differences in magnitude. These patterns are suggestive of distinct strategies: banks with prior country specialization exhibit a balanced approach—reducing non-military lending while moderately increasing military sector credit—suggesting portfolio reallocation while maintaining country presence. In contrast, non-specialized banks redirect capital toward military firms more aggressively, nearly doubling the specialized banks’ response, while similarly reducing their non-military exposure.

Columns (3) and (4) of Table 5 reveal a similar pattern when examining prior the prior

¹²In Appendix P, we also explore relative specialization measures (Paravisini et al., 2023; Blickle et al., 2024). There, we compute ratios and deviations of bank-country (bank-sector) shares from the corresponding country (sector) share in total global lending and then discretize those ratios and deviations by again using the 75th percentile of the respective distribution as thresholds.

Table 5. Bank Specialization and Cross-Border Lending During Violent Conflicts

Specialization:	Dependent variable: $Loan_{bft}$					
	Absolute measure					
	In country ($AS_{bc} = 1$)		P -value $diff=0$	In sector ($AS_{bs} = 1$)		P -value: $diff=0$
	Yes	No		Yes	No	
(1)	(2)	(3)	(4)			
Foreign \times Conflict	-0.353*** (0.137)	-0.351* (0.194)	0.993	-0.182 (0.197)	-0.323*** (0.112)	0.534
Foreign \times Conflict \times Military	0.361*** (0.126)	0.665*** (0.161)	0.136	0.399* (0.220)	0.651*** (0.106)	0.301
Bank FE	✓	✓		✓	✓	
Firm FE	✓	✓		✓	✓	
Home Country \times Year FE	✓	✓		✓	✓	
Host Country \times Year FE	✓	✓		✓	✓	
Conflict \times Military FE	✓	✓		✓	✓	
Foreign \times Military FE	✓	✓		✓	✓	
Military \times Year FE	✓	✓		✓	✓	
Foreign \times Year FE	✓	✓		✓	✓	
N obs	235,371	1,050,721		270,703	1,014,126	
N banks	2,187	11,699		2,850	11,055	
R^2 (adj.)	0.856	0.866		0.856	0.870	

Note: This table shows the results of our baseline specification (2) run on four sub-samples of banks: those specialized in lending to particular countries ($AS_{bc} = 1$) and those that are not ($AS_{bc} = 0$), in the first two columns, and those specialized in lending to specific economic sectors ($AS_{bs} = 1$) and those that are not ($AS_{bs} = 0$), in the last two columns. In all cases, the dependent variable is the natural logarithm of the loan amount. Absolute specialization measures are used, cf. expressions (4), with the cutoff thresholds $\alpha_c = \alpha_s = 75^{th}$ percentile, which correspond to 3.9% of the bank-country lending share and 19.3% of the bank-sector lending share. *Foreign* is a dummy equal to one if the bank lends to a firm in another country. *Conflict* is a dummy equal to one if the firm's country experienced more than 1,000 battle-field related deaths in a calendar year. *Military* is a dummy equal to one if the loan is to a firm in a military-related SIC sector which is either primary or dual (see Table D.I for the relevant SIC codes). All regressions include fixed effects as specified. Data sourced from UCDP and DealScan. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors clustered by bank are shown in parentheses.

specialization of banks in military sectors. Banks with higher specialization in lending to military sectors increase lending to these sectors during conflicts, but this increase is approximately half the magnitude observed in non-specialized banks. However, as with country specialization, this difference is not statistically significant (p -value = 0.301). Regarding non-military lending, sector-specialized banks show only a modest and insignificant reduction, while non-specialized banks exhibit a more pronounced contraction. This suggests that

during violent conflicts, banks without established expertise in military industries undertake substantial, opportunistic, portfolio reallocation toward defense-related sectors, perhaps seeking to diversify their lending profile. In contrast, banks already specialized in military lending show a more muted response, likely because they have less capacity to further increase their already-substantial exposure to these sectors.

Overall, these results underscore how preexisting geographical and sector expertise shape banks’ lending responses during armed conflicts. Appendix Tables P.II and P.I show that the essence of Table 5 remains virtually unchanged when we account for relative instead of absolute specialization.

5 Extensions

5.1 Interest rates

Our evidence so far indicates that violent conflict in a country leads cross-border lenders to increase their exposure to the military sector, more so than domestic banks, although they are reducing their lending to that country in general. In Appendix Table Q.I, we examine another characteristic of loans: their interest rate. This test allows us to distinguish between credit supply and credit demand explanations of the main effect and, more specifically, to examine how violent conflict affects the interest rate spreads charged on syndicated loans, comparing the responses by domestic and foreign banks.

We re-estimate Equation 2) with the loan spread as the dependent variable.¹³ We find that the spread on the average cross-border loan to a firm in the military sector declines during violent conflict, by about one-quarter of a sample standard deviation. The effect

¹³There are insufficient observations of the variable “Spread over default base” in DealScan. We therefore first run the following regression on the full loan sample:

$$\begin{aligned} \text{Loan Rate}_{bft} &= \beta_1 \text{Log}(\text{Loan Amount})_{bft} + \beta_2 \text{Log}(\text{Loan Maturity})_{bft} + \beta_3 \text{Foreign Loan}_{bft} \\ &\quad + \gamma_{bj} + \mu_{it} + \phi_{jt} + \varepsilon_{bft}, \end{aligned}$$

In a second step, we then create a new variable—“Predicted loan rate”—using the coefficients estimated in the first step.

is significant at the 1 percent statistical level. The combined evidence therefore shows that during violent conflicts, the size of the average loan by a cross-border lender to a military firm increases relatively more than that by domestic banks, and this loan share has on average a lower rate. This points towards a mechanism whereby cross-border lenders increase the supply of credit to military firms in conflict countries.

5.2 Spillovers to neighboring countries?

In this section, we explore whether banks increase military lending to neighboring countries that are not directly involved in a conflict, aiming to identify potential spillover effects. The existing literature highlights that wars and violent conflicts can impact regional security dynamics and thereby produce spatial spillover effects ([Federle, Meier, Müller, Mutschler and Schularick, 2024](#)). When a country experiences a violent conflict within its borders, neighboring states may perceive heightened geopolitical uncertainty and respond by strengthening their defense capabilities. Consequently, a similar mechanism to the one underpinning our main results can arise: heightened security concerns in neighboring states may increase domestic demand for military equipment, potentially prompting cross-border lenders to expand credit to military-related sectors in these adjacent countries.

We take this question to the data by first identifying the neighbors of countries in conflict as identified in Table A.I. We do this manually and are careful to exclude the observations where neighboring countries are in major conflicts themselves (i.e., those above the 1,000 battlefield deaths threshold). For instance, Pakistan cannot serve as a neighboring country for India, and vice versa, in 2008, 2009, and 2010 since both countries experienced major conflicts in these years, even though they serve as neighbors in non-conflict years. Hence, we want to examine whether cross-border military lending to a neighboring country increases only because its neighbor is involved in a major violent conflict.

In Table 6, we examine potential spillover effects by modifying our baseline specification. We create a new variable, *Neighbor*, which equals one for countries that share a border

Table 6. Cross-Border Lending During Violent Conflicts: Spillovers

Neighboring countries:	Dependent variable: $Loan_{bft}$			
	Countries with $N\ deaths \leq j$:			
	$j = 1,000$	$j = 500$	$j = 100$	$j = 0$
	(1)	(2)	(3)	(4)
Neighbor \times Foreign	-0.026 (0.037)	-0.050 (0.033)	-0.097*** (0.036)	-0.101*** (0.038)
Neighbor \times Foreign \times Military	0.065 (0.043)	-0.043 (0.041)	-0.020 (0.038)	-0.024 (0.040)
Bank FE	✓	✓	✓	✓
Firm FE	✓	✓	✓	✓
Home Country \times Year FE	✓	✓	✓	✓
Host Country \times Year FE	✓	✓	✓	✓
Conflict \times Military FE	✓	✓	✓	✓
Foreign \times Military FE	✓	✓	✓	✓
Military \times Year FE	✓	✓	✓	✓
Foreign \times Year FE	✓	✓	✓	✓
N obs	1,308,048	1,308,048	1,308,048	1,308,048
N of banks	14,021	14,021	14,021	14,021
R^2 (adj.)	0.868	0.868	0.868	0.868

Note: This table shows the results from estimating Equation (2) with a focus on the neighbors of conflict countries. The dependent variable is the natural logarithm of the loan amount. *Foreign* is a dummy equal to one if the bank lends to a firm in a foreign country. *Neighbor* is a dummy equal to one if the firm is located in a country bordering on a conflict country. *Military* is a dummy equal to one if the loan is to a firm in a military-related SIC sector which is either primary or dual (see Table D.I for SIC codes). Fixed effects as specified. Data sources: UCDP and DealScan. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors clustered by bank in parentheses.

with a conflict-affected nation but do not themselves experience major conflict in that year. We apply increasingly stringent definitions of “non-conflict” across columns: column (1) includes neighboring countries with fewer than 1,000 battlefield deaths, while column (4) restricts the sample to neighboring countries with zero battlefield deaths. This approach allows us to isolate the pure spillover effect from any direct conflict impact.

The results are consistent across specifications: cross-border lenders do not increase military lending to neighboring non-conflict regions. We interpret these results as an indication that banks are reactive, but not proactive in their military lending decisions.

5.3 Cross-border lending during post-conflict recoveries

Another interesting extension is to study how cross-border bank lending to the military sector evolves after a violent conflict comes to an end. Right now, years before and after the conflict are placed in the reference category and treated equally. However, post-conflict years may be special in that banks may have an incentive to keep lending to the military sector. This could happen for a number of reasons. For example, peace may be fragile and banks may expect the conflict to be reignited again. Alternatively, banks may want to continue lending to military firms in order to strengthen the military base after a war to prevent future conflicts. In contrast, banks might reduce military lending following a conflict due to diminished profit opportunities in the defense sector compared to other industries, particularly those vital for post-war reconstruction. Furthermore, peace agreements and ceasefires could negatively impact military lending, as new regulatory measures lead governments to decrease their demand for military equipment and banks to limit their financing of such purchases.

We define a new dummy variable *Post-Conflict* that is equal to 1 in the first, second, or third year after the end of hostilities. In Table 7, we report a version of Equation (2) which includes this variable instead of *Conflict*. We find that lending to the military sector in the first year after the end of a violent conflict is still significantly higher for foreign banks than for domestic banks (column 1). However, the effect becomes substantially weaker, both economically and statistically, in the second year after the conflict (column 2). Finally, during the third year after the conflict, the difference in lending to the military sector between domestic and foreign banks is both statistically and economically zero (column 3).¹⁴

We conclude that the difference in military lending between foreign and domestic banks to a conflict country, while large and significant during the conflict itself, dissipates fairly quickly once hostilities subside. The positive effect during the first and second post-conflict years is worth noting and it can be driven by several factors. First, the peace may be

¹⁴These estimates do not change materially when we also include the double and triple interaction terms with *Conflict*.

Table 7. Cross-Border Lending After Violent Conflicts

Post-conflict period:	Dependent variable: $Loan_{bft}$		
	One year	Two years	Three years
	(1)	(2)	(3)
Post-Conflict \times Foreign	0.036 (0.147)	0.157 (0.135)	0.258** (0.114)
Post-Conflict \times Foreign \times Military	0.724*** (0.169)	0.423** (0.190)	-0.012 (0.172)
Bank FE	✓	✓	✓
Firm FE	✓	✓	✓
Home Country \times Year FE	✓	✓	✓
Host Country \times Year FE	✓	✓	✓
Conflict \times Military FE	✓	✓	✓
Foreign \times Military FE	✓	✓	✓
Military \times Year FE	✓	✓	✓
Foreign \times Year FE	✓	✓	✓
N obs	1,308,048	1,308,048	1,308,048
N banks	14,021	14,021	14,021
R^2 (adj.)	0.868	0.868	0.868

Note: This table shows the results from estimating Equation (2) with a focus on the post-conflict period. The dependent variable is the natural logarithm of the loan amount. *Foreign* is a dummy equal to one if the bank lends to a firm in a foreign country. *Post-Conflict* is a dummy equal to one if the firm’s country experienced more than 1,000 battle-field related deaths in a calendar year. *Military* is a dummy equal to one if the loan is to a firm in a military-related SIC sector which is either primary or dual (see Table D.I for the relevant SIC codes). Fixed effects as specified. Data sources: UCDP and DealScan. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors clustered by bank in parentheses.

understood to be simply a temporary lull in hostilities. Alternatively, the conflict may still be raging, albeit with a lower intensity (e.g., battlefield deaths are now permanently below 1000 or 500). Regardless of what explains this effect exactly, it appears to be short-lived.

At the same time, the coefficient on *Post-Conflict* \times *Foreign* is positive across all time horizons and becomes statistically significant in the third post-conflict year (column 3). This suggests that foreign banks gradually return to conflict-affected markets, eventually expanding their non-military lending significantly as reconstruction and economic recovery efforts take hold—effectively reversing their earlier withdrawal pattern.

5.4 Geographical distance to violent conflicts

While countries proximate to conflict zones may suffer economic hardship, those at a greater distance may experience some economic gains, as they can take advantage of the increased returns from military activities without bearing the direct costs of conflict (Federle et al., 2024). This geographic dynamic creates two competing hypotheses regarding military lending: banks from distant countries may be better positioned to capitalize on increased military credit demand due to their insulation from conflict risks, while banks from neighboring countries may have an advantage due to superior information about potential borrowers.

In Table 8, we examine these competing hypotheses by replacing the *Foreign* dummy with a continuous variable: the log distance between capital cities (set to zero for domestic banks). Column (1), which excludes the triple interaction, tests whether the “flight home” effect strengthens with geographical distance. Our results confirm this intuitive relationship: cross-border lending to the conflict country declines more as the distance from the conflict zone increases. Yet, columns (2) and (3) reveal an inverse pattern for military lending, where the effect strengthens with greater geographical distance between bank and borrower.

This effect is robust across specifications, as we progressively saturate the regression model with fixed effects. The coefficient of 0.057 in the preferred specification in column (3) means that lending to a military firm in a conflict country increases by about 9.4 percent more for a bank domiciled in a country whose capital is 2,000 kilometers from that of the conflict country, relative to a bank that is just 1,000 kilometers away.

This positive triple interaction effect aligns with the idea that geographically distant banks face fewer reputational and regulatory constraints when financing military projects in faraway conflict zones. Banks operating at greater distances may experience less scrutiny from their domestic public, regulatory authorities, and media regarding their financing of military activities. This relative isolation from stakeholder pressure may enable distant banks to more aggressively pursue profit opportunities in conflict-zone military sectors, while their peers in nearby countries face more public scrutiny.

Table 8. Geographical Distance and Cross-Border Lending During Violent Conflicts

Dependent variable	<i>Loan_{bft}</i>		
	(1)	(2)	(3)
Distance	-0.010*** (0.001)	-0.011*** (0.001)	-0.005 (0.005)
Distance × Conflict	-0.018 (0.013)	-0.029** (0.013)	-0.028** (0.013)
Distance × Military		0.003*** (0.001)	0.005 (0.004)
Distance × Conflict × Military		0.056*** (0.012)	0.057*** (0.012)
Bank FE	✓	✓	✓
Firm FE	✓	✓	✓
Home Country × Year FE	✓	✓	✓
Host Country × Year FE	✓	✓	✓
Conflict × Military FE		✓	✓
Foreign × Military FE			✓
Military × Year FE			✓
Foreign × Year FE			✓
<i>N</i> obs	1,306,499	1,306,499	1,306,499
<i>N</i> of banks	13,981	13,981	13,981
R ² (adj.)	0.868	0.868	0.868

Note: This table shows the results from estimating Equation (2) with a focus on the geographical distance between the domicile country of the bank and the firm. The dependent variable is the natural logarithm of the loan amount. *Distance* is the natural logarithm of the geographical distance between a foreign lender’s home country and borrowing firm’s country. *Conflict* is a dummy equal to one if the firm’s country experienced more than 1,000 battle-field related deaths in a calendar year. *Military* is a dummy equal to one if the loan is to a firm in a military-related SIC sector which is either primary or dual (see Table D.I for the relevant SIC codes). Fixed effects as specified. Data sources: UCDP, DealScan, and CEPII GeoDist. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors clustered by bank in parentheses.

5.5 The role of lender type and bank ownership

A natural extension of our analysis concerns the distinction between bank and non-bank institutions, though the expected differences are theoretically ambiguous. Banks—especially large multinational ones—typically have access to deeper internal capital markets, enabling rapid reallocation of financial resources to areas of peak demand. However, banks also face stricter capital regulations than non-bank institutions, and regulators may be reluctant to permit bank lending to military firms in conflict countries given the risks involved.

Table 9. Cross-border Lending During Violent Conflicts:
The Role of Lender Type and Bank Ownership

Dependent variable	$Loan_{bft}$	
	$\mathbb{X}_{1,bft}$	$\mathbb{X}_{2,bft}$
	Bank Non-bank	Private Public
	(1)	(2)
Conflict \times $\mathbb{X}_{1,bft}$	-0.310*** (0.115)	-0.263** (0.112)
Conflict \times $\mathbb{X}_{2,bft}$	-0.256** (0.126)	-0.280*** (0.109)
Conflict \times Military \times $\mathbb{X}_{1,bft}$	0.522*** (0.107)	0.550*** (0.128)
Conflict \times Military \times $\mathbb{X}_{2,bft}$	0.520*** (0.162)	0.529*** (0.107)
Bank FE	✓	✓
Firm FE	✓	✓
Home Country \times Year FE	✓	✓
Host Country \times Year FE	✓	✓
Conflict \times Military FE	✓	✓
Foreign \times Military FE	✓	✓
Military \times Year FE	✓	✓
Foreign \times Year FE	✓	✓
N obs	1,308,048	1,308,048
N lenders	14,021	14,021
R ² (adj.)	0.868	0.868
Share of $\mathbb{X}_{2,b,f,t}$ in the full sample	13%	8%

Note: The dependent variable is the natural logarithm of the loan amount. *Conflict* is a dummy equal to one if the firm’s country experienced more than 1,000 battle-field related deaths in a calendar year. *Military* is a dummy equal to one if the loan is to a firm in a military-related SIC sector which is either primary or dual (see Table D.I for the SIC codes). In column (1), we distinguish between banks and non-banks lending to a firm in a foreign country. In column (2), we distinguish between privately-owned and publicly-owned banks. Fixed effects as specified. Data sources: UCDP and DealScan. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors clustered by bank in parentheses.

Bank ownership represents another important dimension of comparative analysis. An extensive literature demonstrates that public and private banks exhibit distinct lending patterns, often due to political influences—a phenomenon documented in both developed and emerging economies (e.g., Claessens, Feijen and Laeven, 2008; Bircan and Saka, 2021; Koetter and Popov, 2021). If political incentives drive military sector lending, state-owned banks may be more responsive to these pressures than their private counterparts. This raises the

possibility that our findings on foreign bank behavior might be primarily explained by their degree of government ownership. This could also help shed light on the different effects for western and eastern countries that we document in Section 4.4.

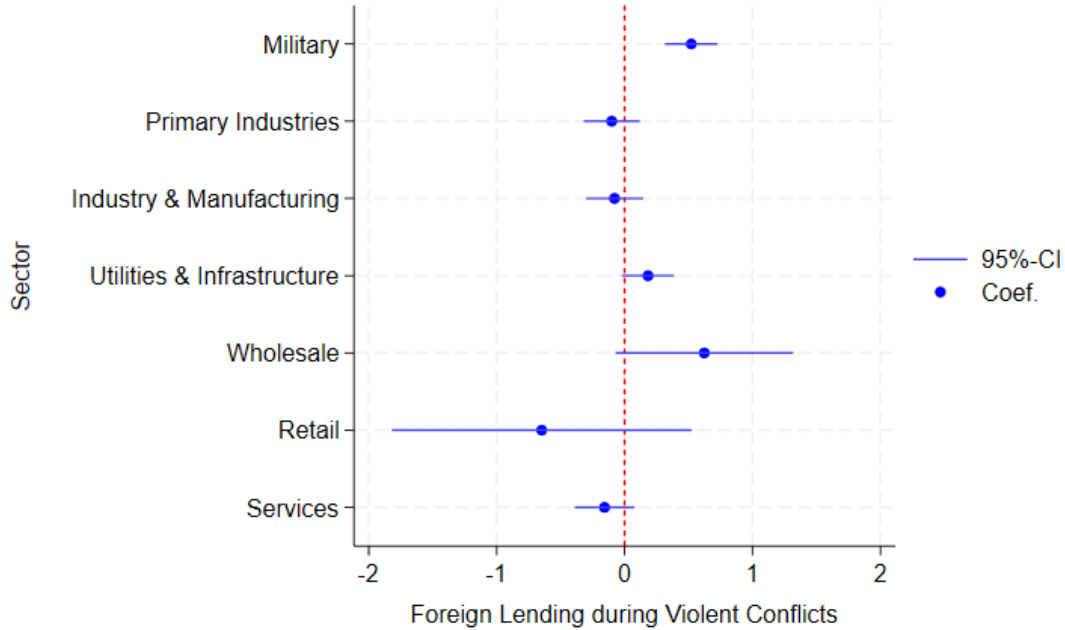
In Table 9, we analyze lending patterns across both these dimensions. Column (1) contrasts the behavior of bank versus non-bank lenders. Both groups increase military sector lending in conflict countries relative to domestic creditors, to a similar extent. At the same time, banks exhibit a somewhat stronger “flight home” effect, although this difference is not statistically significant. In column (2), we observe that both private and state-owned banks reduce their lending to the non-military sector in conflict countries, while simultaneously increasing their military sector lending. This suggests that more and less politically aligned creditors respond similarly to the profit opportunities presented by military firms during times of violent conflict.

5.6 Cross-border lending to other sectors during violent conflict

To determine whether the military sector’s increased cross-border credit supply during conflicts is unique, we modify Equation (2) by replacing the *Military* dummy with indicators for the main other sector types: Primary industries, industry and manufacturing, utilities and infrastructure, wholesale trade, retail trade, and services sectors, while excluding firms appearing in our military sector classification (Table D.I). Figure 3 plots the triple interaction coefficients with 95% confidence intervals for each sector. The stark contrast between the positive coefficient of the military sector and the predominantly negative (but imprecisely estimated) coefficients for other sectors highlights the unique position of defense-related industries during armed conflicts.¹⁵

¹⁵To formally test whether the military sector effect differs significantly from other sectors, we conduct pairwise tests of coefficient equality. The difference between the military sector and each non-military sector is statistically significant at the 5% level or better in almost all cases, confirming the distinctive pattern of the military lending channel. The only exception is the wholesale industry sector, for which the corresponding coefficient is nevertheless imprecisely estimated.

Figure 3. Cross-Border Lending to Various Sectors During Violent Conflicts



Note: This figure shows the regression coefficients and 95% confidence bands for cross-border lending to various sectors during conflicts. We use the same baseline specification (2), where the “sector” is a different one in each regression. The relevant SIC codes for the various sectors which are either primary or dual are listed in Table D.I. All regressions include fixed effects as specified and standard errors clustered by bank. Data sourced from UCDP and DealScan.

6 Conclusions

We have investigated how violent conflicts impact cross-border lending, particularly credit allocation to military-related sectors. Leveraging comprehensive data on syndicated loans from 14,021 banks to 97,169 firms across 179 countries over 1989-2020, we establish two key findings. First, the onset of violent conflict in a country leads cross-border lenders to reduce overall credit to that country, relative to domestic banks. This aligns with a “flight home” effect, whereby cross-border lenders are more likely to withdraw from markets experiencing negative shocks. Second, despite this aggregate pullback, cross-border lenders simultaneously increase credit to firms in the conflict country’s military sector, compared to domestic banks. This reallocation effect towards military-related industries is economically sizable and robust to varying conflict intensity thresholds, alternative classifications of military sectors, different

loan share calculations, and the exclusion of major economies.

We identify several factors that amplify this military lending effect. It is more pronounced for cross-border lenders with less specialized lending portfolios in the conflict country (with lending increases nearly twice as large compared to specialized lenders) and those lending to politically non-aligned countries, particularly when banks from Western or Neutral countries direct credit to military firms in non-Western conflict zones. Importantly, we find no evidence of lending spillovers to neighboring countries and the military lending increase dissipates within three years post-conflict, suggesting cross-border lenders take a reactive rather than proactive approach. In addition, the effect is unique to the military sector, with much more muted responses in other industries.

Our results highlight how global banks act as key capital providers during violent conflicts, significantly shifting credit from civil to military uses. Geopolitical tensions thus emerge as important drivers of international credit reallocation. More broadly, this underscores the role of financial sector linkages in propagating the economic consequences of conflict and facilitating the war economy.

Our findings also suggest several promising directions for future research. First, analyzing firm-level data during conflicts could reveal how foreign credit access affects corporate performance and, ultimately, the intensity and duration of hostilities. Second, the interplay between cross-border lending and local banking systems—both domestic banks and foreign subsidiaries—warrants deeper investigation. Third, examining whether banks with strong government ties serve as key nodes in military financing networks could more shed light on the political economy of conflict financing.

References

- Abadie, Alberto and Javier Gardeazabal (2003) “The Economic Costs of Conflict: A Case Study of the Basque Country,” *American Economic Review*, 93 (1), 113–132.
- Acemoglu, Daron, Simon Johnson, and James Robinson (2005) “The Rise of Europe: Atlantic

- Trade, Institutional Change, and Economic Growth,” *American Economic Review*, 95 (3), 546–579.
- Aiyar, Shekhar, Davide Malacrino, and Andrea F Presbitero (2024) “Investing in Friends: The Role of Geopolitical Alignment in FDI Flows,” *European Journal of Political Economy*, 83, 102508.
- Alfaro, Laura and Davin Chor (2023) “Global Supply Chains: The Looming Great Reallocation,” *NBER Working Paper No. 31661*, National Bureau of Economic Research.
- Bailey, Michael A., Anton Strezhnev, and Erik Voeten (2017) “Estimating Dynamic State Preferences from United Nations Voting Data,” *Journal of Conflict Resolution*, 61 (2), 430–456.
- Barro, Robert and Jong-Wha Lee (1994) “Sources of Economic Growth,” *Carnegie Rochester Conference Series on Public Policy*, 40, 1–46.
- Besedeš, Tibor, Stefan Goldbach, and Volker Nitsch (2017) “You’re Banned! The Effect of Sanctions on German Cross-Border Financial Flows,” *Economic Policy*, 32 (90), 263–318.
- Bircan, Çağatay and Orkun Saka (2021) “Lending Cycles and Real Outcomes: Costs of Political Misalignment,” *The Economic Journal*, 131 (639), 2763–2796.
- Blickle, Kristian, Cecilia Parlato, and Anthony Saunders (2024) “Specialization in Banking,” *Journal of Finance (forthcoming)*.
- Bruno, Valentina and Hyun Song Shin (2015) “Cross-Border Banking and Global Liquidity,” *Review of Economic Studies*, 82 (2), 535–564.
- Calvo, Guillermo, Leonardo Leiderman, and Carmen Reinhart (1993) “Capital Inflows and Real Exchange Rate Appreciation in Latin America: The Role of External Factors,” *IMF Staff Papers*, 40 (1), 108–151.
- Cameron, A Colin and Douglas L Miller (2015) “A Practitioner’s Guide to Cluster-Robust Inference,” *Journal of Human Resources*, 50 (2), 317–372.
- Cerutti, Eugenio, Galina Hale, and Camelia Minoiu (2015) “Financial Crises and the Composition of Cross-Border Lending,” *Journal of International Money and Finance*, 52, 60–81.
- Cetorelli, Nicola and Linda Goldberg (2011) “Global Banks and International Shock Transmission: Evidence from the Crisis,” *IMF Economic Review*, 59, 41–76.
- Chupilkin, Maxim, Beata Javorcik, Aleksandra Peeva, and Alexander Plekhanov (2024) “Exorbitant Privilege and Economic Sanctions,” *EBRD Working Paper No. 281*, European Bank for Reconstruction and Development, London.
- Chupilkin, Maxim, Beata Javorcik, and Alexander Plekhanov (2023) “The Eurasian Roundabout: Trade Flows into Russia Through the Caucasus and Central Asia,” *EBRD Working Paper No. 276*, European Bank for Reconstruction and Development, London.
- CIA (1989) “Iraq-Italy: Repercussions of the BNL-Atlanta Scandal,” <https://www.cia.gov/re>

- [adingroom/docs/DOC_0000491425.pdf](#), declassified memorandum, 6 November 1989.
- Claessens, Stijn, Erik Feijen, and Luc Laeven (2008) “Political Connections and Preferential Access to Finance: The Role of Campaign Contributions,” *Journal of Financial Economics*, 88 (3), 554–580.
- Coeurdacier, Nicolas and H el ene Rey (2013) “Home Bias in Open Economy Financial Macroeconomics,” *Journal of Economic Perspectives*, 51 (1), 63–115.
- Coppola, Antonio, Matteo Maggiori, Brent Neiman, and Jesse Schreger (2021) “Redrawing the Map of Global Capital Flows: The Role of Cross-Border Financing and Tax Havens,” *Quarterly Journal of Economics*, 136 (3), 1499–1556.
- Danisewicz, Piotr, Min Park, Klaus Schaeck, and Yitao Zheng (2025) “Global Bank Lending During Political Conflicts,” Preprint, available at <https://ssrn.com/abstract=4880226>.
- Davis, Donald and David Weinstein (2002) “Bones, Bombs, and Break Points: The Geography of Economic Activity,” *American Economic Review*, 92, 1269–1289.
- De Haas, Ralph and Neeltje Van Horen (2013) “Running for the Exit? International Bank Lending during a Financial Crisis,” *Review of Financial Studies*, 26 (1), 244–285.
- DiGiuseppe, Matthew (2015) “Guns, Butter, and Debt: Sovereign Credit and Foreign Policy,” *Journal of Peace Research*, 52 (5), 680–693.
- Doerr, Sebastian and Patrick Schaz (2021) “Geographic Diversification and Bank Lending during Crises,” *Journal of Financial Economics*, 140 (3), 768–788.
- Efing, Matthias, Stefan Goldbach, and Volker Nitsch (2023) “Freeze! Financial Sanctions and Bank Responses,” *Review of Financial Studies*, 36 (11), 4417–4459.
- Federle, Jonathan, Andr e Meier, Gernot J M uller, Willi Mutschler, and Moritz Schularick (2024) “The Price of War,” *CEPR Discussion Paper No. 18834*, Centre for Economic Policy Research, London.
- Federle, Jonathan, Dominic Rohner, and Moritz Schularick (2025) “Who Wins Wars?” *CEPR Discussion Paper No. 19841*, Centre for Economic Policy Research, London.
- Giannetti, Mariassunta and Luc Laeven (2012) “The Flight Home Effect: Evidence from the Syndicated Loan Market During Financial Crises,” *Journal of Financial Economics*, 104, 23–43.
- Glick, Reuven and Alan M Taylor (2010) “Collateral Damage: Trade Disruption and the Economic Impact of War,” *The Review of Economics and Statistics*, 92 (1), 102–127.
- Gopinath, Gita, Pierre-Olivier Gourinchas, Andrea F Presbitero, and Petia Topalova (2025) “Changing Global Linkages: A New Cold War?” *Journal of International Economics*, 153, 104042.
- Hale, Galina, T Kapan, and Camelia Minoiu (2020) “Shock Transmission Through Cross-Border

- Bank Lending: Credit and Real Effects,” *Review of Financial Studies*, 33, 4839–4882.
- Horn, Sebastian, Carmen M. Reinhart, and Christoph Trebesch (2024) “International Lending in War and Peace,” *Preliminary draft*.
- Kempf, Elisabeth, Mancy Luo, Larissa Schäfer, and Margarita Tsoutsoura (2023) “Political Ideology and International Capital Allocation,” *Journal of Financial Economics*, 148 (2), 150–173.
- Kirshner, Jonathan (2007) *Appeasing Bankers: Financial Caution on the Road to War*, 173 of Princeton Studies in International History and Politics, Princeton, NJ: Princeton University Press.
- Koetter, Michael and Alexander Popov (2021) “Political Cycles in Bank Lending to the Government,” *Review of Financial Studies*, 34 (6), 3138–3180.
- Kremer, Michael and Seema Jayachandran (2006) “Odious Debt,” *American Economic Review*, 96 (1), 82–92.
- Lane, Philip R. and Gian Maria Milesi-Ferretti (2007) “The External Wealth of Nations Mark II: Revised and Extended Estimates of Foreign Assets and Liabilities, 1970–2004,” *Journal of International Economics*, 73 (2), 223–250.
- Longo, Alessandro, Mauro Meggiolaro, and Sonia Felipe (2024) “Finance for War. Finance for Peace: How Values-Based Banks Foster Peace in a World of Increasing Conflict,” February, Commissioned by Fondazione Finanza Etica and the Global Alliance for Banking on Values.
- Maggiore, Matteo, Brent Neiman, and Jesse Schreger (2020) “International Currencies and Capital Allocation,” *Journal of Political Economy*, 128 (6), 2019–2066.
- Mamonov, Mikhail, Steven Ongena, and Anna Pestova (2024) “Disasters and (Bank) Financing,” *LTI Report, CEPR Press, Paris & London*.
- Melander, Erik, Therése Pettersson, and Lotta Themnér (2016) “Organized Violence, 1989–2015,” *Journal of Peace Research*, 53 (5), 727–742.
- Niepmann, Friederike and Leslie Sheng Shen (2025) “Geopolitical Risk and Global Banking,” *Working Paper*, Board of Governors of the Federal Reserve System and Federal Reserve Bank of Boston.
- Oudes, Cor, Frank Slijper, and Michel Uiterwaal (2022) “High-Risk Arms Trade and the Financial Sector,” July, PAX for Peace, The Netherlands.
- Paravisini, Daniel, Veronica Rappoport, and Philipp Schnabl (2023) “Specialization in Bank Lending: Evidence from Exporting Firms,” *Journal of Finance*, 78 (4), 2049–2085.
- Pinker, Steven (2011) *The Better Angels of Our Nature: Why Violence Has Declined*, New York: Viking.
- Poast, Paul (2005) *The Economics of War*: McGraw-Hill.

- Popov, Alexander and Greg Udell (2012) “Cross-Border Banking, Credit Access, and the Financial Crisis,” *Journal of International Economics*, 87, 141–161.
- Reinhart, Carmen M. and Kenneth S. Rogoff (2009) *This Time Is Different: Eight Centuries of Financial Folly*, Princeton: Princeton University Press.
- Rey, H el ene (2015) “Dilemma not Trilemma: The Global Financial Cycle and Monetary Policy Independence,” *NBER Working Paper No. 31661*, National Bureau of Economic Research.
- Shpak, Solomiya, John S Earle, Scott Gehlbach, and Mariia Panga (2023) “Damaged collateral and firm-level finance: Evidence from Russia’s war in Ukraine,” *Journal of Comparative Economics*, 51 (4), 1334–1343.
- Tooze, Adam (2006) “The Wages of Destruction: The Making and Breaking of the Nazi Economy,” *Allen Lane: London*.
- Zielinski, Rosella Cappella (2016) *How States Pay for Wars*, Ithaca, NY: Cornell University Press.

Appendix A Brief descriptions of violent conflicts

Table A.I. Description of violent conflicts, by countries with $\geq 1,000$ deaths (*beginning*)

Country	Conflict Years	Conflict ID	Conflict Description
Algeria	1998, 1999	386	Since the early 1990s, Algeria has experienced an armed conflict over governmental power, primarily involving various Islamic groups seeking to establish an Islamic state by force. The Algerian Civil War (1992–2002) was marked by intense violence, particularly after the government’s decision to cancel the 1991 elections, which an Islamist party was poised to win. The violence peaked in 1993 with widespread massacres and brutality. By 2002, some groups began to disarm and hostilities declined.
Angola	1998, 1999, 2001	327; 387	The Cabindan Insurgency in Angola’s Cabinda Province, driven by aspirations for greater autonomy or independence, has been a long-standing conflict, with separatist groups like the Front for the Liberation of the Enclave of Cabinda (FLEC) clashing with the government over the region’s substantial oil resources. This insurgency has occurred alongside the Angolan Civil War (1975-2002), a protracted conflict between the People’s Movement for the Liberation of Angola (MPLA), which took power after Angola’s independence, and opposition groups like the National Union for the Total Independence of Angola (UNITA), supported by the U.S. and apartheid-era South Africa. Rooted in ideological, ethnic, and political tensions, the civil war caused significant loss of life and displacement. It concluded after the death of UNITA leader Jonas Savimbi in 2002, leading to peace and a shift toward national reconciliation.
Colombia	1994, 1996, 1999, 2000, 2001, 2002, 2003, 2004, 2005	289	Colombia’s conflict with the Revolutionary Armed Forces of Colombia (FARC) and the National Liberation Army (ELN) spanned decades and centers on issues of land reform, inequality, and government control. The FARC, a Marxist guerrilla group, waged a violent insurgency beginning in the 1960s, leading to widespread violence, drug trafficking, and displacement. A landmark peace agreement in 2016 led to FARC’s demobilization and transformation into a political party. The ELN, Colombia’s last active guerrilla group, continues armed resistance despite periodic peace talks, focusing on ideological goals of social justice and economic reform.
Congo, DR	2013, 2014	265; 283; 314	The conflict in the Democratic Republic of Congo (DRC) involves a complex mix of internal and external actors, including the Government of the DRC and various rebel groups like Kata Katanga, M23, and the Allied Democratic Forces (ADF). Kata Katanga, a separatist group in the Katanga region, seeks greater autonomy from the DRC, while M23, a Tutsi-led rebel group, accuses the government of failing to implement peace agreements, with some regional backing from Uganda and Rwanda. The ADF, an Islamist militant group from Uganda, has carried out deadly attacks in eastern DRC. Uganda’s involvement, sometimes supporting armed groups or intervening directly, has contributed to regional instability.
Ethiopia	2020	267	The Ethiopia-Tigray conflict, which began in November 2020, erupted between the Tigray People’s Liberation Front (TPLF) and the Ethiopian government. The TPLF, once part of Ethiopia’s ruling coalition, fell out of favor after Prime Minister Abiy Ahmed’s rise to power in 2018 and his reforms, which sidelined the TPLF. The conflict escalated when the Ethiopian military launched an offensive in Tigray in response to TPLF attacks on federal military bases. A peace agreement in November 2022 brought a halt to major fighting, but the region remains unstable.
India	1989, 1990, 1991, 1993, 1994, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010	218; 227; 251; 335; 347; 351; 364; 365; 421; 434; 11342; 11475	India became independent in 1947 and a republic in 1950. The country hosts various religions, ethnicities, and tribal groups and this has triggered a variety of armed conflicts over the years. It has especially been the case in India’s northeast, where rebel groups based mainly on tribal communities have fought the government in Assam, Tripura, Nagaland, and Manipur. The Indian government has also fought Sikh insurgents over Punjab/Khalistan and various insurgent groups over Kashmir, which is also claimed by Pakistan. Concerning government power, the Indian government has been confronted by several communist groups, such as the MCC, PWG, and CPI-Maoist. The country has also suffered from one interstate conflict with Pakistan over Kashmir.

Table A.I. Description of violent conflicts, by countries with $\geq 1,000$ deaths (*continuing*)

Iraq	2005, 2006, 2007, 2008, 2009, 2011, 2015, 2017	259; 338	The conflict between the Iraqi government and the Islamic State (IS) escalated in 2014 when IS rapidly captured large swathes of territory in Iraq, including major cities like Mosul, declaring a caliphate. This insurgency sought to establish strict Islamist rule. The Iraqi government, supported by a coalition of international forces, regional militias, and Kurdish Peshmerga, launched a prolonged military campaign to regain control. By late 2017, most of the territory had been recaptured, significantly weakening IS's presence, though sporadic attacks and insurgent activities persist.
Israel	2014	234	The Israel-Palestine conflict is a long-standing conflict with territorial claims over the same land, primarily between Jewish Israelis and Palestinian Arabs. It dates back to the early 20th century and intensified following the establishment of Israel in 1948. Despite numerous peace efforts, the conflict remains unresolved, marked by cycles of violence, occupation of the West Bank, and a blockade of Gaza, as both sides assert rights to self-determination and statehood. In 2014, the conflict between the Government of Israel and Hamas intensified during the Gaza War, also known as Operation Protective Edge. The seven-week military conflict was initiated by escalating tensions and rocket fire from Gaza. The operation involved extensive airstrikes and a ground invasion by Israel aimed at neutralizing Hamas' capabilities.
Liberia	2003	341	From 1999 to 2003, Liberia's government fought against rebel groups, primarily LURD (Liberians United for Reconciliation and Democracy) and MODEL (Movement for Democracy in Liberia), who sought to overthrow President Charles Taylor during the Second Liberian Civil War (1999–2003). The war, which was fueled by political and ethnic divisions, also saw significant regional involvement. The conflict concluded with Taylor's resignation, the signing of the Accra Peace Agreement, and the deployment of a United Nations peacekeeping mission to stabilize the country and facilitate transitional governance.
Nigeria	2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020	297; 13641	Nigeria has been dealing with two major Islamist insurgencies led by the Islamic State West Africa Province (ISWAP) and Jama'atu Ahlis Sunna Lidda'awati wal-Jihad (commonly known as Boko Haram). ISWAP, a faction that split from Boko Haram, operates across Nigeria's northeast and the Lake Chad Basin, seeking to control territory under the banner of the Islamic State's "Greater Sahara Province." Its focus has been on attacking military and civilian targets to establish Islamic governance. Meanwhile, Boko Haram (JAS) has fought to overthrow the Nigerian government since 2009, using terrorism, mass abductions, and violence to enforce its vision of an Islamic state governed by Sharia law.
Pakistan	2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015	218; 325; 404; 418	The conflict involving the Government of Pakistan and al-Qaida, the Balochistan Republican Army (BRA), and Tehrik-i-Taliban Pakistan (TTP) reflects a complex security struggle marked by terrorism, insurgency, and regional instability. Al-Qaida operated within Pakistan following the U.S. invasion of Afghanistan, leading to military actions by both Pakistani and U.S. forces targeting militant strongholds. The TTP, or Pakistani Taliban, has conducted numerous attacks against Pakistani military and civilian targets, seeking to impose strict Islamist rule and undermine the state. Meanwhile, the BRA is a separatist group in Balochistan, engaged in a nationalist insurgency for greater autonomy or independence, often clashing with Pakistani security forces over issues of resource control, human rights, and regional grievances.
Philippines	1990, 1991, 2000, 2003, 2017	209; 308; 14275	The Philippine government has faced long-standing conflicts with the Communist Party of the Philippines-New People's Army (CPP-NPA) and the Moro Islamic Liberation Front (MILF). The CPP-NPA has sought to overthrow the government since the late 1960s through guerilla warfare and political resistance. Meanwhile, the MILF, fighting for autonomy for the Muslim-majority Moro people in the southern Philippines, pursued armed conflict for decades, leading to the 2014 peace deal that established the Bangsamoro Autonomous Region. While the MILF conflict has seen progress through peace agreements, the CPP-NPA insurgency remains a challenge. In addition to conflicts with the CPP-NPA and MILF, the Philippine government has been engaged in fighting against Islamic State (IS)-affiliated groups in the southern Philippines. The conflict intensified in 2017 with the siege of Marawi City, where militants attempted to establish an IS caliphate. Although the siege was ended with government victory, the threat of extremist violence persists through periodic attacks and ongoing insurgency efforts by IS-linked militants.

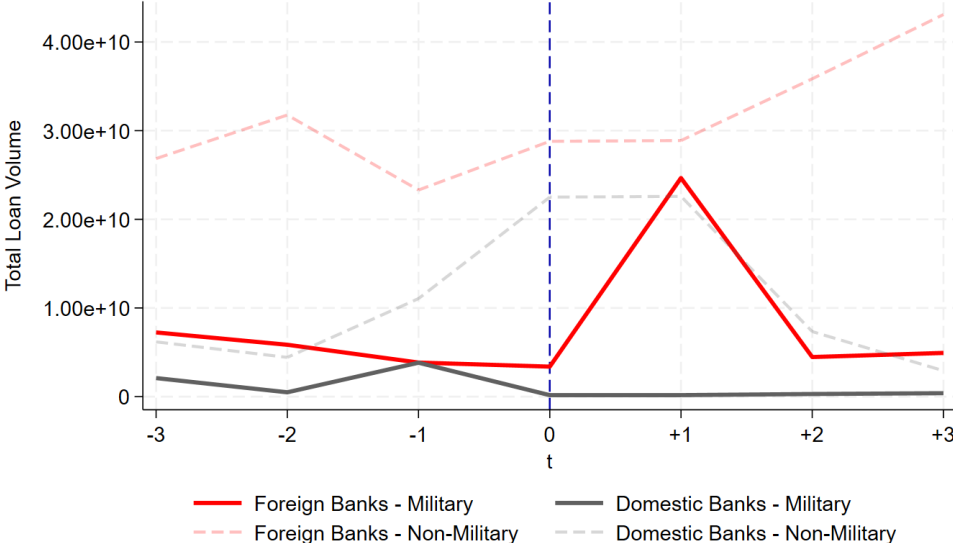
Table A.I. Description of violent conflicts, by countries with $\geq 1,000$ deaths (*ending*)

Russia	1995, 1996, 1999, 2000, 2002, 2004	401; 414	The conflict between the Russian government and the Chechen Republic of Ichkeria encompasses two wars and ongoing tensions rooted in Chechnya's attempts to gain independence following the Soviet Union's dissolution. The First Chechen War (1994-1996) saw Chechen forces resisting Russian control, eventually achieving a ceasefire and de facto independence. However, the Second Chechen War began in 1999 when Russia reasserted control after a Chechen incursion into Dagestan and a series of bombings attributed to Chechen militants. This conflict led to a large-scale Russian military intervention. By the early 2000s, Moscow had re-established authority, integrating Chechnya more firmly within the Russian Federation under a pro-Russian government, though insurgency and tensions persisted.
Sri Lanka	1995, 1996, 1997, 1998, 1999, 2000, 2001, 2006, 2007, 2008, 2009	352	The conflict between the Sri Lankan government and the Liberation Tigers of Tamil Eelam (LTTE) spanned from 1983 to 2009 and centered on the LTTE's pursuit of an independent Tamil state in the country's north and east. Characterized by intense fighting, bombings, and military offensives, the war concluded in 2009 with the military's victory over the LTTE.
Türkiye	1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2016	338; 354; 383; 13902	The conflict in Türkiye involves the government battling insurgent groups like the PKK (Kurdistan Workers' Party) and DHKP-C (Revolutionary People's Liberation Party/Front), both of which challenge Türkiye's authority through violent means. The PKK, fighting for Kurdish autonomy since the 1980s, engages in insurgency and is considered a terrorist group by Türkiye, the EU, and the US, while the DHKP-C targets government institutions with terrorism. Both groups have led to significant security responses from Turkey, including military operations and counterterrorism efforts. Additionally, in 2016, ISIS carried out several major attacks in Türkiye, including the deadly Sultanahmet Square bombing in January and the Ataturk Airport bombing in June. These attacks were part of ISIS's broader strategy to destabilize Türkiye, which was actively involved in the fight against the group in Syria and Iraq.
Ukraine	2014, 2015	13219; 13236; 13243; 13247; 13306	The Maidan protests (2013-2014) led to the ousting of Ukrainian President Yanukovich, resulting in political unrest and a shift toward pro-European governance, which was opposed by parts of the population, especially in the eastern regions. In response, Russian-backed separatists in the Donetsk People's Republic (DPR) and Luhansk People's Republic (LPR) declared independence, sparking armed conflict with the Ukrainian government. Russia provided significant military and logistical support to the separatists, while also deploying its own forces in Crimea, which it annexed in 2014.

Note: This table provides an overview of all conflict-affected countries in our dataset, the year(s) in which the death toll exceeded 1,000, the conflict ID(s) from the UCDP dataset, and a short description of the conflict(s) in those particular year(s). The main data source is UCDP, supplemented by background information from Wikipedia and Britannica.

Appendix B Syndicated lending dynamics around violent conflicts

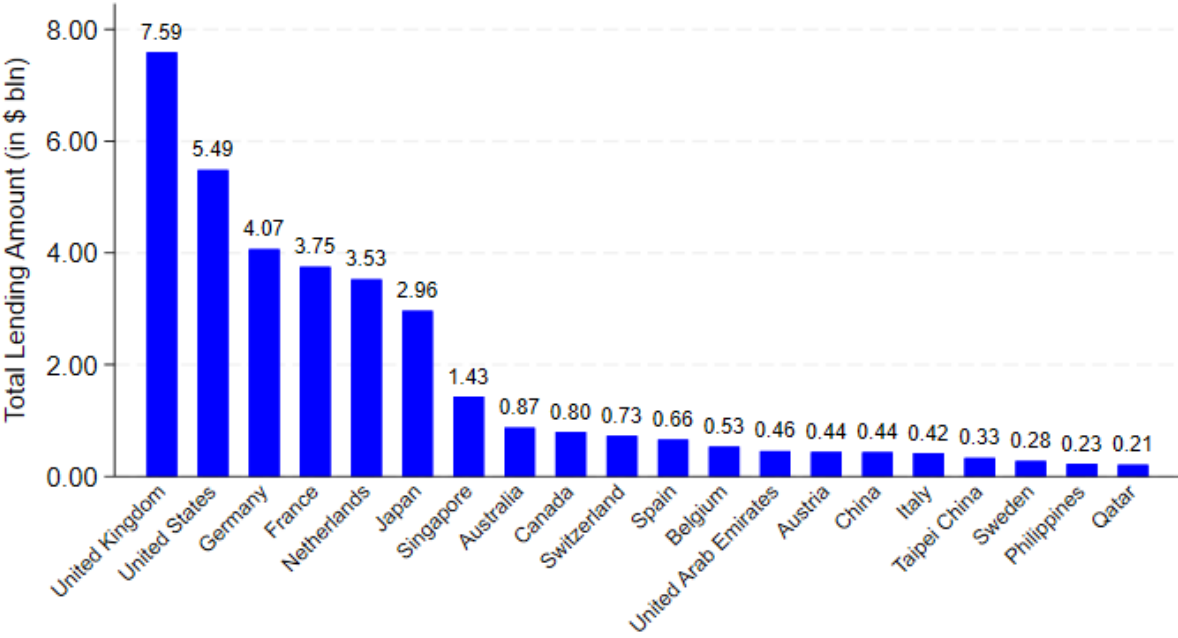
Figure B.I. Absolute amounts of military- and non-military-related lending before and during violent conflicts



Note: This figure shows the absolute amounts (in \$) of military-related lending in all cross-border syndicated lending (solid red line) and in all domestic syndicated lending (solid black line) to conflict countries before and during a violent conflict (1989–2020). The figure also reports non-military-related lending across the same two groups as dashed lines. Data sources: Uppsala Conflict Data Program and DealScan.

Appendix C Syndicated credit to military sectors: Main source countries

Figure C.I. Top-20 countries in terms of lending amount to militaries during violent conflict



Note: This figure shows top-20 home countries in terms of the absolute amount (in \$) of military-related lending to conflict countries during a violent conflict (1989–2020). Violent conflict is defined as a situation in which a country experiences more than 1,000 battle-field related deaths in a calendar year. Data sources: Uppsala Conflict Data Program and DealScan.

Appendix D Primary and dual-use military sectors

Table D.I. Four-digit industry classification of military-related sectors

Panel A: Primary military-related sectors	
SIC Code	Description
2892	Explosives
3482	Small Arms Ammunition
3483	Ammunition, Except for Small Arms
3484	Small Arms
3489	Ordnance and Accessories, Not Elsewhere Classified
3761	Guided Missiles and Space Vehicles
3764	Guided Missile and Space Vehicle Propulsion Units and Propulsion Unit Parts
3769	Guided Missile Space Vehicles Parts and Auxiliary Equipment, Not Elsewhere Classified
3795	Tanks and Tank Components
9711	National Security
Panel B: Dual-use sectors	
SIC Code	Description
Category 0 - Nuclear materials, facilities, and equipment	
2819	Industrial Inorganic Chemicals, Not Elsewhere Classified
2869	Industrial Organic Chemicals, Not Elsewhere Classified
3443	Fabricated Plate Work (Boiler Shops)
3462	Iron and Steel Forgings
3491	Industrial Valves
3559	Special Industry Machinery, Not Elsewhere Classified
3823	Industrial Instruments for Measurement, Display, and Control of Process Variables; and Related Products
3829	Measuring and Controlling Devices, Not Elsewhere Classified
3844	X-Ray Apparatus and Tubes and Related Irradiation Apparatus
3845	Electromedical and Electrotherapeutic Apparatus
Category 1 - Special materials and related equipment	
2836	Biological Products, Except Diagnostic Substances
3312	Steel Works, Blast Furnaces (Including Coke Ovens), and Rolling Mills
3499	Fabricated Metal Products, Not Elsewhere Classified
Category 2 - Materials processing	
2899	Chemicals and Chemical Preparations, Not Elsewhere Classified
3541	Machine Tools, Metal Cutting Types
3542	Machine Tools, Metal Forming Types
3544	Special Dies and Tools, Die Sets, Jigs and Fixtures, and Industrial Molds
3549	Metalworking Machinery, Not Elsewhere Classified
3567	Industrial Process Furnaces and Ovens
3821	Laboratory Apparatus and Furniture
3823	Industrial Instruments for Measurement, Display, and Control of Process Variables; and Related Products
3829	Measuring and Controlling Devices, Not Elsewhere Classified
Category 3 - Electronics	
3469	Metal Stampings, Not Elsewhere Classified
3571	Electronic Computers
3612	Power, Distribution, and Specialty Transformers
3629	Electrical Industrial Apparatus, Not Elsewhere Classified
3669	Communications Equipment, Not Elsewhere Classified
3674	Semiconductors and Related Devices
3675	Electronic Capacitors

- 3676 Electronic Resistors
- 3677 Electronic Coils, Transformers, and Other Inductors
- 3678 Electronic Connectors
- 3679 Electronic Components, Not Elsewhere Classified
- 3699 Electrical Machinery, Equipment, and Supplies, Not Elsewhere
- 3824 Totalizing Fluid Meters and Counting Devices
- 3825 Instruments for Measuring and Testing of Electricity and Electrical Signals
- 3861 Photographic Equipment and Supplies
- 5063 Electrical Apparatus and Equipment Wiring Supplies, and Construction Materials
- 5065 Electronic Parts and Equipment, Not Elsewhere Classified

Category 4 - Computers

- 3572 Computer Storage Devices
- 3575 Computer Terminals
- 3577 Computer Peripheral Equipment, Not Elsewhere Classified
- 3695 Magnetic And Optical Recording Media
- 7371 Computer Programming Services
- 7372 Prepackaged Software
- 7373 Computer Integrated Systems Design
- 7374 Computer Processing and Data Preparation and Processing Services
- 7376 Computer Facilities Management Services
- 7379 Computer Related Services, Not Elsewhere Classified

Category 5 - Telecommunications and “information security”

- 3357 Drawing and Insulating of Nonferrous Wire
- 3661 Telephone and Telegraph Apparatus
- 3663 Radio and Television Broadcasting and Communications Equipment
- 3669 Communications Equipment, Not Elsewhere Classified
- 4812 Radiotelephone Communications
- 4813 Telephone Communications, Except Radiotelephone
- 4822 Telegraph and Other Message Communications
- 4899 Communications Services, Not Elsewhere Classified

Category 6 - Sensors and lasers

- 3699 Electrical Machinery, Equipment, and Supplies, Not Elsewhere
- 3822 Automatic Controls for Regulating Residential and Commercial Environments and Appliances
- 3826 Laboratory Analytical Instruments

Category 7 - Navigation and avionics

- 3357 Drawing and Insulating of Nonferrous Wire
- 3369 Nonferrous Foundries, Except Aluminum and Copper
- 3463 Nonferrous Forgings
- 3492 Fluid Power Valves and Hose Fittings
- 3511 Steam, Gas, and Hydraulic Turbines, and Turbine Generator Set Units
- 3519 Internal Combustion Engines, Not Elsewhere Classified
- 3536 Overhead Traveling Cranes, Hoists, and Monorail Systems
- 3566 Speed Changers, Industrial High-Speed Drives, and Gears
- 3594 Fluid Power Pumps and Motors
- 3621 Motors and Generators
- 3694 Electrical Equipment for Internal Combustion Engines
- 3721 Aircraft
- 3724 Aircraft Engines and Engine Parts
- 3728 Aircraft Parts and Auxiliary Equipment, Not Elsewhere Classified
- 3812 Search, Detection, Navigation, Guidance, Aeronautical, and Nautical Systems and Instruments
- 3824 Totalizing Fluid Meters and Counting Devices
- 3829 Measuring and Controlling Devices, Not Elsewhere Classified
- 4581 Airports, Flying Fields, and Airport Terminal Services

5088 Transportation Equipment and Supplies, Except Motor Vehicles

Category 8 - Marine

3519 Internal Combustion Engines, Not Elsewhere Classified

3561 Pumps and Pumping Equipment

3625 Relays and Industrial Controls

3731 Ship Building and Repairing

3732 Boat Building and Repairing

3823 Industrial Instruments for Measurement, Display, and Control of Process Variables; and Related Products

5088 Transportation Equipment and Supplies, Except Motor Vehicles

8711 Engineering Services

Category 9 - Aerospace and propulsion

3643 Current-Carrying Wiring Devices

3829 Measuring and Controlling Devices, Not Elsewhere Classified

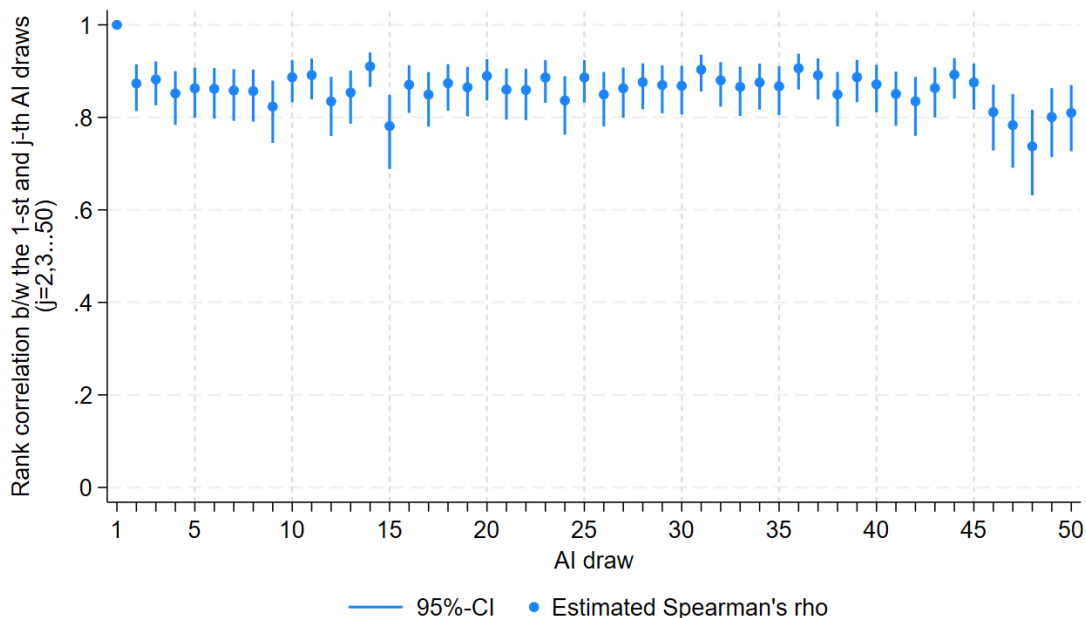
5088 Transportation Equipment and Supplies, Except Motor Vehicles

9661 Space Research and Technology

Note: We refer to the UK Military List and the UK Dual-Use List from the UK Strategic Export Control List provided by the UK Department for Business and Trade for military-related (e.g., “explosives,” “weapons,” “defense”) and dual-use (e.g. “telecommunications”, “electronics”) terms and hand-collect 4-digit SIC codes searching for those terms on the NAICS website. Panel A shows the 10 primary military SIC Codes while Panel B lists the 79 unique dual-use SIC Codes having a minimum 50% likelihood of being of military purpose.

Appendix E AI procedure to identify dual-use sectors

Figure E.I. Rank correlations between different AI-based classification attempts for dual-use sectors



Note: This figure shows the Spearman’s rank correlation coefficients between the first and each subsequent request to ChatGPT to assign probabilities of being used for military purposes for each sector of the economy from the UK Strategic Export Control List. Developed by the UK Department for Business and Trade, the UK Strategic Export Control List determines the UK Military List and the UK Dual-Use List, which we use to identify the military and dual-use industries, respectively. From each list, we collect key terms, such as “weapon”, “gun”, “explosive” for primary military and “nuclear”, “electronics”, “aircraft”, for dual-use, and collect all 4-digit SIC Codes on the NAICS website that would fall under these categories. In this initial process, we collect 10 primary military SIC Codes and 115 dual-use SIC Codes. In a next step, we determine the likelihood of each *dual-use* sector being associated with military functions. For this procedure, we ask ChatGPT to get familiar with the UK Export Control List and assign likelihoods to each dual-use SIC Code to be used for military purposes. As a check, we discreetly include the 10 primary military SIC codes as “pseudo” dual-use to validate the assessment (ChatGPT indeed always assigned a 95-100% probability to those). As the ChatGPT procedure is based on expert judgments, we repeat the procedure 50 times, with all 125 SIC codes randomized before each iteration to ensure robustness.

Appendix F Variables definition and sources

Table F.I. Definitions of variables in the regression analysis

Variable	Definition	Source	Unit
Main Variables			
Loan Amount	Loan amount aggregated to the bank-firm-year level	DealScan	Log \$US
Foreign	<i>Dummy</i> = 1 if country of the bank \neq the country of the firm	Authors' calculations	0/1
Military	<i>Dummy</i> = 1 if the firm's Primary, Secondary, or Tertiary SIC code equals the SIC code in Table D.I.	DealScan, NAICS/SIC website & Authors' calculations	0/1
Battlefield Deaths	Battle-field related deaths per country and year. Sum of the 'best' estimate	Uppsala Conflict Data Program (UCDP)	Persons
Conflict (500)	<i>Dummy</i> = 1 if battle-field related deaths per country and year are greater or equal to 500.	UCDP & Authors' calculations	0/1
Conflict (1,000)	<i>Dummy</i> = 1 if battle-field related deaths per country and year are greater or equal to 1000.	UCDP & Authors' calculations	0/1
Interest rate spread	Spread over default base on the loan	DealScan	Log bps
Loan maturity	Maturity on the loan	DealScan	Log months
Absolute specialization in conflict country	Average (across all years) share of an ever-conflict country in a bank's loan portfolio exceeding the 75 th percentile of the corresponding bank-(conflict) country shares' distribution	DealScan & Authors' calculations	0/1
Absolute specialization in military sector	Average (across all years) share of the military-related sectors in a bank's loan portfolio exceeding the 75 th percentile of the corresponding bank-(military) sector shares' distribution	DealScan & Authors' calculations	0/1
Relative specialization in conflict country	Either the ratio of the average bank-(conflict) country share to the average (conflict) country-world share (Paravisini et al., 2023) or the difference between the two (Blickle et al., 2024) exceeding the 75 th percentile of the corresponding 'ratio' or 'difference' distribution	DealScan & Authors' calculations	0/1
Relative specialization in military sector	Either the ratio of the average bank-(military) sector share to the average (military) sector-world share (Paravisini et al., 2023) or the difference between the two (Blickle et al., 2024) exceeding the 75 th percentile of the corresponding 'ratio' or 'difference' distribution	DealScan & Authors' calculations	0/1
NATO	<i>Dummy</i> = 1 if a country belongs to NATO	www.nato.int	0/1
G7	<i>Dummy</i> = 1 if a country belongs to G7	Wikipedia	0/1
BRICS	<i>Dummy</i> = 1 if a country belongs to BRICS	Wikipedia	0/1
UN West	Countries that vote similar to the US in the UN General Assembly (bottom quartile of the difference of ideal points)	Bailey et al. (2017) & Authors' calculations	0/1
UN East	Countries that vote oppositely to the US in the UN General Assembly (top quartile of the difference of ideal points)	Bailey et al. (2017) & Authors' calculations	0/1
UN Neutral	Countries whose voting patterns in the UN General Assembly fall between alignment with the US and alignment with China/Eastern bloc (middle two quartiles of the difference of ideal points)	Bailey et al. (2017) & Authors' calculations	0/1
Post-conflict	<i>Dummy</i> = 1 for the year(s) after a conflict and where deaths were lower than 1,000 deaths	UCDP & Authors' calculations	0/1
Capital distance	Distance between the capital of the bank country and capital of the firm country	CEPII GeoDist	log km
Primary Industries	<i>Dummy</i> = 1 if the loan is to a firm with SIC codes 0100 - 1,499	DealScan,	0/1
Industry & Manufact.	<i>Dummy</i> = 1 if the loan is to a firm with SIC codes 1,500 - 3,999	NAICS/SIC website	0/1
Utilities & Infrastructure	<i>Dummy</i> = 1 if the loan is to a firm with SIC codes 4,000 - 4,999	& Authors' calculations	0/1
Wholesale	<i>Dummy</i> = 1 if the loan is to a firm with SIC codes 5,000 - 5,199		0/1
Retail	<i>Dummy</i> = 1 if the loan is to a firm with SIC codes 5,200 - 5,999		0/1
Services	<i>Dummy</i> = 1 if the loan is to a firm with SIC codes 6,000 - 8,999		0/1

F.1 Descriptive statistics

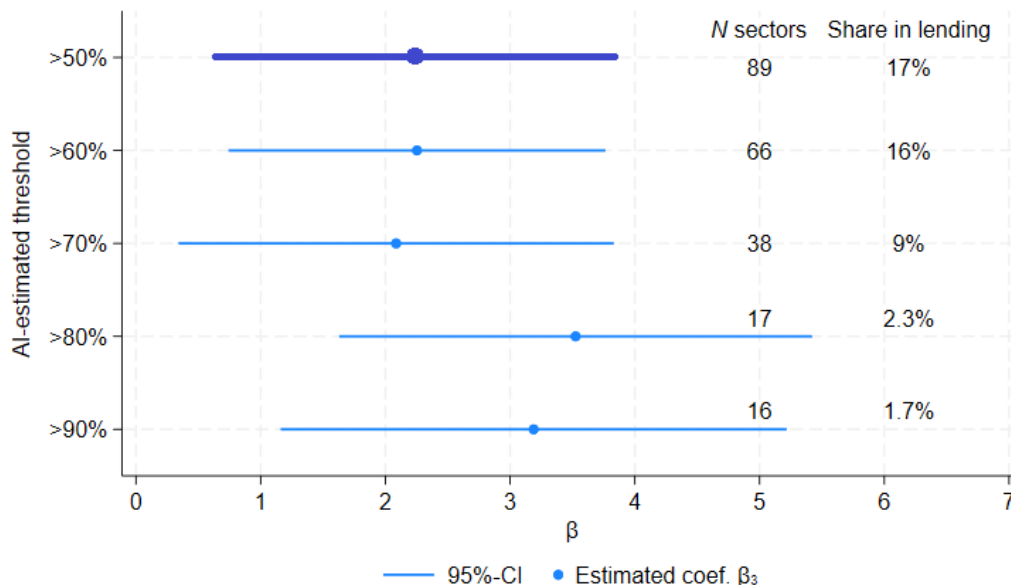
Table F.II. Descriptive statistics

	N	Mean	SD	Min	25th	Median	75th	Max
Main variables								
Loan amount (log)	1,324,617	16.48	2.43	9.16	15.86	17.09	18.02	20.64
Foreign	1,324,617	0.46	0.50	0	0	0	1	1
Military (primary & dual)	1,324,617	0.17	0.38	0	0	0	0	1
Military (primary)	1,324,617	0.003	0.06	0	0	0	0	1
Military (dual)	1,324,617	0.17	0.06	0	0	0	0	1
Deaths	1,324,617	36.38	216.64	0	0	0	0	10,211
Conflict dummy (500)	1,324,617	0.02	0.15	0	0	0	0	1
Conflict dummy (1,000)	1,324,617	0.01	0.10	0	0	0	0	1
Home-Country blocs								
NATO	1,324,617	0.66	0.47	0	0	1	1	1
G7	1,324,617	0.74	0.44	0	0	1	1	1
BRICS	1,324,617	0.05	0.21	0	0	0	0	1
UN West	1,324,617	0.82	0.38	0	1	1	1	1
UN East	1,324,617	0.03	0.17	0	0	0	0	1
UN Neutral	1,324,617	0.11	0.31	0	0	0	0	1
Bank specialization								
Bank-(conflict) country absolute (AS_{bc})	1,324,617	0.19	0.39	0	0	0	0	1
Bank-(military) sector absolute (AS_{bs})	1,324,617	0.22	0.41	0	0	0	0	1
Bank-(conflict) country relative (RS_{bc} , Paravisini et al., 2023)	1,324,617	0.19	0.39	0	0	0	0	1
Bank-(military) sector relative (RS_{bs} , Paravisini et al., 2023)	1,324,617	0.22	0.41	0	0	0	0	1
Bank-(conflict) country relative (RS_{bc} , Blickle et al., 2024)	1,324,617	0.19	0.39	0	0	0	0	1
Bank-(military) sector relative (RS_{bs} , Blickle et al., 2024)	1,324,617	0.22	0.41	0	0	0	0	1
Others								
Post-war	1,324,617	0.01	0.01	0	0	0	0	1
Capital distance	1,323,023	3.81	4.16	0	0	0	8.68	9.90
Interest rate spread	1,266,164	209.16	10.36	181.61	202.37	206.68	212.64	249.69
Maturity	1,271,325	3.78	0.69	0	3.58	4.01	4.11	7.10
Sectors								
Primary Industries	1,324,617	0.08	0.27	0	0	0	0	1
Industry & Manufacturing	1,324,617	0.24	0.42	0	0	0	0	1
Utilities & Infrastructure	1,324,617	0.15	0.35	0	0	0	0	1
Wholesale	1,324,617	0.04	0.20	0	0	0	0	1
Retail	1,324,617	0.06	0.24	0	0	0	0	1
Services	1,324,617	0.34	0.47	0	0	0	1	1

Note: This table shows descriptive statistics for all variables used in the empirical analyses. For the variable definitions, refer to Table F.I. The sample period is 1989-2020. Data sourced from UCDP, DealScan, Bailey et al. (2017), NAICS/SIC webiste, and CEPII GeoDist.

Appendix G Robustness to AI thresholds for dual-use sectors

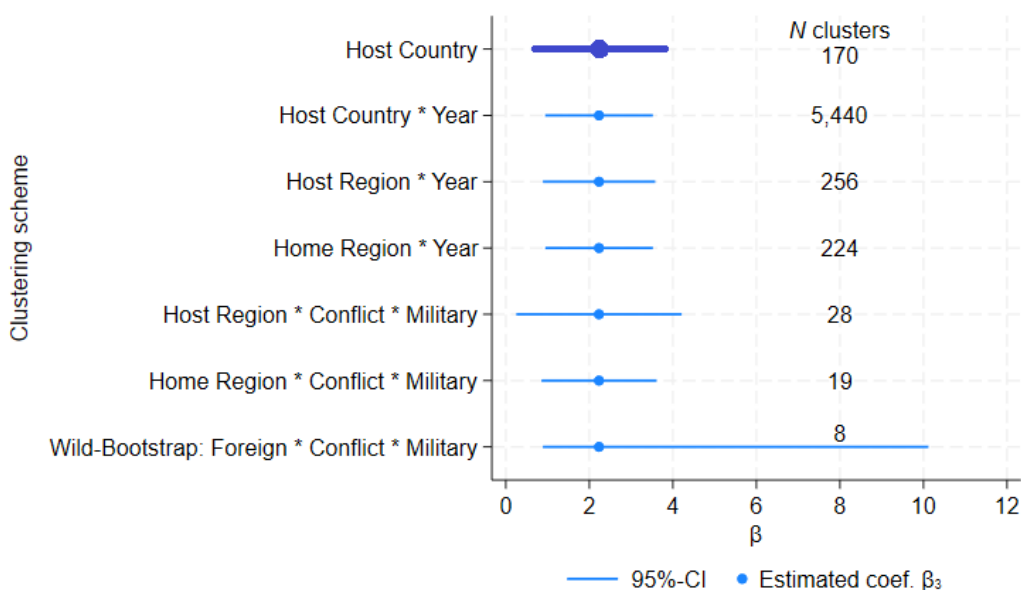
Figure G.I. Cross-border lending to firms in military sectors during violent conflicts: Estimates at the aggregate level using different subsets of dual-use sectors



Note: The figure reports the estimates of the β_3 coefficient on the $Conflict \times Foreign \times Military$ variable, as implied by Equation 1, with the corresponding 95% confidence intervals, which are based on standard error's clustering by home country. *Foreign* is a dummy equal to one (zero) when indicating aggregate cross-border (domestic) lending to a country. *Conflict* is a dummy variable equal to one if the country that received syndicated loans experienced more than 1,000 battle-field related deaths in a calendar year. *Military* is a dummy equal to one if the loan is to a military-related SIC sector which is either primary or dual (see Table D.I for the relevant SIC codes). In the figure, each estimate grounds on a particular AI-classification of dual-use SIC codes that we retrieve from the UK Strategic Export Control List, as described in Appendix E. Specifically, we make a request to ChatGPT to assign probabilities of being used for the military purposes to each dual-use SIC code from the List, starting from 50% (baseline), with the step of 10 pp. The resultant number of SIC-codes for each AI-based probability threshold is reported in *N sectors* and the unconditional share of loans received by the firms operating in these SIC codes in the total syndicated lending in the full sample across all times is reported in *Share in lending*. The 50% threshold is used as the baseline (marked in dark blue). The data is sourced from the Uppsala Conflict Data Program and DealScan.

Appendix H Robustness to different clustering schemes

Figure H.I. Cross-border lending to firms in military sectors during violent conflicts: Estimates at the aggregate level using different clustering of standard errors



Note: The figure reports the baseline estimate of the β_3 coefficient on the $Conflict \times Foreign \times Military$ variable, as implied by Equation 1 and reported in Table 1, and the corresponding 95% confidence intervals that are based on different schemes of standard error's clustering. *Foreign* is a dummy equal to one (zero) when indicating aggregate cross-border (domestic) lending to a country. *Conflict* is a dummy variable equal to one if the country that received syndicated loans experienced more than 1,000 battle-field related deaths in a calendar year. *Military* is a dummy equal to one if the loan is to a military-related SIC sector which is either primary or dual (see Table D.I for the relevant SIC codes). In the figure, *Host (Home) Country (Region)* means the country (region) where the credit comes from (arrives in). Region contains 7 regions: East Asia and Pacific; North America; Europe and Central Asia; Latin America and the Caribbean; Middle East and North Africa; South Asia; Sub-Saharan Africa). The host-country clustering scheme is used as the baseline (marked in dark blue). The data is sourced from the Uppsala Conflict Data Program and DealScan.

Appendix I Tobit estimation

Table I.I. Cross-border lending to firms in military sectors during violent conflicts:
Estimates at the aggregate level

	Dependent variable: $Loan_{gsct}$		
	(1)	(2)	(3)
Foreign	7.708*** (0.195)	8.739*** (0.235)	6.553*** (1.255)
Foreign \times Conflict	-4.097*** (0.688)	-4.720*** (0.725)	-4.344*** (0.763)
Foreign \times Military		-3.093*** (0.294)	-3.096*** (0.292)
Foreign \times Conflict \times Military		3.023** (1.266)	2.735** (1.278)
Conflict	✓	✓	✓
Host-country FE	✓	✓	✓
Foreign Region FE	✓	✓	✓
Year FE	✓	✓	✓
Conflict \times Military FE			✓
Foreign \times Military FE			✓
Military \times Year FE			✓
Foreign \times Year FE			✓
N obs	22,912	22,912	22,912
N of countries	179	179	179
R^2 (pseudo)	0.199	0.227	0.229

Note: This table shows the results from estimating Equation (1). The dependent variable is the inverse hyperbolic sine (IHS) transformation of total loans y by bank group g to sector s in country c and year t , where IHS is computed as $\ln(y + \sqrt{y^2 + 1})$. The estimation method is switched from the linear model with multiple fixed effects to the Tobit estimation with the same structure of fixed effects that are explicitly estimated rather than absorbed. $Foreign_{gc}$ is a dummy equal to one (zero) when indicating aggregate cross-border (domestic) lending to country c . $Conflict$ is a dummy variable equal to one if the country in which the firm is domiciled, experienced more than 1,000 battle-field related deaths in a calendar year. $Military$ is a dummy equal to one if the loan is to a firm in a military-related SIC sector which is either primary or dual (see Table D.I for the relevant SIC codes). All regressions include fixed effects as specified. *Foreign Region FE* capture the following source regions of foreign credit: East Asia and Pacific; North America; Europe and Central Asia; Latin America and the Caribbean; Middle East and North Africa; South Asia; Sub-Saharan Africa. Data sourced from UCDP and DealScan. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors are clustered at the destination country \times year level and reported in parentheses.

Appendix J Other measures of violent conflict

Table J.I. Cross-border lending during violent conflicts: Different indicator thresholds

$\mathbb{1}_{\{deaths \geq j\}}$	Dependent variable: $Loan_{bft}$					
	$j = 0$	$j = 100$	$j = 250$	$j = 500$	$j = 750$	$j = 1,000$
	(1)	(2)	(3)	(4)	(5)	(6)
Conflict \times Foreign	0.024 (0.026)	0.098 (0.075)	0.132 (0.142)	0.028 (0.134)	-0.259** (0.103)	-0.310*** (0.115)
Conflict \times Military \times Foreign	0.070** (0.027)	0.113*** (0.040)	0.418*** (0.092)	0.554*** (0.092)	0.424*** (0.094)	0.521*** (0.105)
Bank FE	✓	✓	✓	✓	✓	✓
Firm FE	✓	✓	✓	✓	✓	✓
Home Country \times Year FE	✓	✓	✓	✓	✓	✓
Host Country \times Year FE	✓	✓	✓	✓	✓	✓
Conflict \times Military FE	✓	✓	✓	✓	✓	✓
Foreign \times Military FE	✓	✓	✓	✓	✓	✓
Military \times Year FE	✓	✓	✓	✓	✓	✓
Foreign \times Year FE	✓	✓	✓	✓	✓	✓
N obs	1,308,048	1,308,048	1,308,048	1,308,048	1,308,048	1,308,048
N of banks	14,021	14,021	14,021	14,021	14,021	14,021
R^2 (adj.)	0.868	0.868	0.868	0.868	0.868	0.868

Note: This table shows the results from estimating Equation (2). The dependent variable is the natural logarithm of the loan amount. *Foreign* is a dummy equal to one if the bank lends to a firm in a foreign country. *Military* is a dummy equal to one if the loan is to a firm in a military-related SIC sector which is either primary or dual (see Table D.I for the relevant SIC codes). We vary the *Conflict* dummy with different death thresholds and make it equal to one if the country, in which the firm is domiciled, experienced more than 100, 250, 500, 750, and 1,000 battle-field related deaths in a calendar year, respectively. Fixed effects as specified. Data sources: UCDP and DealScan. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors clustered by bank in parentheses.

Table J.II. Cross-border lending during violent conflicts: Different continuous thresholds

	Dependent variable: $Loan_{bft}$					
	Conflict: $deaths$, conditional on $deaths \geq j$:					
	$j = 0$	$j = 100$	$j = 250$	$j = 500$	$j = 750$	$j = 1,000$
	(1)	(2)	(3)	(4)	(5)	(6)
Foreign \times Conflict	-0.000 (0.000)	0.014 (0.013)	0.015 (0.021)	0.000 (0.019)	-0.037*** (0.014)	-0.042*** (0.015)
Foreign \times Conflict \times Military	0.000*** (0.000)	0.023*** (0.007)	0.065*** (0.013)	0.080*** (0.013)	0.059*** (0.013)	0.067*** (0.015)
Bank FE	✓	✓	✓	✓	✓	✓
Firm FE	✓	✓	✓	✓	✓	✓
Home Country \times Year FE	✓	✓	✓	✓	✓	✓
Host Country \times Year FE	✓	✓	✓	✓	✓	✓
Conflict \times Military FE	✓	✓	✓	✓	✓	✓
Foreign \times Military FE	✓	✓	✓	✓	✓	✓
Military \times Year FE	✓	✓	✓	✓	✓	✓
Foreign \times Year FE	✓	✓	✓	✓	✓	✓
N obs	1,308,048	1,308,048	1,308,048	1,308,048	1,308,048	1,308,048
N of banks	14,021	14,021	14,021	14,021	14,021	14,021
R^2 (adj.)	0.868	0.868	0.868	0.868	0.868	0.868

Note: This table shows the results from estimating Equation (2). The dependent variable is the natural logarithm of the loan amount. *Foreign* is a dummy equal to one if the bank lends to a firm in a foreign country. *Military* is a dummy variable equal to one if the loan is extended to a firm operating in military-related SIC sectors (see Table D.I for the relevant SIC codes). In all columns, we use *deaths* as a continuous threshold to measure the intensity of the *Conflict*. Threshold j represents a point where values below j are coded as zero, while values above j maintain their continuity. Fixed effects as specified. Data sources: UCDP and DealScan. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors clustered by bank in parentheses.

Appendix K Decomposition of military sectors

Table K.I. Primary vs. dual-use military sectors

	Dependent variable: $Loan_{bft}$		
	Primary & Dual-use	Dual-use only	Primary-use only
	(1)	(2)	(3)
Conflict \times Foreign	-0.310*** (0.115)	-0.304*** (0.114)	-0.219* (0.116)
Conflict \times Military \times Foreign	0.521*** (0.105)	0.483*** (0.105)	0.486** (0.210)
Bank FE	✓	✓	✓
Firm FE	✓	✓	✓
Home Country \times Year FE	✓	✓	✓
Host Country \times Year FE	✓	✓	✓
Conflict \times Military FE	✓	✓	✓
Foreign \times Military FE	✓	✓	✓
Military \times Year FE	✓	✓	✓
Foreign \times Year FE	✓	✓	✓
N obs	1,308,048	1,308,048	1,308,048
N of banks	14,021	14,021	14,021
R^2 (adj.)	0.868	0.868	0.868

Note: This table shows the results from estimating Equation (2). The dependent variable is the natural logarithm of the loan amount. *Foreign* is a dummy equal to one if the bank lends to a firm in a foreign country. *Conflict* is a dummy equal to one if the firm's country experienced more than 1,000 battle-field related deaths in a calendar year. In column (1), *Military* is a dummy equal to one if the loan is extended to a firm operating in both primary and dual-use military-related SIC sectors which are either primary or dual (see Table D.I for the relevant SIC codes). In column (2), *Military* is a dummy equal to one if the loan is extended to a firm operating in dual-use SIC sectors only. In column (3), *Military* is a dummy equal to one if the loan is extended to a firm operating in primary military-related SIC sectors only. Fixed effects as specified. Data sources: UCDP and DealScan. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors clustered by bank in parentheses.

Appendix L Robustness: Loan share allocation

Table L.I. Robustness: Different loan shares

Dependent variable	<i>Loan_{bft}</i>		
	(1)	(2)	(3)
Foreign × Conflict	-0.310*** (0.115)	-0.652* (0.373)	-0.091 (0.769)
Foreign × Conflict × Military	0.521*** (0.105)	1.270*** (0.397)	1.331*** (0.502)
Bank FE	✓	✓	✓
Firm FE	✓	✓	✓
Home Country × Year FE	✓	✓	✓
Host Country × Year FE	✓	✓	✓
Conflict × Military FE	✓	✓	✓
Foreign × Military FE	✓	✓	✓
Military × Year FE	✓	✓	✓
Foreign × Year FE	✓	✓	✓
<i>N</i> obs	1,308,048	1,308,048	1,307,507
<i>N</i> of banks	14,021	14,021	14,016
R ² (adj.)	0.868	0.539	0.428

Note: The table shows the results after imputing the missing loan shares in different ways. Column (1) shows our baseline specification. In column (2), following [De Haas and Van Horen \(2013\)](#), lead banks and non-lead banks are each allocated 50% of the loan share and then shares are split equally across banks with the same role in the syndicate. In column (3), we assign the entire loan volume to the lead bank when there is only one lead bank. In case of multiple lead banks, the loan amount is divided equally among them. The dependent variable is the natural logarithm of the loan amount. *Foreign* is a dummy equal to one if the bank lends to a firm in a foreign country. *Conflict* is a dummy equal to one if the firm's country experienced more than 1,000 battle-field related deaths in a calendar year. *Military* is a dummy equal to one if the loan is to a firm in a military-related SIC sector (see Table D.I for the relevant SIC codes). Fixed effects as specified. Data sources: UCDP and DealScan. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors clustered by bank in parentheses.

Appendix M Excluding major source countries

Table M.I. Cross-border lending during violent conflicts:
Excluding foreign banks from major economies

Dependent variable	<i>Loan_{bft}</i>			
	US	Japan	DE & FR	China
	(1)	(2)	(3)	(4)
Foreign × Conflict	-0.316*** (0.117)	-0.301*** (0.116)	-0.301** (0.118)	-0.320*** (0.116)
Foreign × Conflict × Military	0.551*** (0.112)	0.529*** (0.107)	0.489*** (0.111)	0.540*** (0.108)
Bank FE	✓	✓	✓	✓
Firm FE	✓	✓	✓	✓
Home Country × Year FE	✓	✓	✓	✓
Host Country × Year FE	✓	✓	✓	✓
Conflict × Military FE	✓	✓	✓	✓
Foreign × Military FE	✓	✓	✓	✓
Military × Year FE	✓	✓	✓	✓
Foreign × Year FE	✓	✓	✓	✓
<i>N</i> obs	872,880	1,104,600	1,143,206	1,271,769
<i>N</i> of banks	9,399	12,681	12,799	13,106
R ² (adj.)	0.890	0.765	0.875	0.869

Note: The table shows the results after excluding major economies in our dataset. We exclude banks from the US, Japan, Germany & France, and China in column 1, 2, 3, and 4, respectively. The dependent variable is the natural logarithm of the loan amount. *Foreign* is a dummy equal to one if the bank lends to a firm in a foreign country. *Conflict* is a dummy equal to one if the firm's country experienced more than 1,000 battle-field related deaths in a calendar year. *Military* is a dummy equal to one if the loan is to a firm in a military-related SIC sector (see Table D.I for the relevant SIC codes). Fixed effects as specified. Data sources: UCDP and DealScan. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors clustered by bank in parentheses.

Appendix N Robustness to using only largest lenders

Table N.I. Loan-level regressions: Keep only largest lenders

Dependent variable	<i>Loan_{bf_sct}</i>		
	(1)	(2)	(3)
Foreign	-0.101*** (0.011)	-0.104*** (0.011)	
Foreign × Conflict	-0.449** (0.190)	-0.539*** (0.187)	-0.525*** (0.188)
Foreign × Military		0.013 (0.009)	
Foreign × Conflict × Military		0.405** (0.159)	0.410** (0.159)
Bank FE	✓	✓	✓
Firm FE	✓	✓	✓
Home Country × Year FE	✓	✓	✓
Host Country × Year FE	✓	✓	✓
Conflict × Military FE		✓	✓
Foreign × Military FE			✓
Military × Year FE			✓
Foreign × Year FE			✓
<i>N</i> obs	980,396	980,396	980,396
<i>N</i> of banks	575	575	575
R ² (adj.)	0.879	0.879	0.879

Note: This table shows the results from estimating Equation (2). The dependent variable is the interest rate spread. *Foreign* is a dummy equal to one if the bank lends to a firm in a foreign country. *Conflict* is a dummy equal to one if the firm's country experienced more than 1,000 battle-field related deaths in a calendar year. *Military* is a dummy equal to one if the loan is to a firm in a military-related SIC sector (see Table D.I for the relevant SIC codes). All regressions include fixed effects as specified. Data sourced from UCDP and DealScan. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors clustered by bank are shown in parentheses.

Appendix O Composition of country dyads

Table O.I. West-to-West, West-to-Neutral, and West-to-East country dyads, 1989–2020

West home	West (conflict) host	West home	Neutral (conflict) host	West home	East (conflict) host
Albania	Israel	Andorra	Angola	Australia	Algeria
Australia	Russia	Australia	Colombia	Austria	Colombia
Austria	Turkey	Austria	India	Belgium	Congo, DR
Belgium	Ukraine	Belgium	Iraq	Canada	India
Bulgaria		Bermuda	Nigeria	Czech Republic	Iraq
Canada		Canada	Pakistan	Finland	Liberia
Croatia		Croatia	Philippines	France	Nigeria
Czech Republic		Czech Republic	Russia	Germany	Pakistan
Denmark		Denmark	Sri Lanka	Italy	Philippines
Finland		Finland	Turkey	Japan	Sri Lanka
France		France		Netherlands	
Germany		Germany		Norway	
Greece		Greece		Portugal	
Ireland		Hungary		Spain	
Israel		Iceland		Sweden	
Italy		Ireland		Switzerland	
Japan		Israel		Taipei China	
Malta		Italy		United Kingdom	
Netherlands		Japan		United States	
Norway		Latvia			
Poland		Liechtenstein			
Portugal		Luxembourg			
Slovakia		Netherlands			
South Korea		Norway			
Spain		Poland			
Sweden		Portugal			
Switzerland		Russia			
Taipei China		Slovakia			
United Kingdom		Slovenia			
United States		South Korea			
		Spain			
		Sweden			
		Switzerland			
		Taipei China			
		United Kingdom			
		United States			
30	4	36	10	19	10

Table O.II. Neutral-to-West, Neutral-to-Neutral, and Neutral-to-East country dyads, 1989–2020

Neutral home	West (conflict) host	Neutral home	Neutral (conflict) host	Neutral home	East (conflict) host
Angola	Israel	Angola	Angola	Australia	Algeria
Austria	Russia	Argentina	Colombia	Austria	Colombia
Bahrain	Turkey	Australia	India	Brazil	Congo, DR
China	Ukraine	Austria	Iraq	China	India
India		Azerbaijan	Nigeria	Ghana	Iraq
Japan		Bahrain	Pakistan	India	Liberia
Jordan		Bangladesh	Philippines	Ireland	Nigeria
Kuwait		Brazil	Russia	Ivory Coast	Pakistan
Mauritius		Chile	Sri Lanka	Japan	Philippines
Pakistan		China	Turkey	Kuwait	Sri Lanka
Qatar		Ghana		Lebanon	
Russia		India		Philippines	
Saudi Arabia		Ireland		Singapore	
Singapore		Ivory Coast		South Africa	
South Africa		Japan		South Korea	
South Korea		Jordan		Togo	
UAE		Kazakhstan		UAE	
		Kuwait			
		Malaysia			
		Mauritius			
		Mongolia			
		Morocco			
		Nigeria			
		Pakistan			
		Panama			
		Philippines			
		Qatar			
		Russia			
		Saudi Arabia			
		Singapore			
		South Africa			
		South Korea			
		Spain			
		Sri Lanka			
		Thailand			
		Togo			
		Tunisia			
		Turkey			
		UAE			
		Venezuela			
17	4	40	10	17	10

Table O.III. East-to-West, East-to-Neutral, and East-to-East country dyads, 1989–2020

East home	West (conflict) host	East home	Neutral (conflict) host	East home	East (conflict) host
China	Israel	Bahrain	Angola	Afghanistan	Algeria
Egypt	Russia	Brunei	Colombia	Bahrain	Colombia
India	Turkey	China	India	Brunei	Congo, DR
Indonesia	Ukraine	Egypt	Iraq	China	India
Lebanon		Hong Kong	Nigeria	Egypt	Iraq
Oman		India	Pakistan	Hong Kong	Liberia
Palestine		Indonesia	Philippines	India	Nigeria
Tunisia		Iran	Russia	Indonesia	Pakistan
		Jordan	Sri Lanka	Jordan	Philippines
		Kuwait	Turkey	Kuwait	Sri Lanka
		Lebanon		Lebanon	
		Macau		Oman	
		Malaysia		Pakistan	
		Morocco		Philippines	
		Oman		Qatar	
		Pakistan		Thailand	
		Palestine		UAE	
		Philippines		Venezuela	
		Qatar			
		Saudi Arabia			
		Sri Lanka			
		Thailand			
		Tunisia			
		UAE			
8	4	24	10	18	10

Appendix P Bank specialization: Robustness

Given the country- and sector shares in bank lending, we then compute a country's c and sector's s shares in the 'world' lending:

$$Country\ Share_{ct} = \frac{\sum_{b=1}^{B_t} \sum_{f=1}^{F_{bct}} Loan_{bct}}{\sum_{b=1}^{B_t} \sum_{c=1}^{C_{bt}} \sum_{f=1}^{F_{bct}} Loan_{bct}}, \quad Sector\ Share_{st} = \frac{\sum_{b=1}^{B_t} \sum_{f=1}^{F_{bst}} Loan_{bst}}{\sum_{b=1}^{B_t} \sum_{s=1}^{S_{bt}} \sum_{f=1}^{F_{bst}} Loan_{bst}}$$

Further, we take into account the revealed comparative advantage concept in bank lending (Paravisini et al., 2023). Following Blickle et al. (2024), we compute deviations of a country c (sector s) share in a bank's b total lending in year t from the country's c (sector's s) share in 'world' total lending in that year:

$$Deviation\ Country\ Share_{bct} = Country\ Share_{bct} - Country\ Share_{ct}, \quad (5)$$

$$Deviation\ Sector\ Share_{bst} = Sector\ Share_{bst} - Sector\ Share_{st} \quad (6)$$

We also employ the specialization measure proposed by Paravisini et al. (2023)—instead of subtracting the country (sector) shares we divide by them.

Finally, we average the obtained deviations across time and discretize them to split all banks according to their *relative* specialization:

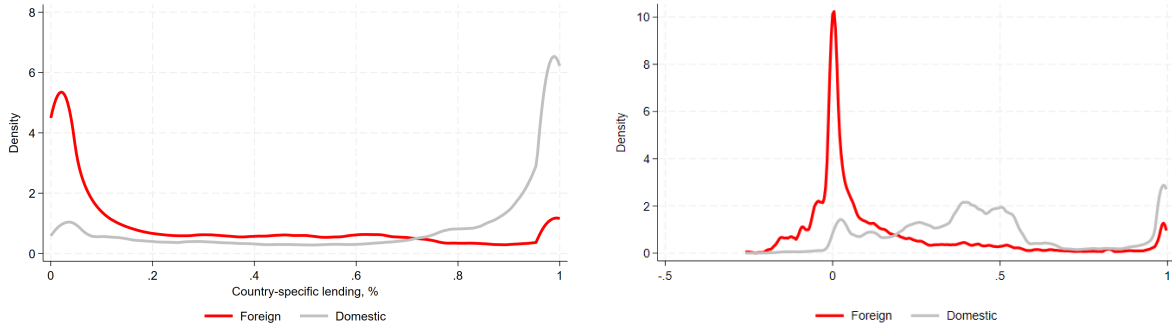
$$RS_{bc} = \begin{cases} 1, & \text{if } Deviation\ Country\ Share_{bc} \geq \alpha_c \\ 0, & \text{if else} \end{cases} \quad (7)$$

$$RS_{bs} = \begin{cases} 1, & \text{if } Deviation\ Sector\ Share_{bs} \geq \alpha_s \\ 0, & \text{if else} \end{cases} \quad (8)$$

For the estimations we use $\alpha_c = \alpha_s = 75^{th}$ percentile. Focusing on the specialization measure proposed by Blickle et al. (2024), we find that these α_c and α_s correspond to a bank whose country share deviates from the world share by 0.034 (or 3.4 pp) and whose sector share deviates from the world benchmark by 0.090 (or 9.0 pp). The corresponding empirical frequencies of bank-country shares and their deviations from the 'world' appear in Figures P.I.(a) and P.I.(b), and analogous frequencies of bank-sector shares and their deviations from the 'world'— in Figures P.II.(a) and P.II.(b).

To test the specialization hypothesis, we run model (2) on a subsample of specialized cross-border lenders ($RS_{bc} = 1$) and non-specialized lenders (or $RS_{bc} = 0$).

Figure P.I. Bank-country lending shares and their deviations from country shares

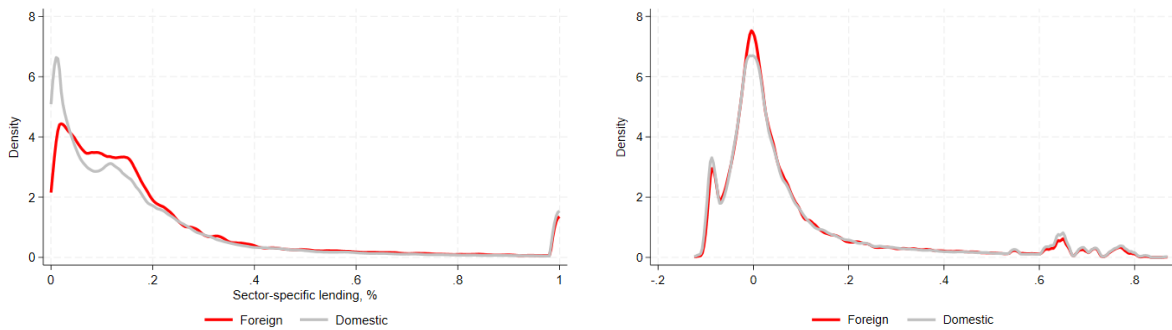


(a) Bank-country lending shares

(b) Deviations from country shares

Note: The figure reports empirical frequencies of bank-country lending shares (a) and their deviations from the corresponding country shares in the ‘world’ lending portfolio, as implied by Expression (5), averaged across 1989–2020 by foreign and domestic banks. The data is sourced from the Uppsala Conflict Data Program and DealScan.

Figure P.II. Bank-sector lending shares in the full sample



(a) Bank-sector lending shares

(b) Deviations from sector shares

Note: The figure reports empirical frequencies of bank-country lending shares (a) and their deviations from the corresponding country shares in the ‘world’ lending portfolio, as implied by Expression (6), averaged across 1989–2020 by foreign and domestic banks. The data is sourced from the Uppsala Conflict Data Program and DealScan.

Table P.I. Bank specialization in foreign lending during violent conflicts:
Robustness to [Blickle et al. \(2024\)](#)

Specialization:	Dependent variable: $Loan_{bft}$					
	Relative measure					
	In country ($RS_{bc} = 1$)		P -value $diff=0$	In sector ($RS_{bs} = 1$)		P -value: $diff=0$
	Yes	No		Yes	No	
(1)	(2)	(3)	(4)			
Foreign \times Conflict	-0.376*** (0.136)	-0.395** (0.183)	0.933	-0.279 (0.196)	-0.293*** (0.108)	0.950
Foreign \times Conflict \times Military	0.431*** (0.154)	0.641*** (0.151)	0.328	0.615*** (0.185)	0.533*** (0.131)	0.717
Bank FE	✓	✓		✓	✓	
Firm FE	✓	✓		✓	✓	
Home Country \times Year FE	✓	✓		✓	✓	
Host Country \times Year FE	✓	✓		✓	✓	
Conflict \times Military FE	✓	✓		✓	✓	
Foreign \times Military FE	✓	✓		✓	✓	
Military \times Year FE	✓	✓		✓	✓	
Foreign \times Year FE	✓	✓		✓	✓	
N obs	234,349	1,051,771		267,295	1,017,829	
N banks	2,191	11,695		2,792	11,120	
R^2 (adj.)	0.854	0.865		0.868	0.865	

Note: The table shows the results from the regression of our baseline specification (2) run separately on the following four sub-samples of banks: those that are specialized in lending to particular countries ($RS_{bc} = 1$) and those that are not ($RS_{bc} = 0$), in the first two columns, and those that are specialized in lending to specific economic sectors ($RS_{bs} = 1$) and those that are not ($RS_{bs} = 0$), in the last two columns. In all cases, the dependent variable is the natural logarithm of the loan amount and the concept of relative specialization of [Blickle et al. \(2024\)](#) is used, as implied by Expressions (7) and (8) with the cutoff thresholds $\alpha_c = \alpha_s = 75^{th}$ percentile. *Foreign* is a dummy equal to one if the bank lends to a firm in a foreign country. *Conflict* is a dummy equal to one if the firm's country experienced more than 1,000 battle-field related deaths in a calendar year. *Military* is a dummy equal to one if the loan is to a firm in a military-related SIC sector (see Table D.I for the relevant SIC codes). Fixed effects as specified. Data sources: UCDP and DealScan. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors clustered by bank in parentheses.

Table P.II. Bank specialization in foreign lending during violent conflicts:
Robustness to [Paravisini et al. \(2023\)](#)

Specialization:	Dependent variable: $Loan_{bft}$					
	Relative measure					
	In country ($RS_{bc} = 1$)		P -value $diff=0$	In sector ($RS_{bs} = 1$)		P -value: $diff=0$
	Yes	No		Yes	No	
(1)	(2)	(3)	(4)			
Foreign \times Conflict	-0.356*** (0.123)	-0.151 (0.167)	0.323	-0.253 (0.175)	-0.323** (0.108)	0.733
Foreign \times Conflict \times Military	0.473*** (0.138)	0.566*** (0.151)	0.651	0.426** (0.195)	0.645*** (0.111)	0.329
Bank FE	✓	✓		✓	✓	
Firm FE	✓	✓		✓	✓	
Home Country \times Year FE	✓	✓		✓	✓	
Host Country \times Year FE	✓	✓		✓	✓	
Conflict \times Military FE	✓	✓		✓	✓	
Foreign \times Military FE	✓	✓		✓	✓	
Military \times Year FE	✓	✓		✓	✓	
Foreign \times Year FE	✓	✓		✓	✓	
N obs	233,601	1,050,969		276,084	1,009,312	
N banks	2,100	11,781		2,788	11,124	
R^2 (adj.)	0.856	0.864		0.874	0.862	

Note: The table shows the results from the regression of our baseline specification (2) run separately on the following four sub-samples of banks: those that are specialized in lending to particular countries ($RS_{bc} = 1$) and those that are not ($RS_{bc} = 0$), in the first two columns, and those that are specialized in lending to specific economic sectors ($RS_{bs} = 1$) and those that are not ($RS_{bs} = 0$), in the last two columns. In all cases, the dependent variable is the natural logarithm of the loan amount and the concept of relative specialization of [Paravisini et al. \(2023\)](#) is used, as implied by Expressions (7) and (8) with the cutoff thresholds $\alpha_c = \alpha_s = 75^{th}$ percentile. *Foreign* is a dummy equal to one if the bank lends to a firm in a foreign country. *Conflict* is a dummy equal to one if the firm's country experienced more than 1,000 battle-field related deaths in a calendar year. *Military* is a dummy equal to one if the loan is to a firm in a military-related SIC sector (see Table D.I for the relevant SIC codes). Fixed effects as specified. Data sources: UCDP and DealScan. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors are clustered by bank in parentheses.

Appendix Q Extension: Interest Rates

Table Q.I. Loan-level Interest Rate Regressions

Dependent variable	<i>Rates_{bfscf}</i>		
	(1)	(2)	(3)
Foreign	-0.389*** (0.043)	-0.374*** (0.042)	
Foreign × Conflict	0.995** (0.502)	1.487*** (0.502)	1.392*** (0.501)
Foreign × Military		-0.072** (0.034)	
Foreign × Conflict × Military		-2.554*** (0.415)	-2.572*** (0.416)
Bank FE	✓	✓	✓
Firm FE	✓	✓	✓
Home Country × Year FE	✓	✓	✓
Host Country × Year FE	✓	✓	✓
Conflict × Military FE		✓	✓
Foreign × Military FE			✓
Military × Year FE			✓
Foreign × Year FE			✓
<i>N</i> obs	1,253,005	1,253,005	1,253,005
<i>N</i> of banks	13,664	13,664	13,664
R ² (adj.)	0.861	0.861	0.861

Note: This table shows the results from estimating Equation (2). The dependent variable is the interest rate spread. *Foreign* is a dummy equal to one if the bank lends to a firm in a foreign country. *Conflict* is a dummy equal to one if the firm's country experienced more than 1,000 battle-field related deaths in a calendar year. *Military* is a dummy equal to one if the loan is to a firm in a military-related SIC sector (see Table D.I for the relevant SIC codes). All regressions include fixed effects as specified. Data sourced from UCDP and DealScan. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors clustered by bank are shown in parentheses.