Domestic credit, trade finance, and the trade tensions of 2016-18: A prelude to international fragmentation? *

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Abstract

This paper exploits the exogenous changes of destination/origin-specific trade uncertainty indexes to investigate the impact of trade tensions on banks' credit provision and firms' foreign trade performance. Using transaction-level data of Chilean firms and banks, we show that increases in trade uncertainty induce a bank-firm portfolio reallocation away from non-trade firms toward firms involved in the global value chain (GVC) and importers who trade with countries exhibiting increasing trade uncertainty. However, bank credit to exporters does not increase when trade uncertainty augments, presumably because banks perceive them as riskier (compared to GVC firms and importers). Furthermore, our findings are consistent with the working capital channel, where the lower external demand due to the trade tensions and the resulting worsening financial conditions of foreign firms negatively affect Chilean firms' working capital leading in turn to a reduction in exports financed with cash-in-advance and trade credit. In contrast, imports do grow more when trade uncertainty is high if they are financed with cash-in-advance or with bank credit. The latter hence indicates that Chilean firms and banks are providing finance to foreign firms exposed to increasing trade uncertainty in their own countries.

Keywords: Trade uncertainty, domestic credit provision, trade finance

JEL codes: F36, F65, G21

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1 Introduction

Since the late 20th and early 21st century, we have witnessed an increase in the international integration of trade and global finance, with growing interdependencies between them. However, these interlinkages have been put under pressure since the global financial crisis. Further tensions have arisen from trade-policy frictions and the uncertainty associated with threats of increased unilateralism, war, sanctions, and retaliation. In this regard, the most prominent headlines in the recent past have highlighted tensions between the U.S. and China in general, the U.S. and Mexico with the renegotiation of NAFTA, and the U.K. and the E.U. with the realization of Brexit. Indeed, these growing trade tensions have been considered by some academics as indications of a more general de-globalization or international fragmentation process (see Antràs (2020) for a discussion).

Increasing trade tensions[1] may affect the prospects of firms trading with those countries affected by the tensions and, consequently, their credit decisions. Moreover, in reaction to trade uncertainty, banks can tighten credit conditions to firms by altering the amounts granted, the interest rates, and/or the maturities. Banks can alternatively adjust and re-allocate credit across firms and/or sectors. This way, firms not engaged in foreign trade or with credit unrelated to foreign trade could be affected by banks' reactions to these trade tensions. Finally, a bank's reaction (to trade uncertainty) also depends on whether the bank is heavily exposed to affected firms or specializes in certain countries or foreign currencies.

This paper exploits the exogenous changes of destination/origin-specific trade uncertainty indexes to investigate how trade tensions affect credit provision and the external sector, emphasizing the interlinkages among trade, domestic credit, and trade finance under periods of trade uncertainty. Precisely, we aim to respond to the following research questions. First, does trade uncertainty affect credit provision? Second, does increasing trade uncertainty impact credit provision differently for non-trade and trade firms? Third, how does trade uncertainty affect foreign trade operations? Finally, is the reaction of trade firms to increasing trade uncertainty modulated by how firms finance their international operations? Answering these questions allows us to shed some light on whether the impact of trade uncertainty is likely to have limited effects on the external sector or, oppositely, it may result in spillovers to the overall economy, amplifying the initial shocks through the banking sector.

[1] Trade tensions encompass the three following features. First increased uncertainty regarding the future path of tariffs and non-tariff barriers to trade due to policymakers' discussions. Second, a materialization of tariff increases or tightening of non-tariff measures that augment uncertainty further. And finally, changes in outstanding trade agreements.

Our case study is Chile, an open emerging economy with an inflation targeting and a floating exchange rate regime. Chile is a very globalized economy:it has negotiated 30 trade agreements, covering 70 markets, representing 88% of the world's GDP. This network of trade agreements has significantly improved market access for Chilean products and exports.[2] In addition, the country has diversified export destinations and import origins.[3] To answer the research questions above, we build a highly disaggregated database combining information from the administrative credit registry, banks' balance sheets, and the National customs. Our time frame extends over the period January 2012 and March 2019. Importantly, we observe the universe of Chilean exports and imports, as well as all new loans granted to non-financial corporations over our time frame. To measure trade tensions, we rely on the country-specific trade uncertainty indexes, calculated by Ahir et al. (2022). These indexes have comprehensive coverage in terms of countries and periods.

Examining an open economy like Chile with our transactional dataset is appealing for several reasons. First, we can exploit Chile's foreign trade diversification structure to disentangle the heterogeneous effects of destination/origin-specific trade uncertainty shocks on firms and banks. These destination/origin-specific trade uncertainty indexes are exogenous from the point of view of Chilean firms and banks. Second, thanks to the granularity of our customs dataset, we can quantify firms' exposures to increasing trade uncertainty and their reactions in terms of credit behavior and foreign trade operations (including how they finance their foreign trade operations). We measure a firm's exposure to a given origin or destination country by the value of its exports and/or imports to/from that country, relative to the total value of its foreign trade. Third, by incorporating the administrative credit registry, we can measure how exposed banks are to the country-specific trade uncertainty changes and which banks' features make them more (or less) sensitive to higher trade tensions. We account for a bank's exposure to destination/origin-specific trade uncertainty shocks through the importance that a given country (of destination/origin) has for the firms who are in the portfolio of loans of that bank.

First, we show that under periods of high trade uncertainty, banks reallocate credit from non-trade firms to global value chain (GVC) firms (that is, firms that have exported and imported to the same given country over the last year), and to a lesser extent, to importers, who are exposed to the countries exhibiting an increase in trade uncertainty. This credit reallocation results in these firms receiving new bank credits

[2]Over 94% of exports went to countries with which Chile has free trade agreements. The main export markets are China, 40%; the United States, 13.7%; the European Union, 9.8%; Japan, 8.7%; and Mercosur, 5.7%.

[3]Figure A.1, in the Appendix, exhibits the Chilean exports by sector.

with better credit conditions (mainly with longer maturities) under periods of higher trade uncertainty. In contrast, there is no significant impact in the new loans granted to exporters exposed to increasing trade uncertainty (or an improvement in their credit conditions). Intuitively, banks may perceive exporters as riskier (compared to GVCs and importers), because exporters face the risk of not being paid for the products they produce and export, with this risk increasing under periods of trade tensions. Oppositely, since GVCs export and import at the same time from a given country, their balance sheets are likely to be better hedged (since the risk they are exposed to affects simultaneously their assets and liabilities). As a result, banks may perceive GVCs as entailing lower risks, which in turn would explain why they provide new loans to them when trade uncertainty increases. Furthermore, previous studies (Antràs and Chor, 2022; Bernard et al., 2007, 2009; Kasahara and Lapham, 2013) have shown that GVCs are larger and more productive than pure exporters or pure importers. They also trade a larger share of their outputs and inputs and they are more likely to trade more intensively with developed economies, which are the most affected countries by the increase in trade uncertainty we observe during the 2016-2018 period.[4] Therefore, banks may perceive GVC firms as less risky than other trading firms, but also as more exposed to trade uncertainty shocks, which in turn offers another explanation for banks providing more credit to GVCs when trade uncertainty increases.

Second, when investigating the impact of trade tensions on firms' foreign trade operations, we find a dissimilar pattern for exports and imports. Precisely, in the case of exports, we find, consistent with the results on credit outcomes, that exports grow less under periods of higher trade uncertainty when they are mainly financed with cash-in-advance or with trade credit. In contrast, we find no significant impact on export growth during periods of increasing trade tensions when the exports are financed with bank credit. These results are consistent with the working capital channel: Trade tensions may deteriorate the financial conditions of the importers of Chilean products, thus being less willing (or unable) to pay for their imports with cash. Similarly, because of the increase in trade tensions, Chilean exporters prefer not to finance their exports with trade credit (note that with cash-in-advance, the importer finances the exporter, whereas, with trade credit, the importer receives credit from the exporter). As a result, exporters' working capital worsens, which in turn leads them to reduce their exports.

[4]As a matter of fact, GVC firms in our sample are more specialized in the countries or regions exhibiting the largest increases in trade uncertainty in the recent past, namely China, U.S., U.K, and the European Union. Indeed, these central economies represent, on average, 60,5% of the international trade of the GVCs, well above the 49,5% these countries represent in the case of pure importers, and the 39,4% they represent for pure exporters, during the period 2012-2019.

In relation to the impact of trade tensions on import growth, we show an opposite pattern, as we find that imports grow more if they are mainly financed by cash-in-advance, or by bank credit. These results are hence reflecting that to compensate for the increase in trade uncertainty in a given foreign country, Chilean firms importing from that country need to provide credit to the foreign firm by paying with cash-in-advance or by relying on bank credit. As a result, banks limit the possible spillover effects of the increasing trade tensions on the external sector and the real economy.

Finally, when examining whether some banks' business model traits influence the willingness (or ability) of banks to provide more credit under periods of higher trade uncertainty, results indicate that larger, and riskier banks, as well as banks with a larger share of liabilities in foreign currency and foreign banks with strong linkages with their headquarters, are the ones providing more credit under periods of trade tensions. One way to rationalize this finding is that these banks do not need to limit credit provision under periods of increasing trade uncertainty as they may have access to alternative sources of funding (or they may be willing to bear more risk when trade uncertainty increases).

Wrapping up, this paper documents the significant linkages between credit provision, and trade finance under periods of increasing trade uncertainty. Indeed, we show that higher trade uncertainty in the destination countries negatively affects exports, through the working capital channel. In the case of imports, they grow more with the origin-specific trade uncertainty indexes when imports are financed with cash-in-advance or bank credit. This is hence indicating that Chilean importers (partially assisted by banks) are indeed financing foreign firms exposed to the increasing trade uncertainty in their own countries.

We conclude that while the trade tensions observed during 2016-2018 have resulted in a reallocation of domestic credit, our results do not provide support for the hypothesis of increasing international fragmentation due to growing trade tensions, at least for an open emerging-market economy like Chile. Taking a longer historical perspective, Antràs (2020) arrives to a similar conclusion, when arguing that there is no conclusive evidence that the world economy is significantly less global than it was at the onset of the 2007-2009 Great Recession. Nonetheless, the arguments above do not mean that further increases in trade tensions (for example, due to the implementation of policies that stall liberalization and encourage protectionism) cannot contribute to a de-globalization trend as discussed in Antràs (2020).

This paper is linked to two strands of literature. On the one hand, there is the literature investigating the impact of financial shocks and financial frictions on foreign trade performance (Manova, 2013; Manova et al., 2015), banks' credit provision (Paravisini et al., 2017), and trade finance (Niepmann and Schmidt-Eisenlohr, 2017a,b; Garcia-Marin et al., 2019; Costello, 2020). According to this literature, the financing mode and its conditions matter the larger the time gap between the production and the sales (Schmidt-Eisenlohr, 2013; Niepmann and Schmidt-Eisenlohr, 2017b). We add to this literature by studying the impact of trade uncertainty shocks that originate in the real sector. Interestingly, we show that increasing destination/origin-specific trade uncertainty indexes affect banks' credit provision and lead to a reallocation of credit from non-trade to GVC firms and importers. Furthermore, we analyze the influence of the specialization of banks on exports or imports of a given country as in Paravisini et al. (2017) rather than on the characteristics of the country in question as in Niepmann and Schmidt-Eisenlohr (2017a). We add to this literature by investigating the linkages between credit provision, and trade finance during periods of increasing trade tensions. To the best of our knowledge, no previous study has documented the impact of trade tensions on credit provision.

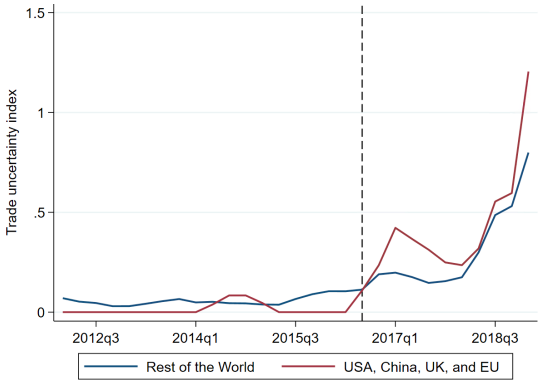
On the other hand, our paper connects with the literature on the effects of trade tensions on firms' performance. To the best of our knowledge, this is the first paper assessing the impact of trade tensions arising after the global financial crisis on the foreign trade operations (exports and imports) of firms in an open emerging-markets economy. As some references in this strand of literature, Graziano et al. (2020) study the effect of Brexit performance on UK firms. In turn, Handley and Limão (2017, 2015) investigate the impact of the trade uncertainty arising from the access of China to the WTO on US imports from China. In addition, Fajgelbaum et al. (2022) examine the trade wars between the U.S. and China in 2018, which have led to large declines in US exports and imports, with incomplete pass-through to prices. We add to this literature by showing that firms' reaction to increasing trade tensions in a given country of destination (or origin) depends on the way exports (or imports) are financed. As an illustration, we show that exports grow less under periods of trade tensions if the exports are mainly financed with trade credit or cash.

The paper is structured as follows. Section 2 documents some stylized facts on trade tensions and foreign trade performance. In turn, Section three presents the data, whereas Section four introduces the methodology we rely on in this paper. Section five exhibits the model estimates, first, it focuses on the impact of trade tensions on credit outcomes; next, it examines the role of banks' business traits to provide credit under periods of

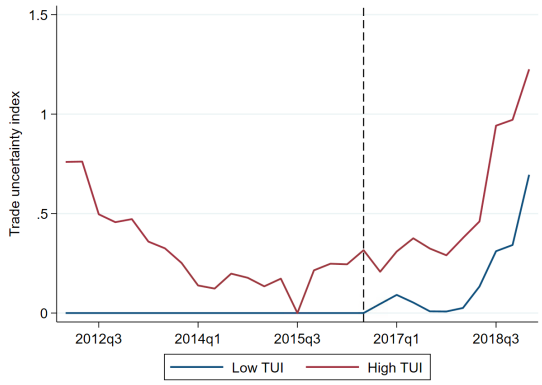
trade uncertainty; last, it investigates the influence of trade tensions on foreign trade performance, including the way foreign trade is financed. Finally, Section six concludes with a discussion of the main findings of the paper. Additional analyses are relegated to the Appendix.

2 Stylized facts on trade tensions and foreign trade

Trade tensions show an increasing trend starting in 2016. Indeed, Figure 1 exhibits a steep increase in trade uncertainty, which is mainly explained by the growing trend tensions between the United States, and China, and the United Kingdom, with the European Union, since 2016.[5] Importantly, these are countries or regions which are central to world trade. Although having periods of elevated trade uncertainty is not a new phenomenon (e.g. Argentina in 2011 and 2015; and Turkey, from the end of 2015 to 2016; for references, please refer to Figure A.2, in the Appendix), what is new is that these central regions (from the point of view of world trade) have become, on average, more uncertain than the rest of the world. This first stylized fact is one of the motivations of the present work.



(a) USA, China, UK and EU versus Rest of the World



(b) High vs Low TUI economies

Figure 1: Evolution of the mean trade uncertainty index for different groups of countries. The index is re-scaled to the logarithm of the index plus one. High (low) TUI refers to countries whose trade uncertainty index is above (below) the 90th percentile of the distribution of trade uncertainty indexes for each quarter. The indexes for high and low TUI are scaled such that the minimum value equals zero.

[5]The focus on international trade policies started with the 2016 U.S. election and the trade policy proposed by Donald Trump, culminating in trade tensions between U.S. and China. Simultaneously, Brexit brought this issue to the European Union.

In this paper, we rely on the country-specific trade uncertainty indexes, hereafter TUI, calculated by Ahir et al. (2022) to assess the evolution of trade tensions across countries. These indexes count the number of times the word uncertainty (and its variants) is mentioned in proximity to terms related to trade in the EIU country report.[6] Therefore, the indexes capture not only actual changes in tariffs and non-tariff measures, but also the uncertainty arising from threats in tariff and non-tariff changes. While one could argue that actual changes in tariffs are the most important determinants of behavior, a growing literature highlights the importance of policy uncertainty as a driver of economic outcomes (Attig et al., 2021; Xu, 2020; Bordo et al., 2016; Gulen and Ion, 2016; Julio and Yook, 2012). Our work is hence motivated by the literature above.

Inspecting the relation between trade uncertainty and Chilean exports, Figure 2 shows that before the third quarter of 2016, the average growth rate of exports to economies with high TUI was similar to those with low TUI. Afterward, the trend diverges. Despite increasing growth rates of exports to both groups afterward, the export growth to high TUI economies has been lower than those to low TUI economies. This suggests that elevated trade uncertainty may dampen export growth

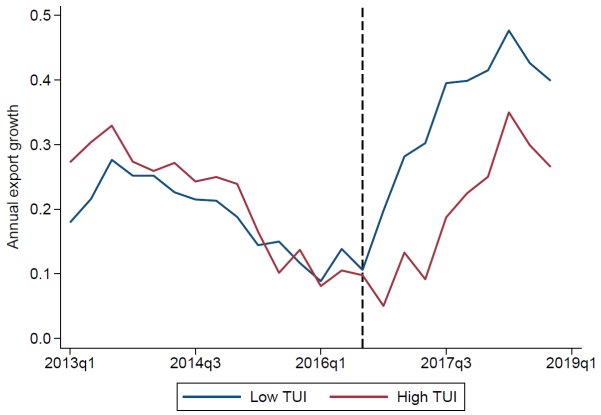


Figure 2: Average export growth of Chilean firms to high and low trade uncertainty economies. Average export growth rates are winsorized at 1% and weighted by the export value.

On the side of imports, Figure 3 depicts, in contrast, that the difference in average growth rates between high and low TUI economies is always negative, although it narrows down after the third quarter of 2016. This is hence indicating that import growth from high TUI countries may not diminish due to trade tensions.

[6]The most common indexes used in the literature rely on text-searching related words in newspapers and other mass media and firm statement reports. These indexes are usually regarded as good indicators of trade policy uncertainty, but they have the shortcoming of being tailored to a single country. Hence, cross-country comparisons are unfeasible.

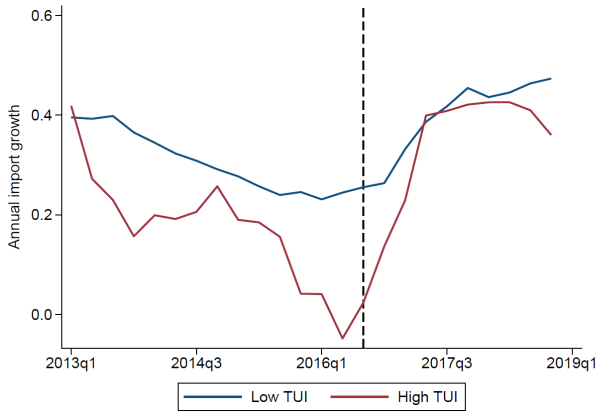


Figure 3: Average import growth of Chilean firms from high and low trade uncertainty economies. Average export growth rates are winsorized at 1% and weighted by the export value.

Summing up, the evidence above suggests that the impact of trade uncertainty on exporters and importers may be different CITATION?. Therefore, examining firms' exposure to destination/origin countries with high or low trade uncertainty by considering their country-specific foreign trade operations is vital to understanding the dynamics of firms' foreign trade activities, their credit behavior, as well as the spillover effects that trade tensions may generate to the rest of the economy.

3 Data

In this section, we explain the data sources used in this paper.

3.1 Loan registry

Our first dataset is an administrative and confidential dataset that registers the universe of loans granted to non-financial corporations over the period January 2012- March 2019 (source: Financial Markets Commission). This database includes the firm and bank identifiers, the date of origination, the loan amount (in Chilean pesos), the currency, the annualized interest rate charged (on a 360-day basis), the type of interest rate (fixed or variable, and if the latter, the interest rate basis and the frequency of the adjustments), the term of the contract (in months), the type of loan, and whether it is related to a development (collateralized) instrument.

The loan amounts in our dataset correspond to the sum of the credit amounts granted by bank b to firm f in quarter t, hereafter ℓ_{fbt}. The firm-bank-quarter interest rates r_{fbt} and terms τ_{fbt} are averages, weighted by the loan amounts.

For the analysis, we distinguish among the following loan categories: (i) total loans, (ii) commercial loans excluding development loans (including installment loans, factoring, letters of credit, mutual mortgages for general purposes, repurchase operations, and other credit) (iii) foreign-trade loans, and (iv) development loans, which are collateralized loans by a (public) development agency. The weighted-average interest rates and contractual terms are calculated for each loan category.

Finally, the sector classification of the firms in our administrative dataset is based on the National Accounts' Classification of Activities, which comprises 160 categories. We exclude firms that operate in the financial and housing sectors and non-private firms from the analysis.

3.2 Banks' balance sheet data

As banks' balance-sheet characteristics, we follow the banking literature (Dell'Ariccia et al., 2017; Morais et al., 2019; Jiménez et al., 2012) and consider information on assets, liquidity, balance sheet quality (as measured by the share of non-performing loans or NPL), and capitalization. These bank balance sheet characteristics are known to influence credit supply and are commonly used in the literature. In addition, to examine the influence of certain banks' business model traits on credit provision under periods of trade uncertainty, we also include the share of liabilities in foreign currency, whether the bank is foreign-owned, and the intensity of linkages between a resident bank in Chile with its headquarters located overseas (proxied by the gross cross-border positions with the headquarter in the country c).

3.3 Customs data

Our third data source is the Chilean National Customs Data, an administrative and confidential database that provides transaction-level data for the universe of Chilean exports and imports. The data is available for the 140 destinations of Chilean exports and the 138 countries from which Chilean firms import goods and services over our sample period. It is released monthly.

For each export or import transaction, the dataset details the identity of the exporter/importer, the country of origin/destination, the product description including the 8-digit Harmonized System code to which the product belongs, the transaction date, the freight-on-board value and volume of the merchandise, and the financing mode of the export transaction. The data allows us to identify if each transaction was paid in advance (cash in advance or CIA), post-shipment (trade credit, hereafter TC), or with financial institutions (such as letters of credit or two-part contracts, hereafter BC).

3.4 Trade uncertainty indexes

Trade uncertainty indexes come from Ahir et al. (2022). They are constructed by counting the number of times uncertainty (and its variants) is mentioned in proximity to a word related to trade in the Economist Intelligence Unit (EIU) country reports. The indexes are equally weighted averages, they are scaled by the total number of words in the EIU country reports and multiplied by 100,000. In this study, we focus on trade uncertainty as encompassing both, that is, tensions generated by changes in trade tariffs and non-tariff measures, as well as those driven by the uncertainty regarding the future evolution of trade linkages among countries.[7]

Tables A.2 and A.1, in the Appendix, exhibit the descriptive statistics of the data we consider in this paper.

4 Methodology

4.1 The effect of trade uncertainty on credit provision

To test whether trade uncertainty affects credit supply and demand decisions, we estimate the following model specifications with stacked observations (to be detailed):

$$\ell_{fbt} = \alpha_{st} + \alpha_{bt} + \alpha_{fbc} + \beta U_{ct} + \gamma S^c_{ft} + \delta S^c_{ft} \times U_{ct} + \varepsilon_{fbct} \quad (1)$$

$$r_{fbt} = \alpha_{st} + \alpha_{bt} + \alpha_{fbc} + \beta U_{ct} + \gamma S^c_{ft} + \delta S^c_{ft} \times U_{ct} + \varepsilon_{fbct} \quad (2)$$

$$\tau_{fbt} = \alpha_{st} + \alpha_{bt} + \alpha_{fbc} + \beta U_{ct} + \gamma S^c_{ft} + \delta S^c_{ft} \times U_{ct} + \varepsilon_{fbct} \quad (3)$$

[7] Another advantage of the trade uncertainty indexes by Ahir et al. (2022) is that they cover 143 countries. In contrast, trade-policy uncertainty indexes usually cover one country at a time.

The model specifications in equations (1) to (3) consider three alternative dependent variables. First, ℓ_{bft} is the logged amount of new credit granted by bank b to firm f in quarter t. Second, r_{fbt} is the interest rate of the new loan granted by bank b to the firm f in quarter t. Finally, τ_{fbt} denotes the maturity of the new loan granted by bank b to firm f in quarter t, in logarithm.

The model specifications in (1) to (3) isolate the bank-firm pair component of lending by using saturated regressions (Paravisini et al., 2017). Precisely, we account for bank-specific credit supply shocks (common in expectation across all firms) and firm-specific credit demand shocks (common in expectation across all banks) by including bank-time and sector-time dummies, α_{bt}, and α_{st}, respectively. The reason for including sector-time fixed effects instead of firm-time dummies is that we do not observe new loans granted continuously to the same firm throughout the sample period. Therefore, using firm-time fixed effects would have severely reduced the number of observations. To circumvent this problem, we follow Degryse et al. (2019) and include sector-time fixed effects.[8] In turn, the set of time-invariant firm-bank-country fixed effects in equations (1) to (3), α_{fbc}, accounts for all unobserved heterogeneity in the firm-bank-country (or firm-bank-region) lending relationship, such as the distance between bank headquarters and the destination country. Importantly, Paravisini et al. (2017) show that by including bank-time and sector-time dummies simultaneously in the model specifications (1) to (3), the estimated loan amounts (ℓ_{fbt}) and the credit conditions (r_{fbt} and τ_{fbt}, respectively) correspond to bank-firm equilibrium outcomes. We follow this interpretation in the analysis forthcoming unless we explicitly state it otherwise.

Furthermore, the model specifications in equations (1) to (3) account for multiple country trade partners for a given firm f. However, we only observe the total loans of bank b to firm f without distinguishing the loan amount associated with each trading partner of firm f. As a result, we need to stack the observations, repeating the left-hand side values as many times as the number of countries included in the sample. However, to avoid an excessive number of stacked observations, we regroup the 140 trading partners with which Chilean firms trade into five groups: the U.S., China, the European Union (including 28 countries), the United Kingdom, and the rest of the world. Therefore, with this procedure, we construct a firm-bank-country (or region)-time panel to estimate our regressions. We cluster the standard errors at the firm-bank level, as is customary in this literature.

[8]The approach of using granular sector-time fixed effect also allows for a larger sample of firms than would be the case if we only used firms with multiple bank relationships in our sample.

Our variable of interest, U_{ct} in equations (1) to (3), is the average trade uncertainty measure for country (or region, when corresponding) c at quarter t. The trade uncertainty measure is scaled by taking the logarithm of one plus the value of the index; this is to preserve the observations with a value of zero. Also, as suggested by Ahir et al. (2022), we consider the three-quarter moving averages of the trade uncertainty index. In turn, S_{ft}^{c} denotes a vector of firm-specific statuses, which allows us to distinguish among the following seven categories of firms: i) non-trade firms; ii) exporters only, who have not exported to country (or region) c over the last four quarters; iii) exporters only, who have exported to country (or region) c; iv) importers only, who have not imported from the country (or region) c over the last four quarters; v) importers only, who have imported from the country (or region) c over the last four quarters; vi) global value chains or GVCs, that is, firms that have both exported and imported over the last four quarters, but which have not traded with the country (or region) c (over the last four quarters); vii) GVCs having traded with the country (or region) c over the last four quarters.

Notably, the interaction term between firms' statuses and the trade uncertainty index in equations (1) to (3) allows us to answer the following two key questions: i) whether trade uncertainty has affected differently firms trading internationally *vis-à-vis* those that only trade locally; ii) whether credit provision shifts from non-exposed firms to firms trading with foreign countries experiencing high trade uncertainty (or reversely) during periods of trade uncertainty.

To account for the relative importance for a firm of a given country (or region) of destination/origination at a certain period, for estimation, we perform a weighted least square (WLS) procedure, with the weights ω_{fct} being calculated as follows:

$$\omega_{fct} = \frac{T_{fct}}{\sum_{c} T_{fct}}, \text{ such that } \sum_{c} \omega_{fct} = 1,$$

where T represents the total value of the exports, the imports, or the sum of both exports and imports, of firm f in quarter t. To account for the possible seasonality of trade, we compute the accumulated trade value during the last four quarters. In the case of firms that only trade locally, we assign a weight of 0.2 to each of the five destinations/origins at each firm-bank-country-quarter observation.

4.2 Banks' heterogeneity in the credit supply

To study whether certain banks' business model traits influence the amount of credit provided and the credit conditions under periods of trade uncertainty, we modify the model specifications in equations (1) to (3) on two grounds. First, we include a matrix of time-varying (one-quarter-lagged) bank controls $\mathbf{X}_{b,t-1}$. Specifically, we consider the NPL ratio, the capital ratio, assets, and liquidity as bank controls. This approach, of course, requires not including the bank-time dummies α_{bt}. This is because they would otherwise absorb all the bank-time varying effects.

Second, to examine the influence of specific business model traits on the funding conditions granted by banks under periods of trade uncertainty, we interact, one at the time, a dummy variable that takes the value of one if the given (one-quarter-lagged) business model trait is above its median (and zero if it is below), with the trade uncertainty indexes of the countries (regions) with which a given firm trades. The traits we consider are the balance sheet quality, the share of liabilities in foreign currency, whether the bank is foreign, the intensity of linkages between the Chilean bank with its headquarters, and finally, the banks' specialization measure as defined in Paravisini et al. (2017). In particular, the specialization measure accounts for the possibility that banks specialize in specific foreign markets by lending to firms mainly trading with these countries. To construct our specialization measure, instead of considering exports as in Paravisini et al. (2017), we rely on the sum of exports and imports to a given foreign country. Note that in the case of the specialization measure, we do not build the indicator variable because the specialization variable is already a dummy regressor. The model specifications that account for the influence of banks' heterogeneous business model traits on credit outcomes under periods of trade uncertainty become,

$$\ell_{fbt} = \alpha_{st} + \alpha_{fbc} + \beta U_{ct} + \gamma \mathbf{X}_{b,t-1} + \psi Z_{b,t-1} + \delta Z_{b,t-1} \times U_{ct} + \varepsilon_{fbct} \tag{4}$$

$$r_{fbt} = \alpha_{st} + \alpha_{fbc} + \beta U_{ct} + \gamma \mathbf{X}_{b,t-1} + \psi Z_{b,t-1} + \delta Z_{b,t-1} \times U_{ct} + \varepsilon_{fbct} \tag{5}$$

$$\tau_{fbt} = \alpha_{st} + \alpha_{fbc} + \beta U_{ct} + \gamma \mathbf{X}_{b,t-1} + \psi Z_{b,t-1} + \delta Z_{b,t-1} \times U_{ct} + \varepsilon_{fbct} \tag{6}$$

where $Z_{b,t-1}$ denotes the dummy variable for the business model trait under consideration (with the exception of the specialization measure of Paravisini et al., 2017).

4.3 Inspecting the real effects of trade tensions

We now focus on firms trading with foreign markets and investigate whether trade uncertainty has real effects on foreign trade. Precisely, we examine the following two questions: i) whether and to what extent trade uncertainty impacts foreign trade operations; ii) does the reaction of trading firms to periods of high uncertainty depend on the way foreign trade is financed?

To answer the research questions above, first, we need to examine whether trade uncertainty has affected foreign trade operations. With this aim, we propose the following baseline model specification:

$$\Delta T_{fpct} = \alpha_{fpc} + \alpha_{fpt} + \alpha_{pcy} + \beta U_{ct} + \varepsilon_{fpct}. \tag{7}$$

The dependent variable in equation (7) corresponds to the year on year quarterly changes of the logged trade volumes, with the trade volumes being the exports, the imports, or the sum of exports and imports of product p traded by firm f to the country c in quarter t. Therefore, the model specification in equation (7) involves a firm-product-country-quarter panel. This is thanks to the richness and granularity of our customs data. To account for firms being specialized in some products and countries, we include firm-product-country fixed effects α_{fpc}. In turn, to capture firm-product-specific demand shocks, we add firm-product-quarter dummies, hereafter α_{fpt}. Finally, to account for unobserved heterogeneity in the product-country foreign trade transactions, which may evolve through time, we include product-country-year dummies, which we denote as α_{pcy}.

Standard errors are clustered at the firm-quarter level to account for the fact that the firm decides every period whether to trade internationally a product p with country c. To account for the importance of a given destination/origin for a firm at a given period, we estimate a WLS regression using weights ω^{θ}_{fcq} defined as follows:

$$\omega_{fct} = \frac{\sum\limits_{p \in P} \theta_{fpct}}{\sum\limits_{c \in C,\, p \in P} \theta_{fpct}}, \text{ such that } \sum_{c \in C,\, p \in P} \omega_{fpct} = 1$$

Second, we investigate whether the reaction of trade firms to trade uncertainty depends on the way trade operations are mainly financed. To do this, we augment the model specification in equation (7) as follows:

$$\Delta T_{fpct} = \alpha_{fpc} + \alpha_{fpt} + \alpha_{pcy} + \beta U_{ct} + \gamma F_{fpct} + \gamma F_{fpct} \times U_{ct} + \varepsilon_{fpct}, \tag{8}$$

where F_{fpct} is a categorical variable if the operation is financed mainly with payment-in-advance, trade credit, or bank credit.

5 Results

5.1 On the credit outcomes

To investigate the impact of trade uncertainty on credit provision, we examine the following three aspects: i) does trade uncertainty affect domestic credit provision?; ii) do trade tensions impact credit provision differently for non-trade firms relative to firms trading internationally?; ii) does trade uncertainty have a differential impact on the credit outcomes of exporters, importers, and GVCs having traded or not with a given foreign country (or region) c experiencing increasing trade tensions?. We can disentangle these heterogeneous impacts thanks to the interaction term between the country-specific trade uncertainty indexes and the foreign-trade firms' statuses.

To begin with, Table 1 exhibits the estimates of the model specifications in equations (1) to (3), but excluding the variable for the firms' statuses and its interaction. Next, Table 2 exhibits the estimates for the complete model specifications in equations in (1) to (3). The first and second columns in each table report the estimates for loan amounts distinguishing between total loan amounts and loan amounts in local currency or LC, respectively. In turn, columns 3 and 4 in each table examine the impact of trade uncertainty on interest rates (again distinguishing between total loans and loans in LC, respectively), whereas the last two columns have as dependent variable loan maturities. The top panel in each table reports the estimated coefficients, while the bottom panel exhibits the marginal effects of trade uncertainty for the different firm statuses.

In particular, the variable foreign-trade firm's status allows us to classify firms into seven categories, with their labels being as follows: 0 = non-trade firm; 1 = exporter not having exported to country (or region) c over the last year; 2 = exporter having exported to the country c over the last year; 3 = importer not having imported from country (or region) c (over the last year); 4 = importer having imported from country (or region) c; 5 = GVC not trading with country (or region) c over the last year; and 6 = GVC trading with country (or region) c.

To begin with, Table 1 shows that the overall impact of trade tensions on credit outcomes is non-significant at the 5% level, regardless of the dependent variable we consider. However, when distinguishing by foreign-trade firms' statuses, Table 2 shows that increases in trade uncertainty do result in significant changes in loan amounts, interest

Table 1: Overall impact of country-specific trade uncertainty indexes on credit outcomes: loan amounts, interest rates, and maturities

	(1) Amount All	(2) Amount LC	(3) Int. Rate All	(4) Int. Rate LC	(5) Maturity All	(6) Maturity LC
TUI_{ct}	-0.0012*	-0.0002	-0.0036	0.0010	-0.0005	0.0001
	(0.0007)	(0.0007)	(0.0023)	(0.0023)	(0.0007)	(0.0007)
Firm-bank-country FE	Yes	Yes	Yes	Yes	Yes	Yes
Sector-quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
Bank-quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	2,562,792	1,996,289	2,562,792	1,996,289	2,562,792	1,996,289
R^2	0.8157	0.8230	0.8192	0.8079	0.6086	0.6466
Adjusted-R^2	0.7725	0.7758	0.7768	0.7567	0.5169	0.5523

This table exhibits the estimates of equations (1), (2), and (3) without distinguishing among firms' foreign trade statuses, hence $\delta = \gamma = 0$. Weights correspond to the share of the firm's trade with country c on its total trade. For firms without international trade, a weight of 0.2 is assigned to each observation. Standard errors are in parentheses. Errors are clustered at the firm-bank level. LC stands for local currency, and Int. Rate for interest rates. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$

rates, and maturities. More specifically, when examining the marginal effects of the interaction term between the foreign-trade firms' statuses and the trade uncertainty index, first, we find that, when trade uncertainty augments, loan amounts decrease for non-trade firms (our base category). The same occurs for the maturities and the interest rates of the new loans that non-trade firms receive. These findings are hence indicating that there is no worsening of credit conditions to non-trade firms *per se*, but rather a reduction in the loan maturities of their new loans.

Second, focusing now on trade firms, Table 2 shows heterogeneous patterns for the new loan amounts and the credit conditions depending on the foreign-trade firms' statuses. In the case of exporters, we find no significant impact of trade uncertainty on the new loan amounts to the exporters exposed to destination countries with increasing trade tensions. It thus indicates that under periods of higher trade uncertainty, banks do not assist exporters exposed to the increasing trade tensions. As a result, exporters may need to rely more upon working capital to finance the production of goods and services to export. Alternatively, they may need to reduce their exports. We will re-examine these alternative effects in Section 5.3 when studying the impact of trade tensions on export growth.

In contrast, the marginal impact of the destination-specific trade uncertainty index on the interest rates charged to firms exporting to a country (or region) c where trade uncertainty is increasing is larger compared to the corresponding marginal impact for the interest rates of the new loans given to exporters not trading with the country

Table 2: Impact of country-specific trade uncertainty indexes on credit outcomes distinguishing among firms' foreign trade statuses

	(1) Amount All	(2) Amount LC	(3) Int. Rate All	(4) Int. Rate LC	(5) Maturity All	(6) Maturity LC
	Estimated coefficients					
TUI_{ct}	-0.006***	-0.003***	-0.039***	0.005	-0.005***	-0.004***
	(0.001)	(0.001)	(0.004)	(0.004)	(0.001)	(0.001)
$TUI_{ct}\times$ Status$_{fct}=1$	-0.018*	-0.016	0.092**	0.061	0.004	(0.008
	(0.011)	(0.012)	(0.040)	(0.044)	(0.010)	(0.011)
$TUI_{ct}\times$ Status$_{fct}=2$	0.019**	0.010	0.157***	0.031	0.011	0.031*
	(0.008)	(0.016)	(0.037)	(0.087)	(0.009)	(0.019)
$TUI_{ct}\times$ Status$_{fct}=3$	0.003	0.005	0.010	0.010	0.007**	(0.008**
	(0.003)	(0.003)	(0.012)	(0.012)	(0.003)	(0.003)
$TUI_{ct}\times$ Status$_{fct}=4$	0.012***	0.013***	0.047***	-0.017	0.010***	(0.008**
	(0.003)	(0.003)	(0.010)	(0.012)	(0.003)	(0.003)
$TUI_{ct}\times$ Status$_{fct}=5$	0.002	0.004	-0.042	-0.041	0.015**	(0.015*
	(0.008)	(0.009)	(0.028)	(0.033)	(0.007)	(0.008)
$TUI_{ct}\times$ Status$_{fct}=6$	0.012***	0.007*	0.135***	-0.025**	0.010***	(0.012***
	(0.003)	(0.003)	(0.009)	(0.011)	(0.002)	(0.003)
	Marginal effect of TUI_{ct} at:					
Status$_{fct}=0$	-0.006***	-0.003***	-0.039***	0.005	-0.005***	-0.004***
	(0.001)	(0.001)	(0.004)	(0.004)	(0.001)	(0.001)
Status$_{fct}=1$	-0.024**	-0.019	0.053	0.065	-0.002	0.005
	(0.011)	(0.012)	(0.039)	(0.043)	(0.010)	(0.011)
Status$_{fct}=2$	0.013	0.007	0.118***	0.036	0.006	0.028
	(0.008)	(0.016)	(0.037)	(0.087)	(0.009)	(0.019)
Status$_{fct}=3$	-0.003	0.002	-0.029***	0.015	0.002	0.004
	(0.003)	(0.003)	(0.010)	(0.010)	(0.003)	(0.003)
Status$_{fct}=4$	0.006***	0.010***	0.008	-0.012	0.005**	0.005
	(0.002)	(0.003)	(0.009)	(0.011)	(0.002)	(0.003)
Status$_{fct}=5$	-0.004	0.001	-0.081***	-0.036	0.010	0.012
	(0.008)	(0.009)	(0.027)	(0.032)	(0.007)	(0.008)
Status$_{fct}=6$	0.007***	0.004	0.096***	-0.020**	0.005**	0.009***
	(0.002)	(0.003)	(0.007)	(0.010)	(0.002)	(0.003)
Firm-Bank-Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Sector-Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
Bank-Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	2,562,792	1,996,289	2,562,792	1,996,289	2,562,792	1,996,289
R^2	0.816	0.823	0.819	0.808	0.609	0.647
Adjusted-R^2	0.773	0.776	0.777	0.757	0.517	0.552

This table exhibits the estimates of equations (1), (2), and (3), controlling for the foreign-trade status of the firm. Alternative dependent variables are the logarithm of the loan amounts, annualized interest rates, and the logarithm of the maturity of the new loans granted. The foreign-trade status of the firms is a categorical variable of value 0 if the firm only trades domestically; 1 if the firm only exports but has not exported to the country c during the last four quarters and 2 if it has; 3 and 4 are analogous to 1 and 2, but for firms that only import; 5 and 6 are also analogous to 1 and 2 but for GVC firms. Marginal effects are calculated as the sum of the coefficients on TUI_{ct} and its interaction with the status variable. Weights correspond to the share of the firm's trade with country c on its total trade. For firms without international trade, a weight of 0.2 is assigned to each observation. Standard errors are in parentheses. Errors are clustered at the firm-bank level. LC stands for local currency and Int. Rate for interest rates
$^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$

(or region) c (where the TUI increases).[9] We interpret this result as indicating that banks perceive firms exporting to countries with elevated trade uncertainty as riskier. This is presumably because exporters face the risk of not being paid for the products they produce and export, with this risk increasing under periods of trade tensions. In the case of the firms not exporting to country (or region) c exhibiting higher TUI, the negative (and statistically significant) estimated coefficient in Table 2 for loan amounts, which amounts to -0.024, is indicating a reduction in the credit provided to these firms (as it is the case with non-trade firms).

Focusing now on importers, Table 2 shows that the new loan amounts granted to firms importing from countries with higher trade uncertainty do increase, thus suggesting that banks help importers cope with the exogenous variations in the origin-specific trade uncertainty. In addition, we find that the credit conditions for these importing firms improve when they suffer from higher trade tensions. This is reflected in the maturity of the new loans to these firms increasing with trade uncertainty, without a significant impact on interest rates. This is interesting as it indicates that in the case of importers, banks may not amplify the initial trade tension shock, but oppositely, moderate its impact on credit outcomes.

Finally, when examining the marginal impact on the credit conditions of the new loans granted to GVC firms following an increase in trade uncertainty, we find a similar pattern to the one described for firms importing from countries experiencing higher trade uncertainty. Precisely, Table 2 shows that not only the amounts of the new loans granted but also the maturity and the interest rates of these new loans increase when the trade uncertainty of the country with which these GVCs are trading augments. To put these results in economic terms, in the case of a GVC, an increase of 114% in the trade uncertainty index of a country with which the GVC firm is trading (114,4% is the increase in the trade uncertainty index of the U.K. registered between the fourth quarter of 2017 and the first quarter of 2018), would imply 0.8% larger amounts of new credit to them, at 11% higher interest rates, and with 0.6% longer maturity (in days). For these computations, we consider the estimates when including all loans.[10,11]

[9] Although we do not observe the loan amounts associated with each foreign trading partner of a firm f, the fact of stacking observations and weighting them by the importance of a given country (or region) of destination/origin for firms, allows us to assess how trade uncertainty affects the credit provision to firms trading and/or not trading to a country (or region) where the TUI has increased.

[10] As a comparison, Bassett et al. (2014) find that an increase of 100 basis points in the credit spread charged by a bank is associated with a decrease in unsecured commercial and investment loans between 0.5% and 1.7%

[11] Considering the averages for foreign-trade firms in Table A.2, in economic terms, the increase in the TUI amounts to 8.8 thousand U.S. dollars more, 7.6 basis points higher interest rates, and 4.6 fewer days of maturity.

As a robustness check, Tables A.3, A.4, and A.5, in the Appendix, present the estimates for loan amounts, interest rates, and maturities (equations (1) to (3)), respectively, distinguishing by type of bank product (commercial, foreign-trade, and development loans). Interestingly, results show that credit to trade firms under periods of higher trade tensions has been mainly provided through commercial loans. This is also the debt type registering the most significant changes in interest rates and loan maturities. Similarly, the negative estimated impact of trade uncertainty on credit to non-trade firms occurs mainly through commercial loans, which are the most affected debt category.

Wrapping up, increasing trade uncertainty has led to a reallocation of credit from non-trade to GVC firms and importers. In contrast, credit to exporters exposed to the higher trade tensions has not expanded. Our results are hence consistent with a risk-mitigating channel for banks. Intuitively, banks may perceive exporters as riskier (compared to GVCs and importers), because exporters face the risk of not being paid for the products they produce and export, with this risk increasing under periods of increasing trade uncertainty. Oppositely, GVCs export and import at the same time from a given country; hence, their balance sheets are likely to be better hedged (since the risk they are exposed to affects simultaneously their assets and liabilities), thus being perceived as entailing lower risks. The elements above would explain why banks provide credit facilities to GVC firms when trade uncertainty increases. In Section 5.3, we link these results with the impact of trade tensions on trade growth and the way Chilean firms finance their foreign trade operations. This will allow us to investigate the linkages between trade uncertainty, foreign trade growth, and trade finance.

5.2 The influence of business model traits on the credit supply

We now investigate whether some business model traits make banks more or less likely to provide more credit to firms under periods of higher trade uncertainty. For the analysis, we estimate the model specification in equations (4), (5), and (6). To capture banks' business model traits, as detailed in section 4.2, we interact, one at a time, a dummy variable that takes the value of one if the given business model trait is above its median (and zero if it is below), with the trade uncertainty indexes of the countries (regions) with which a given firm trades.

The traits we consider are the balance sheet quality, the share of liabilities in foreign currency, whether the bank is foreign, the intensity of linkages between the Chilean bank and its headquarters, and the banks' specialization measure as defined in Paravisini et al. (2017). Note that in the case of banks classified in terms of their NPLs, we construct

a categorical variable that takes three possible values: low risk, high risk, and *Banco Estado*, which is the largest public bank in Chile. The reason for this different treatment for *Banco Estado* is that this bank has a social role in providing credit to debtors that may not be eligible for credit in other financial institutions. As a result, the share of NPLs of this public bank is considerably larger compared to the other banks in the system, which in turn justifies having it as a separate category. Table 3 considers loan amounts as the dependent variable, whereas Tables 4, and 5 have interest rates and maturities, respectively, as regressors. The column heads in each table indicate the business model trait which is being analyzed in the corresponding estimated results.

To begin with, Table 3 shows that larger and riskier banks, excluding *Banco Estado*, as well as banks with a larger share of liabilities in foreign currency, are the ones expanding credit more intensively when trade uncertainty augments. Oppositely, we find that banks with weak linkages with their headquarters (which occurs when the cross-border positions between the given bank and its headquarters in the country (or region) c are below the median cross-border positions) and domestic banks decrease their credit provision when trade uncertainty augments, compared to banks with strong linkages to their headquarters and foreign banks.

One way to rationalize the previous findings is that riskier banks, larger banks, and banks with more liabilities in foreign currency have unique features that allow them to provide more credit under periods of trade uncertainty. In the case of riskier banks, this may be because these banks are more used to taking risks, whereas, in the case of larger banks and banks with more liabilities in foreign currency, they may have a better capacity to diversify risks and obtain alternative funding sources, thus being able not to contract credit when trade uncertainty increases. A similar (but reverse) reasoning may explain why banks with weak linkages with their headquarters and domestic banks appear to tighten credit when the country-specific trade uncertainty index increases. This is because they may not have access to alternative funding sources to avoid contracting credit when trade uncertainty rises. Concerning the estimates for the specialization measure, we find that the interaction term between the country-specific trade uncertainty indexes and the specialization measure is only significant at a 10% level of significance, thus suggesting that banks' specialization does not strongly influence loan amounts.

Focusing now on the model estimates when interest rates and loan maturities are the dependent variables (Tables 4 and 5, respectively), we find that riskier and larger banks not only provide more credit but also offer more advantageous credit conditions under periods of trade uncertainty. This is because they appear to extend new loans with longer maturities and lower interest rates (the opposite is true for less risky and smaller

banks). Furthermore, when trade uncertainty augments, banks with a larger share of liabilities in foreign currency, domestic banks, and banks specializing in foreign trade à la Paravisini et al. (2017) appear to extend new credits with longer maturities but with higher interest rates, thus reflecting a term premium (the opposite is true for banks with a smaller share of liabilities in foreign currency and foreign banks).

Table 3: Investigating whether some banks' business model traits moderate the impact of increases in country-specific trade uncertainty indexes on loan amounts

	(1) Share of liabs. in foreign currency	(2) Foreign trade special-ization	(3) Gross cross-border positions with HQ	(4) Foreign bank	(5) NPL ratio	(6) Bank size
	Estimated coefficients					
$\text{BankChar}_{bt} = 1$	-0.035***	0.022***	0.011**		0.055***	0.023***
	(0.006)	(0.004)	(0.005)		(0.009)	(0.008)
TUI_{ct}	-0.003***	-0.001	-0.009***	-0.002*	-0.007***	-0.015***
	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)
$TUI_{ct} \times \text{BankChar}_{bt} = 1$	0.009***	-0.006***	0.008***	0.002	0.011***	0.019***
	(0.002)	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)
$TUI_{ct} \times \text{BankChar}_{bt} = 2$					-0.000	
					(0.003)	
	Marginal effect of TUI_{ct} at:					
$\text{BankChar}_{bt} = 0$	-0.003***	-0.001	-0.009***	-0.002*	-0.007***	-0.015***
	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)
$\text{BankChar}_{bt} = 1$	0.005***	-0.007***	-0.001	-0.000	0.004***	0.004***
	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
$\text{BankChar}_{bt} = 2$					-0.007***	
					(0.002)	
Firm-Bank-Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Sector-Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
Bank-level controls	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	2,557,746	2,557,746	2,557,746	2,557,746	2,557,746	2,557,746
R^2	0.815	0.815	0.815	0.815	0.815	0.815
Adjusted-R^2	0.771	0.771	0.771	0.771	0.771	0.771

This table exhibits the estimates of equation (4). The dependent variable is the logarithm of the total amounts of new loans granted to firm f at bank b in quarter t. BankChar_{bt} is a binary value equal to 1 if the level of the bank characteristic is above the median, and 0 otherwise. In column 4, BankChar_{bt} is equal to 1 if a bank is foreign. In column 5, we include a value equal to 2 for *BancoEstado*. Marginal effects of TUI_{ct} correspond to the sum of the coefficients on TUI_{ct} and its interaction with BankChar_{bt}. Weights correspond to the share of the firm's trade with country c on its total trade. For firms without international trade, a weight of 0.2 is assigned to each observation. Standard errors are in parentheses. Errors are clustered at the firm-bank level. Liabs. stand for liabilities, and HQ for headquarters. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table 4: Investigating whether some banks' business model traits moderate the impact of increases in country-specific trade uncertainty indexes on new loan interest rates

	(1)	(2)	(3)	(4)	(5)	(6)
	Share of liabs. in foreign currency	Foreign trade special-ization	Gross cross-border positions with HQ	Foreign bank	NPL ratio	Bank size
	Estimated coefficients					
$\text{BankChar}_{bt} = 1$	0.253***	-0.066***	-0.205***		0.043	0.453***
	(0.020)	(0.014)	(0.016)		(0.038)	(0.027)
TUI_{ct}	-0.009***	-0.006**	0.073***	0.079***	0.074***	0.080***
	(0.003)	(0.002)	(0.005)	(0.004)	(0.005)	(0.006)
$TUI_{ct} \times \text{BankChar}_{bt} = 1$	0.025***	0.109***	-0.073***	-0.196***	-0.144***	-0.118***
	(0.008)	(0.007)	(0.005)	(0.007)	(0.007)	(0.007)
$TUI_{ct} \times \text{BankChar}_{bt} = 2$					0.006	
					(0.009)	
	Marginal effects of TUI_{ct} at:					
$\text{BankChar}_{bt} = 0$	-0.009***	-0.006**	0.073***	0.079***	0.074***	0.080***
	(0.003)	(0.002)	(0.005)	(0.004)	(0.005)	(0.006)
$\text{BankChar}_{bt} = 1$	0.016**	0.103***	-0.000	-0.116***	-0.070***	-0.038***
	(0.006)	(0.007)	(0.002)	(0.005)	(0.004)	(0.003)
$\text{BankChar}_{bt} = 2$					0.080***	
					(0.007)	
Firm-Bank-Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Sector-Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
Bank-level controls	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	2,557,746	2,557,746	2,557,746	2,557,746	2,557,746	2,557,746
R^2	0.815	0.815	0.815	0.815	0.815	0.815
Adjusted-R^2	0.771	0.771	0.771	0.772	0.771	0.771

This table exhibits the estimates of equation (5). The dependent variable is the annualized interest rate of new loans granted to firm f at bank b in quarter t. BankChar_{bt} is a binary value equal to 1 if the level of the bank characteristic is above the median, and 0 otherwise. In column 4, BankChar_{bt} is equal to 1 if a bank is foreign. In column 5, we include a value equal to 2 for *BancoEstado*. Marginal effects of TUI_{ct} correspond to the sum of the coefficients on TUI_{ct} and its interaction with BankChar_{bt}. Weights correspond to the share of the firm's trade with country c on its total trade. For firms without international trade, a weight of 0.2 is assigned to each observation. Standard errors are in parentheses. Errors are clustered at the firm-bank level. Liabs. stand for liabilities, and HQ for headquarters. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table 5: Investigating whether some banks' business model traits moderate the impact of increases in country-specific trade uncertainty indexes on new loan maturities by banks' characteristics

	(1) Share of liabs in foreign currency	(2) Foreign trade special-ization	(3) Gross cross-border positions with HQ	(4) Foreign bank	(5) NPL ratio	(6) Bank size
	Estimated coefficients					
$\text{BankChar}_{bt} = 1$	-0.086***	0.003	0.048***		0.055***	-0.037***
	(0.005)	(0.004)	(0.004)		(0.010)	(0.008)
TUI_{ct}	-0.007***	-0.000	-0.007***	0.005***	-0.016***	-0.014***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)
$TUI_{ct} \times \text{BankChar}_{bt} = 1$	0.025***	0.003	0.006***	-0.011***	0.027***	0.019***
	(0.002)	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)
$TUI_{ct} \times \text{BankChar}_{bt} = 2$					0.010***	
					(0.003)	
	Marginal effect of TUI_{ct} at:					
$\text{BankChar}_{bt} = 0$	-0.007***	-0.000	-0.007***	0.005***	-0.016***	-0.014***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)
$\text{BankChar}_{bt} = 1$	0.019***	0.003	-0.001	-0.007***	0.012***	0.006***
	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
$\text{BankChar}_{bt} = 2$					-0.005**	
					(0.002)	
Firm-Bank-Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Sector-Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
Bank-level controls	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	2,557,746	2,557,746	2,557,746	2,557,746	2,557,746	2,557,746
R^2	0.605	0.605	0.605	0.605	0.605	0.605
Adjusted-R^2	0.512	0.512	0.512	0.512	0.512	0.512

This table exhibits the estimates of equation (6). The dependent variable is the logarithm of the maturity of new loans granted to firm f at bank b in quarter t. BankChar_{bt} is a binary value equal to 1 if the level of the bank characteristic is above the median, and 0 otherwise. In column 4, BankChar_{bt} is equal to 1 if a bank is foreign. In column 5, we include a value equal to 2 for *BancoEstado*. Marginal effects of TUI_{ct} correspond to the sum of the coefficients on TUI_{ct} and its interaction with BankChar_{bt}. Weights correspond to the share of the firm's trade with country c on its total trade. For firms without international trade, a weight of 0.2 is assigned to each observation. Standard errors are in parentheses. Errors are clustered at the firm-bank level. Liabs. stand for liabilities, and HQ for headquarters. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Summing up, results indicate that there are indeed some business model traits that make banks more likely to extend new loans during periods of increasing trade tensions. These banks' traits are size, risk, and the availability of alternative sources of funding, which can materialize by having a larger share of liabilities in foreign currency, or as being a foreign bank with strong linkages with its headquarters. In the next section, we analyze the impact of trade tensions on firms' foreign trade operations.

5.3 The impact of TUI on trade growth

Before concluding, we examine how trade tensions influence Chilean firms' foreign trade operations, and whether the reaction of trading firms to periods of high uncertainty depend on the way foreign trade is financed. With this aim, columns 1 and 3 in Table 6 report the estimates of the model specification in equation (7); column one has as dependent variable the export growth, whereas column 3 focuses on import growth. In turn, columns 2 and 4 in the same table exhibit the estimates of the model specification in equation (8), which add the information on the mode the foreign trade operation is mainly financed. Similarly, column two has export growth as the dependent variable, whereas column four focuses on import growth.

Focusing first on the exporters, Table 6 shows that, overall, periods of high trade uncertainty lead to a significant decrease in export growth (column 1 of this table). Furthermore, when distinguishing by the mode with which exports are mainly financed (column 2), we find that the reduction in export growth under periods of increasing trade uncertainty is mainly explained by the reduction of exports financed with payment in cash-in-advance and with trade credits. This is because the estimated marginal effects of the destination-specific trade uncertainty index when exports are financed with the cash-in-advance or trade credit modes (as the main financing modes of exports) are negative. In contrast, the estimated marginal effect of TUI when the exports are mainly financed with bank credit is non-significant. Interestingly, this last finding is consistent with the estimates for credit outcomes (Table 2), where we find that there is a non-significant impact of trade uncertainty on the new loan amounts provided to exporters when trade uncertainty increases.

Intuitively, the finding that exports financed by cash-in-advance or trade credit grow less under periods of increasing trade uncertainty in the destination country is consistent with the working capital channel. Intuitively, to finance the time gap between production and sale revenues, firms need funding (Niepmann and Schmidt-Eisenlohr, 2017b).

Indeed, with cash-in-advance (trade credit), exporters (importers) receive credit from importers (exporters), as the latter pay in advance for goods and services they will receive later (provide credit by producing the product the importer demands without receiving any payment).

However, under periods of increasing trade uncertainty, the financial conditions of importers buying goods and services from Chilean firms deteriorate (Ellingsen and Vlachos, 2009; Schmidt-Eisenlohr, 2013; Hoefele et al., 2016), thus being less willing (or unable) to finance their imports with cash. Similarly, Chilean exporters may avoid providing trade credit to foreign firms established in countries with increasing trade tensions. As a result, Chilean firms' working capital is negatively affected (without any significant increase in the banks' credit provision to these firms. Indeed Table 2 shows that loan amounts to trade firms exporting to countries with increasing trade uncertainty do not increase under periods of trade uncertainty), which in turn results in them cutting exports.

In the case of imports, Table 6 (second column) reveals that, overall, there is no significant impact of trade tensions on import growth. However, when distinguishing by the way imports are financed, we do find that, under periods of increasing trade uncertainty, the growth of imports is higher when they are financed with cash-in-advance or with bank credit. Therefore, results indicate that to overcome the increasing trade tensions in the foreign country from where Chilean firms import, importers provide credit to the foreign firms by paying with cash. Similarly, imports financed with bank credit to the importers who are exposed to the increasing uncertainty in the origin countries (of their import) also expands.[12]

[12] As a robustness check, we augment the model specifications in equations (7) and (8) by interacting the firm size with the categorical variable registering whether the foreign trade operation is mainly financed with payment-in-advance, trade credit, or bank credit. The intuition is that the propensity to use a specific payment mode may depend on the capacity of the firm to grant trade credit or access to bank loans. Results are globally consistent with the ones reported in Table 6. The estimates of this robustness check are available from the authors upon request.

Table 6: Marginal effects of the country-specific trade uncertainty indexes on export/import growth distinguishing by payment type (payment in advance, trade credit and bank credit)

	(1)	(2)	(3)	(4)
	Exports	Exports	Imports	Imports
$TUI_{c,t}$	-0.031**		0.019	
	(0.015)	(0.038)	(0.015)	(0.022)
Payment in advance		-0.087**		0.051**
		(0.038)		(0.022)
Trade credit		-0.026*		0.008
		(0.015)		(0.015)
Bank credit		0.028		0.097*
		(0.051)		(0.056)
Firm-product-country FE	Yes	Yes	Yes	Yes
Firm-product-quarter FE	Yes	Yes	Yes	Yes
Product-country-year FE	Yes	Yes	Yes	Yes
Obs.	2137,84	213,784	515,528	515,528
R^2	0.714	0.714	0.751	0.752
Adjusted-R^2	0.506	0.506	0.411	0.411

This table shows the marginal effects of the country-specific trade uncertainty indexes on export/import growth distinguishing by payment type. The marginal effects result from the estimation of equations (7) and (8). The dependent variables are the annual growth rates of exports or imports; they are winsorized at the one percent level. Weights are the shares of the trade value of a firm f with a country c in quarter t in the overall trade value of that firm during that quarter. Hence, each firm-quarter observation sums one. To measure payment type, we build a categorical value of zero if the operation is mostly financed with cash, one if mostly with trade credit, and two with bank credit. Weights are the shares of the trade value of a firm f with a country c in quarter t on the overall trade value of that firm during that quarter. Hence, each firm-quarter observation sums one. Standard errors are in parentheses. Errors are clustered at the firm-quarter level. $^{*}p < 0.10,^{**}p < 0.05,^{***}p < 0.01$.

Summing up, there are two main conclusions to extract from the results above. First, increasing trade uncertainty in foreign countries has a differential impact on exports and imports. Second, the reactions of exporters and importers to higher trade uncertainty depend on how the trade operations are financed. In the case of exports, our results are consistent with the working capital channel. In the case of imports, increasing trade tensions in foreign markets result in Chilean firms (and banks) providing finance to foreign firms more intensively, as a way to compensate for the deterioration of the financial conditions of the latter.

6 Conclusions

In this paper, we exploit the exogenous variations of destination/origin-specific trade uncertainty indexes to identify the effect of increasing trade tensions on banks' credit provision to Chilean firms and on firms' foreign trade performance. For the study, we have access to a proprietary confidential dataset of all new loan transactions of Chilean banks and their balance-sheet information, combined with all foreign-trade operations of Chilean firms, which source is the National customs. We consider the period January 2012 to March 2019. To measure trade uncertainty, we rely on text-based measures from Ahir et al. (2022) encompassing actual changes and the uncertainty arising due to threats of changes to tariff and non-tariff measures. In addition, the fact that Chile is an open emerging-market economy makes trade uncertainty abroad exogenous to its firms. At the same time, the diversity of trade partners and sectors make the case of Chile an ideal laboratory to explore the topic.

Our results show that under elevated trade uncertainty, there is a reallocation of bank credit from non-trade firms towards GVCs and importers. At the same time, higher trade uncertainty is associated with lower export growth, particularly if exports are paid in advance or with trade credit to the importer firm abroad. Furthermore, imports grow with increases in trade uncertainty if these are paid in advance or through bank credit. These results are consistent with a working capital channel for the transmission of trade uncertainty shocks. In the case of GVCs, our results suggest that banks may regard them as less risky (compared to the other trading firms), as they tend to be larger and more productive, with balance sheets that are likely to be better hedged. At the same time, GVCs appear to be the most exposed to the countries exhibiting increasing trade tensions over the period end of 2016 to 2018.

Finally, we conclude that our findings do not support the hypothesis of international fragmentation due to increasing trade uncertainty, at least for Chile. We show that trade uncertainty in the short term (and when protectionist measures are far from being implemented on a large scale) leads to reallocation of bank credit between firms and to lower export growth. However, on the aggregate, trade growth may not necessarily be negative following increasing trade tensions. However, the future implementation of policies preventing trade liberalization and encouraging protectionism on a large scale could certainly be an important trigger for real and financial fragmentation.

Our paper is subject to two main shortcomings, due to data limitations. One of them is the measurement of firms' sizes, which requires information on sales (or the number of employees, for instance), which we do not observe. We approach this issue by separating pure exporters and pure importers from GVCs, as a way to proxy their differing sizes

and trade intensity. A second issue relates to the fact that firms do not demand and obtain new loans continuously from the banks. Hence, new loan registries do not feature continuous observations for the same firm. This prevents us from including firm-time fixed effects and from controlling for other factors at the firm level which are often used in the credit registries. We have approached this by including fairly granular sector-time fixed effects as in Degryse et al. (2019), which proxy for credit demand factors.

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A Appendix

I Additional Figures

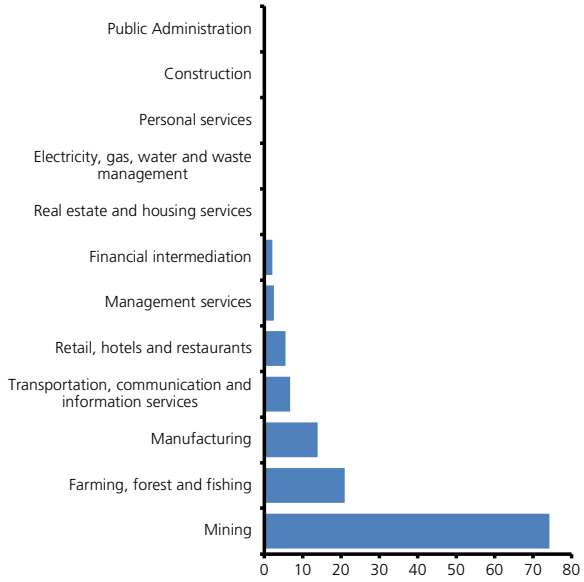


Figure A.1: Export intensity by sectors, according to the Chilean National Accounts' sector classifications. Export intensity is measured as the sector-specific ratio between exports and total output. The figure exhibits averages between 2013 and 2018. Source: Banco Central de Chile.

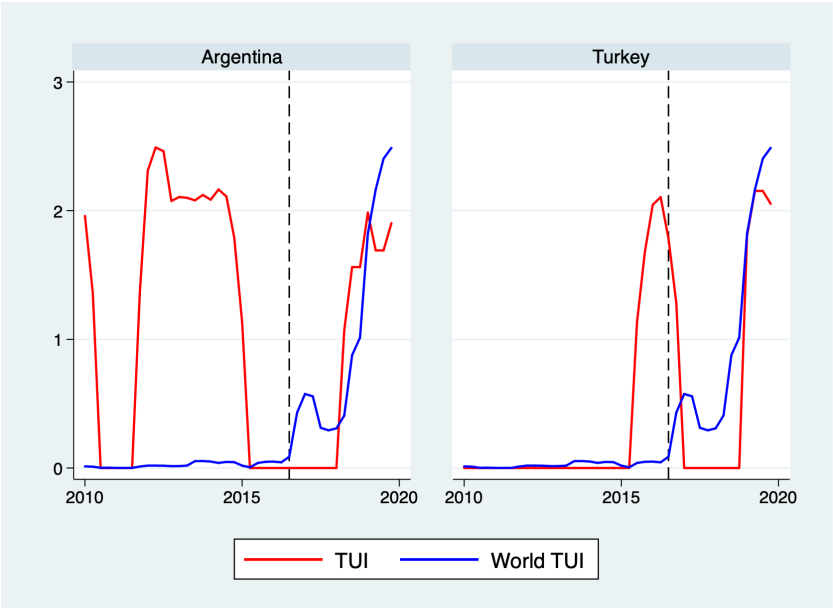


Figure A.2: Selected economies with high above median trade uncertainty indexes before the beginning of the 2016-2018 trade tensions. The indexes are shown as 3-quarter average and are rescaled as the logarithm of one plus TUI. The World TUI is the GDP-weighted average of the country indexes.

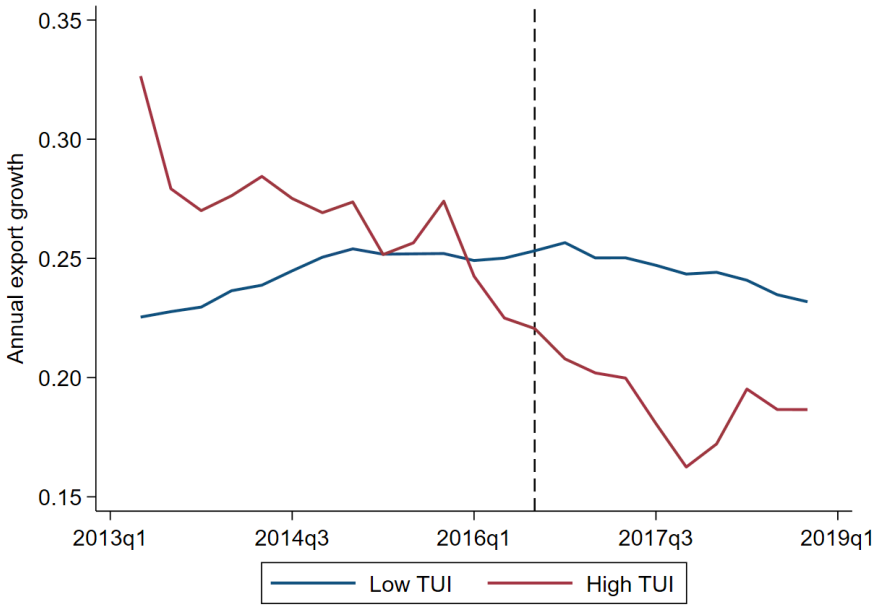


Figure A.3: Average export growth of high and low trade uncertainty economies, weighted by export values. Export growth rates are the residuals of a regression of the export growth rates on product-quarter fixed effects. The aim is to remove product and time-varying factors such as prices in the international markets, which reflect both the demand and supply developments.

II Additional Tables

Table A.1: Summary statistics of banks' characteristics

Bank variable	Mean	Std. Dev.	Median	90th percentile
Liquid assets to total assets (%)	14.1	6.3	12.1	24.2
NPL ratio (%)	1.0	0.5	0.9	1.6
Capital ratio (%)	13.2	4.0	13.3	14.1
Loan to assets (%)	76.0	6.2	77.2	82.4
FX liabilities to total liabilities (%)	19.2	5.8	18.9	24.3
Assets (USD mn.)	39,527	17,480	46,148	57,041

Source: Banco Central de Chile and Comisión de Mercados Financieros. Data sample: 2012Q1-2019Q1.

Table A.2: Summary statistics of the loan registry data

	Loan characteristics	Mean	Std. Dev.	Median	90th percentile
All firms	Amount (USD mn.)	0.7	7.1	0.1	1.0
	Term (months)	3.2	10.7	0.0	6.1
	Interest rate (%)	10.7	6.9	9.3	19.6
Firms without foreign trade	Amount (USD mn.)	0.3	3.1	0.1	0.4
	Term (months)	4.2	13.2	0.0	12.0
	Interest rate (%)	13.9	7.0	12.7	22.3
Firms with foreign trade	Amount (USD mn.)	1.1	9.1	0.2	1.8
	Term (months)	2.3	8.2	0.0	5.9
	Interest rate (%)	8.1	5.6	6.9	15.5

Source: Banco Central de Chile and Comisión de Mercados Financieros. Data sample: 2012Q2-2019Q1. A term of zero months indicates loans with maturity of less than 30 days.

Table A.3: Impact of the country-specific trade uncertainty indexes on new loan amounts, distinguishing by type of product and firm status

	(1) Commercial	(2) Foreign trade	(3) Development
	Estimated coefficients:		
TUI_{ct}	-0.006***	0.007	-0.004***
	(0.001)	(0.007)	(0.001)
$TUI_{ct}\times$ Status$_{fct}=1$	-0.019*	-0.037**	-0.008
	(0.011)	(0.015)	(0.019)
$TUI_{ct}\times$ Status$_{fct}=2$	0.016*	0.001	0.042*
	(0.008)	(0.011)	(0.025)
$TUI_{ct}\times$ Status$_{fct}=3$	0.003	-0.021*	0.010*
	(0.003)	(0.012)	(0.006)
$TUI_{ct}\times$ Status$_{fct}=4$	0.012***	-0.012	0.018***
	(0.003)	(0.008)	(0.006)
$TUI_{ct}\times$ Status$_{fct}=5$	0.002	-0.018	0.010
	(0.008)	(0.016)	(0.019)
$TUI_{ct}\times$ Status$_{fct}=6$	0.013***	-0.007	0.018**
	(0.003)	(0.007)	(0.008)
	Marginal effects of TUI_{ct} at:		
Status$_{fct}=0$	-0.006***	0.007	-0.004***
	(0.001)	(0.007)	(0.001)
Status$_{fct}=1$	-0.025**	-0.030**	-0.012
	(0.011)	(0.013)	(0.018)
Status$_{fct}=2$	0.010	0.008	0.038
	(0.008)	(0.009)	(0.025)
Status$_{fct}=3$	-0.003	-0.015	0.006
	(0.003)	(0.010)	(0.006)
Status$_{fct}=4$	0.006**	-0.005	0.014**
	(0.002)	(0.004)	(0.006)
Status$_{fct}=5$	-0.004	-0.011	0.005
	(0.008)	(0.014)	(0.019)
Status$_{fct}=6$	0.007***	0.000	0.014*
	(0.002)	(0.002)	(0.008)
Firm-bank-country FE	Yes	Yes	Yes
Sector-quarter FE	Yes	Yes	Yes
Bank-quarter FE	Yes	Yes	Yes
Obs.	2,546,304	484,595	441,738
R^2	0.815	0.805	0.796
Adjusted-R^2	0.772	0.773	0.709

This table shows the estimates of equation (1). The dependent variable is the logarithm of the loan amounts distinguishing by commercial, foreign-trade, and development loans. The foreign-trade status of the firms is a categorical variable of value 0 if the firm only trades domestically; 1 if the firm only exports but has not exported to the country c during the last four quarters and 2 if it has; 3 and 4 are analogous to 1 and 2, but for firms that only import; 5 and 6 are also analogous to 1 and 2 but for GVC firms. Marginal effects are calculated as the sum of the coefficients on TUI_{ct} and its interaction with the status variable. Weights correspond to the share of the firm's trade with country c on its total trade. For firms without international trade, a weight of 0.2 is assigned to each observation. Standard errors are in parentheses. Errors are clustered at the firm-bank level. $^{*}p<0.10$, $^{**}p<0.05$, $^{***}p<0.01$

Table A.4: Impact of the country-specific trade uncertainty indexes on new loan interest rates, distinguishing by type of product and firm status

	(1) Commercial	(2) Foreign trade	(3) Development
	Estimated coefficients:		
TUI_{ct}	-0.037***	-0.030**	0.006
	(0.004)	(0.014)	(0.004)
$TUI_{ct} \times$ Status$_{fct} = 1$	0.091**	0.037	0.116
	(0.040)	(0.031)	(0.081)
$TUI_{ct} \times$ Status$_{fct} = 2$	0.134***	0.052**	-0.084
	(0.039)	(0.022)	(0.065)
$TUI_{ct} \times$ Status$_{fct} = 3$	0.010	0.002	-0.039*
	(0.012)	(0.022)	(0.022)
$TUI_{ct} \times$ Status$_{fct} = 4$	0.046***	0.025	-0.038
	(0.010)	(0.016)	(0.025)
$TUI_{ct} \times$ Status$_{fct} = 5$	-0.048*	0.021	0.156***
	(0.028)	(0.025)	(0.059)
$TUI_{ct} \times$ Status$_{fct} = 6$	0.131***	0.051***	0.043*
	(0.009)	(0.015)	(0.026)
	Marginal coefficients of TUI_{ct} at:		
Status$_{fct} = 0$	-0.037***	-0.030**	0.006
	(0.004)	(0.014)	(0.004)
Status$_{fct} = 1$	0.054	0.008	0.122
	(0.039)	(0.027)	(0.080)
Status$_{fct} = 2$	0.097**	0.022	-0.079
	(0.039)	(0.017)	(0.065)
Status$_{fct} = 3$	-0.028***	-0.028*	-0.034
	(0.010)	(0.016)	(0.021)
Status$_{fct} = 4$	0.008	-0.004	-0.033
	(0.009)	(0.008)	(0.024)
Status$_{fct} = 5$	-0.085***	-0.009	0.162***
	(0.027)	(0.020)	(0.058)
Status$_{fct} = 6$	0.093***	0.021***	0.049*
	(0.007)	(0.004)	(0.025)
Firm-bank-country FE	Yes	Yes	Yes
Sector-quarter FE	Yes	Yes	Yes
Bank-quarter FE	Yes	Yes	Yes
Obs.	2,546,304	484,595	441,738
R^2	0.818	0.752	0.882
Adjusted-R^2	0.776	0.711	0.832

This table shows the estimates of equation (2). The dependent variable is the annualized interest rates of new commercial, foreign trade, and development loans. The foreign-trade status of the firms is a categorical variable of value 0 if the firm only trades domestically; 1 if the firm only exports but has not exported to the country c during the last four quarters and 2 if it has; 3 and 4 are analogous to 1 and 2, but for firms that only import; 5 and 6 are also analogous to 1 and 2 but for GVC firms. Marginal effects are calculated as the sum of the coefficients on TUI_{ct} and its interaction with the status variable. Weights correspond to the share of the firm's trade with country c on its total trade. For firms without international trade, a weight of 0.2 is assigned to each observation. Standard errors are in parentheses. Errors are clustered at the firm-bank level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$

Table A.5: Impact of the country-specific trade uncertainty indexes on new loans maturity, distinguishing by type of product and firm status

	(1) Commercial	(2) Foreign trade	(3) Development
	Estimated coefficients:		
TUI_{ct}	-0.005***	-0.013**	-0.002*
	(0.001)	(0.005)	(0.001)
$TUI_{ct}\times$ Status$_{fct}=1$	0.004	0.016	-0.003
	(0.010)	(0.017)	(0.025)
$TUI_{ct}\times$ Status$_{fct}=2$	0.011	0.021**	0.020
	(0.010)	(0.009)	(0.021)
$TUI_{ct}\times$ Status$_{fct}=3$	0.007**	0.018**	0.010
	(0.003)	(0.008)	(0.007)
$TUI_{ct}\times$ Status$_{fct}=4$	0.010***	0.022***	0.011
	(0.003)	(0.006)	(0.007)
$TUI_{ct}\times$ Status$_{fct}=5$	0.016**	0.025*	-0.015
	(0.007)	(0.013)	(0.027)
$TUI_{ct}\times$ Status$_{fct}=6$	0.010***	0.013**	0.012
	(0.002)	(0.006)	(0.008)
	Marginal coefficients of TUI_{ct} at:		
Status$_{fct}=0$	-0.005***	-0.013**	-0.002*
	(0.001)	(0.005)	(0.001)
Status$_{fct}=1$	-0.002	0.003	-0.005
	(0.010)	(0.016)	(0.025)
Status$_{fct}=2$	0.006	0.007	0.017
	(0.010)	(0.007)	(0.021)
Status$_{fct}=3$	0.002	0.005	0.008
	(0.003)	(0.006)	(0.006)
Status$_{fct}=4$	0.005**	0.008***	0.009
	(0.002)	(0.002)	(0.007)
Status$_{fct}=5$	0.011	0.011	-0.017
	(0.007)	(0.012)	(0.027)
Status$_{fct}=6$	0.005**	-0.000	0.010
	(0.002)	(0.002)	(0.008)
Firm-bank-country FE	Yes	Yes	Yes
Sector-quarter FE	Yes	Yes	Yes
Bank-quarter FE	Yes	Yes	Yes
Obs.	2,546,304	484,595	441,738
R^2	0.609	0.592	0.719
Adjusted-R^2	0.517	0.525	0.599

This table shows the estimates of equation (3). The dependent variable is the logarithm of the maturity of the new commercial, foreign trade, and development loans. The foreign-trade status of the firms is a categorical variable of value 0 if the firm only trades domestically; 1 if the firm only exports but has not exported to the country c during the last four quarters and 2 if it has; 3 and 4 are analogous to 1 and 2, but for firms that only import; 5 and 6 are also analogous to 1 and 2 but for GVC firms. Marginal effects are calculated as the sum of the coefficients on TUI_{ct} and its interaction with the status variable. Weights correspond to the share of the firm's trade with country c on its total trade. For firms without international trade, a weight of 0.2 is assigned to each observation. Standard errors are in parentheses. Errors are clustered at the firm-bank level. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$