Determinants and Effects of Countries' External Capital Structure: A Firm-Level Analysis*

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Abstract

This paper examines how a firm's foreign liability composition affects its resilience during economic turmoil and identifies the key factors shaping foreign capital structures. Using firm-level data, we find that firms with a higher foreign equity share in their liabilities were significantly less affected by the global financial crisis. This resilience can be attributed mainly to intra-firm trade credit and intra-firm loans, which provided critical financial buffers when external capital markets were distressed and domestic financing was constrained. Moreover, firms with a positive foreign equity share were less likely to default after the crisis, highlighting the stabilizing role of foreign equity financing in enhancing firm resilience and supporting overall financial stability.

Keywords: Firm-level data, External liabilities, Foreign capital structure, FDI, Financial crisis, Financial stability

JEL Codes: E44, F21, F23, F32, F34, F36

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1 Introduction

Over the past decade, large and persistent current account imbalances have led to historic highs of countries' net international investment positions and raised concerns about the disorderly unwinding of the resulting stock imbalances (International Monetary Fund (2019)). The rapid tightening of monetary policy in advanced economies, following the shocks of the COVID-19 pandemic and geopolitical tensions, has led to a new period of financial and capital flow volatility. This poses significant challenges for policymakers, reviving concerns about countries' vulnerability to sudden capital flow reversals. Recent developments once again highlight the importance of understanding the specific factors determining countries' external vulnerabilities when exposed to global shocks.

Previous research found that the composition of foreign liabilities—specifically the share of foreign direct investment (FDI), portfolio equity, and external debt in a country's gross foreign liabilities—is a key determinant in a country's vulnerability to external crises.[1] Given that liquidity crises are unlikely to be generated by sudden stops in equity flows but are often triggered by sudden stops in debt flows, a large share of equity in total liabilities can strengthen macroeconomic and financial stability during times of distress when debt markets may freeze or become prohibitively expensive.

This paper provides new evidence on these topics at the *micro-level*, using a comprehensive universe of Slovenian firm-level data. The data contains detailed information on firm characteristics, their balance sheets, and, most importantly, information on the stock of firm liabilities vis-à-vis foreign residents. With this information, we construct a firm-level measure of the foreign equity share, which closely mirrors measures used in the macroeconomic literature. Using the 2009 global financial crisis shock, we analyse whether the composition of foreign liabilities at the firm level offers insights into a country's vulnerability to external shocks. Slovenia, a small open economy highly integrated into global trade and capital markets and part of a monetary union, offers a unique case for analysing the impact of firms' foreign liability composition on economic and financial resilience.

Our study presents four key findings. First, while the composition of foreign capital structure is relatively stable at the aggregate level, it masks substantial heterogeneity across firms and over time. Second, firms with a higher share of foreign equity in their total foreign liabilities performed better in terms of sales growth after the global financial crisis compared to firms without foreign equity. We show that this result can be explained by intra-firm trade credit and intra-firm loans, which provided crucial short-term liquidity when external markets were under stress and domestic financing was limited. Third, we find that firms with a positive foreign equity share were less likely to default after the

[1] See, Lane and Milesi-Ferretti (2000), Pistelli et al. (2007), Gourinchas and Obstfeld (2012), Catão and Milesi-Ferretti (2014), and Cubeddu et al. (2021).

crisis. This suggests that foreign equity acts as a long-term commitment from investors, enhancing financial stability. Finally, we explore what factors determine a firm's foreign liability structure. We show that larger, more open, and more productive firms exhibit a higher equity share in foreign liabilities. While previous studies have addressed this question from a cross-country perspective—examining factors like institutional quality and financial market development—we complement the existing literature by showing how firm-level characteristics influence the foreign equity share.[2]

Related literature. This paper contributes to the literature on the effects of firms' (foreign) capital structure on countries' vulnerability to external shocks. There is an active body of literature that looks at firms' capital structure and its effect on performance during the Great Recession. However, most of these studies typically focus on the *overall financing structure* of firms. For example, Clarke et al. (2012) investigate how country and firm characteristics affected financial constraints and the default probability of firms during the Great Recession. Medina (2012) uses cross-sectional data from 48 developed and developing countries to identify resilience and vulnerability factors in the aftermath of the global financial crisis. Wu (2012) studies the effects of changes in external financing conditions on firm performance after the crisis, while Kalemli-Ozcan et al. (2019) analyses the role of financial factors that have contributed to sluggish investment in Europe in the aftermath of the 2008-2009 crisis. In contrast to these studies, which mostly look at the *overall financial leverage* of firms, we focus on the composition of *foreign liabilities* as a determinant of firm performance during external shocks.

Another strand of literature focuses on access to *foreign debt financing* during the Great Recession (for example, Ongena et al. (2015) and Gabrijelčič et al. (2016)). These studies find that foreign debt, either bank or corporate, is an important driver for the transmission of external shocks. Moreover, Kim et al. (2015) and Kim (2016) study the role of *currency composition* in firms' balance sheets on their performance in the aftermath of the crisis.

The literature on multinational firms provides additional insights into the stabilizing role of foreign equity. For instance, Alfaro and Chen (2010) and Alfaro and Chen (2012) study how multinational firms, i.e. firms with some foreign equity, responded to the Great Recession relative to local firms. They show that multinational subsidiaries performed better than local firms after the Great Recession. Similarly, Desai et al. (2008) highlight that multinational firms benefiting from parent equity financing are more resilient during crises than their purely domestic counterparts.

We contribute to the existing literature by focusing specifically on the *foreign capital*

[2] Faria et al. (2007), Faria and Mauro (2009), and Wei and Zhou (2018), among others, find that better institutions and more developed financial markets tend to increase the aggregate equity share in countries' total external liabilities.

structure and examining how the composition of foreign liabilities influences firm performance during the Great Recession.[3]

Finally, the paper also relates to the extensive literature on the externalities of international capital flows that contribute to financial instability and recessions (e.g. Forbes et al. (2015), Erten et al. (2021)) as well as on how to select an appropriate policy mix for preserving macroeconomic and financial stability in the face of domestic and external shocks (e.g. International Monetary Fund (2018)).

The structure of this paper is as follows. Section 2 discusses the data used in our analysis. Section 3 presents stylized facts, the empirical strategy, and our main results. Section 4 concludes.

2 Data description

We use annual data from a merged firm-level database containing both qualitative and quantitative information about all Slovenian firms. The database is compiled from two different data sources. The first is the Slovenian Business Register, which provides qualitative information about firms with their principal place of business in Slovenia. The second source is the Annual Reports of Corporate Entities (JOLP), which contains quantitative data, including firms' balance sheets and income statements (IS). By combining these datasets, we create a comprehensive dataset for analysing how firm characteristics and capital structures affect firms' performance.[4]

A unique feature of our dataset is that firms operating abroad must report BS and IS separately for their foreign operations and liability positions.[5] This allows us to calculate the share of foreign equity in total foreign liabilities—which is our main variable of interest—in a way that closely resembles the measure used in the macroeconomic literature that examines cross-country differences (e.g., Faria and Mauro (2009) or Wei and Zhou (2018)).[6] In these studies, total equity consists of FDI and portfolio equity and is expressed as a share of total international liabilities, which includes FDI, portfolio equity, and debt. In the BOP statistics, debt is further divided into portfolio debt (e.g., bills, bonds, and similar instruments typically traded in the financial markets) and other investments such as trade credits and bank loans.

In our analysis, we construct *firm-level* measure of the foreign equity share as the sum of foreign capital, long and short-term loans, trade and consumption loans, as well as

[3]By foreign financing, we refer to financing sources coming from abroad. Note that this is different from the typical dichotomy between firms' internal and external sources of financing, as usually discussed in the corporate finance literature. See also Section 3.1 for more details.

[4]For a detailed description of the data, see Gabrijelčič et al. (2016) and Lenarčič and Papadopoulos (2020).

[5]This granular information is part of the raw data used to compile Slovenia's balance of payments (BOP) statistics.

[6]See also appendix A for the exact variable definition.

financial leasing from the rest of the world (where the foreign creditor owns more than 10 percent of the respective firm) divided by total liabilities to the rest of the world. These components are encompassed under FDI in countries' balance of payments statistics. The aim is to follow the approach applied in cross-country analyses but using firm-level data.

Ideally, to closely match the macroeconomic literature, we would require information on all relevant components for individual firms, including portfolio equity and tradable debt securities. However, firms typically do not have detailed data on the ultimate ownership of portfolio equity or tradable debt securities, so these items are not reported in our dataset. Despite this limitation, our measure is very close to the equity share derived from aggregate country statistics. First, publicly-listed companies (PLCs) make up only about 1 percent of all firms in Slovenia, meaning portfolio equity held by foreign residents is negligible for most firms. Second, debt securities issuance by Slovenian firms is minimal; firms predominantly rely on bank loans for financing (see Gabrijelčič et al. (2016), Bank of Slovenia (2017)). As a result, portfolio debt liabilities are likely to be negligibly small.[7]

We argue that all this makes Slovenia a particularly interesting case to study, given the literature's emphasis on the dichotomy between "debt vs. equity" or, more broadly, "stable vs. unstable" funding sources. FDI, widely considered the most stable form of foreign financing, plays a substantial role in Slovenia's economy. As of 2014, 2,899 Slovenian firms had inward FDI through direct affiliations. Foreign investors focused the majority of their investments in Slovenia's non-financial corporate sector, which represented 83 percent of the total value of inward FDI. Although firms with FDI liabilities made up only about 5 percent of all Slovenian firms, their economic influence was disproportionately large. These firms accounted for 19 percent of the total capital in the corporate sector, 22 percent of all corporate assets, and employed 22 percent of the workforce in the corporate sector. Moreover, a significant share of FDI in Slovenia consists of new (greenfield) investments, which are typically associated with economic stability and growth. Of the 3,531 inward FDI projects recorded in Slovenia, 62 percent were actually greenfield investments (Bank of Slovenia (2014)).

For our analysis, we apply four sample restrictions to the data. First, we restrict our sample to the period from 2005 to 2014. Although data from earlier years are available, we start in 2005 to avoid potential confounding effects related to exchange rate changes.[8] Second, we exclude firms in the financial, insurance, and government sectors due to the distinct structure of their balance sheets, which differ significantly from those of firms in other sectors. Third, to minimize the impact of extreme outliers on our results, we trim

[7] Herman and Lozej (2021) document that for most Slovenian firms, financing from abroad takes the form of either FDI or loans channelled through the domestic banking system.

[8] Slovenia entered the Exchange Rate Mechanism II in July 2004. Since then, until the Euro adoption in January 2007, its exchange rate has been fixed to Euro.

the top and bottom 0.1 percent of the dependent variable for each year.[9] Lastly, since our focus is on the foreign capital structure of operating firms, we exclude all firms that declared bankruptcy during the sample period.[10]

A potential concern is that excluding bankrupt firms could introduce a survival bias into our results. For example, bankruptcies might be more likely among firms with weak balance sheets or low growth potential. To the extent that these characteristics are also related to a firm's foreign equity share, bankruptcies might occur relatively more or less often among firms with a positive foreign equity share. Excluding firms that went bankrupt could lead to biased estimates. To address this concern, Figure B.1 in the appendix shows the number of defaults across firm types over the sample period. Before the crisis, the number of defaults for both types of firms was very low. However, the number of defaults increased dramatically for firms without foreign equity after the crisis. Including bankrupt firms—assuming that defaulting firms typically perform worse than operating ones—-would tend to increase the difference in sales growth between firms with and without foreign equity.

Our sample could also be affected by what is known as "fire-sale FDI". This term describes a scenario in which asset prices fall so dramatically during a crisis that foreign investors find FDI opportunities attractive despite the ongoing crisis and the accompanying outflow of portfolio investments from the country (Krugman, 2000).[11] If this is the case, then our sample would upward bias results as new "fire-sale FDI" would facilitate the performance of firms with foreign equity.[12] Figure B.2 in the appendix plots the number of firms that changed their foreign equity status over the sample period. The number of firms that have changed their foreign equity status is small and stable over the examined period. More importantly, we have not seen any increase in FDI in Slovenia after the global financial crisis, which could indicate "fire-sale FDI" activity.

Table 1 provides summary statistics of the main variables used in our analysis. Panel (A) reports statistics for firms with a positive equity share, and Panel (B) reports statistics for all other firms. We further split the sample into a pre- and post-crisis period, where the cut-off year for the post-crisis period is 2009.[13] Looking at the table, one can observe that firms with a positive equity share are, on average, larger, have more employees, are more productive, and more open. At the same time, they are younger, less leveraged, have less tangible assets, and have a higher liquidity ratio. The share of publicly listed companies (PLC) is comparable across both sub-samples.

[9] This is a very conservative approach and less restrictive than what is commonly done in the literature; for instance, studies often eliminate observations in the top and bottom 1 percent of the sample.

[10] In total, this applies to 5,106 firms.

[11] For example, Aguiar and Gopinath (2005) and Alquist et al. (2016) find that the number of foreign mergers and acquisitions in East Asia drastically increased during the 1997 Asian financial crisis.

[12] This could be due to additional liquidity, management, access to new technologies, etc.

[13] More precisely, the last year in the pre-crisis period is 2008, and the first year in the post-crisis period is 2009.

Table 1: Summary Statistics

	A. Firms with Positive Foreign Equity				B. Firms without Foreign Equity			
	Pre-Crisis		Post-Crisis		Pre-Crisis		Post-Crisis	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Sales Growth (%)	18.32	10.24	9.73	1.77	15.15	9.73	3.57	0.10
Total Liabilities / TA (%)	67.74	61.52	74.61	59.38	77.14	70.48	82.25	68.37
Size - Assets (€, 1000)	11542	551	10072	384	3872	459	3663	451
Size - Employment	86.33	9.00	70.54	8.00	29.89	5.00	23.83	5.00
Firm Age (years)	7.97	7.00	8.49	6.00	11.17	13.00	12.62	13.00
Tangibility (%)	27.73	17.01	28.14	15.91	30.17	25.42	30.11	24.59
Firm Openness (%)	45.44	31.70	52.64	60.63	21.74	3.08	24.99	4.53
Productivity (%)	63.26	38.56	55.67	36.74	40.72	28.64	37.50	28.58
Liquidity Ratio (%)	160.00	96.97	1082.92	103.37	108.38	81.58	135.80	85.15
Capital Intensity (€)	2285.56	71.15	1031.65	76.06	532.51	75.84	500.42	81.91
PLC (%)	0.04	0.00	0.03	0.00	0.04	0.00	0.03	0.00
N	6398		13752		35086		63079	

Notes: Summary statistics are shown for firms with and without foreign equity before and after the crisis.

3 Empirical Analysis

This section presents some stylized facts about foreign equity shares and the empirical identification strategies used in our analysis. Finally, we report the results.

3.1 Some stylized facts

Before presenting stylized facts, we clarify the terminology used throughout the empirical analysis. The focus of this paper is on the firm's *Foreign Equity Share*, which is calculated as the ratio of foreign equity to total foreign liabilities

$$\text{Foreign Equity Share} = \frac{\text{Equity}^{\text{Foreign}}}{\text{Equity}^{\text{Foreign}} + \text{Debt}^{\text{Foreign}}} \tag{1}$$

The Foreign Equity Share measures the proportion of a firm's foreign liabilities that is financed through foreign equity. This measure is conceptually distinct yet closely related to the *Equity Share*, which reflects the overall capital structure of a firm-—that is, the specific combination of debt and equity a company employs to finance its operations and facilitate growth. The Equity Share is calculated as the ratio of total equity, including both domestic and foreign equity, to the total liabilities, including both domestic and

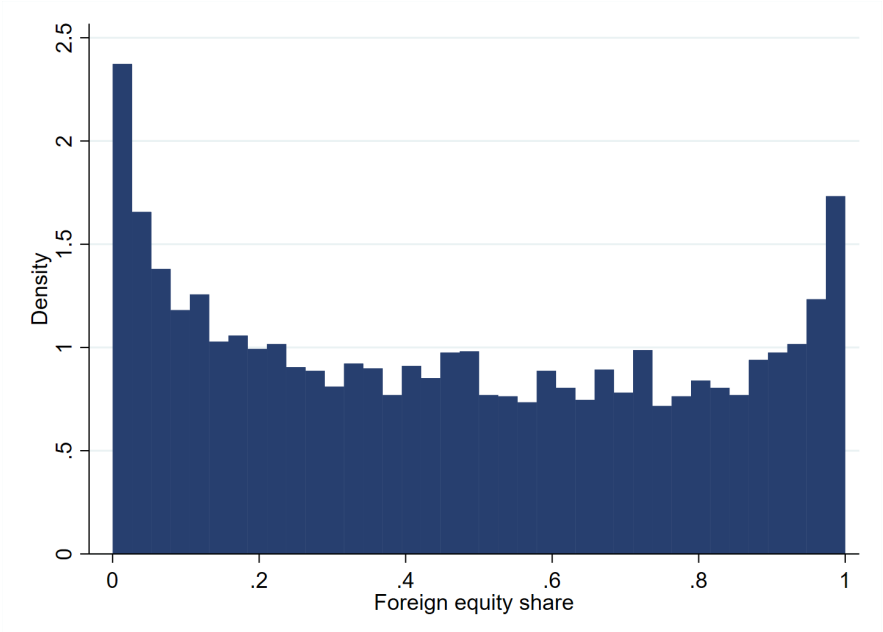
foreign obligations

$$\text{Equity Share} = \frac{\text{Equity}^{\text{Home}} + \text{Equity}^{\text{Foreign}}}{\text{Equity}^{\text{Home}} + \text{Debt}^{\text{Home}} + \text{Equity}^{\text{Foreign}} + \text{Debt}^{\text{Foreign}}} \tag{2}$$

While one would expect these two concepts to be highly correlated, there is no particular reason why the two shares should be identical. For instance, if a firm decides to take out a loan from a domestic bank, its overall equity share in (2) would decrease while the foreign equity share in (1) remains unchanged. Conversely, if the domestic owner of a firm sells equity to a foreign investor, the foreign equity share would increase, but the overall financing structure of the firm does not change. Indeed, in our data, the two ratios are highly correlated but not identical (see Figure B.3 in appendix).

A firm's overall financing structure-—the mix of debt and equity-—is generally under its direct control. However, the extent to which the firm can influence the identity of its creditors, particularly foreign ones, is more limited. Since our primary interest lies in the composition of firms' *foreign* liabilities, we account for the overall capital structure in our regression analysis. This approach allows us to isolate the variation in the *foreign* capital structure that is not explained by the firm's overall financing decisions.

Figure 1: Firm-Level Distribution of Foreign Equity Share



Notes: This histogram shows the distribution of firms' foreign equity share as a proportion of total foreign liabilities over the 2005–2014 period.

Let us now examine some stylized facts about the foreign equity share as defined in (1). Figure 1 displays the distribution of the individual firm's equity share in foreign

liabilities among firms that have any foreign liabilities. While the distribution appears relatively even across the middle range, there are noticeable spikes at both ends of the distribution.

Table 2: Summary Statistics for All Firms

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Firms with Foreign Liabilities (%)	23	23	23	22	22	22	22	22	22	21
Equity Liabilities (%)	10	10	11	11	11	11	11	12	12	13
Number of Firms	38,165	39,782	42,786	45,856	47,851	49,086	52,197	54,577	56,957	59,856

Notes: All values are in percentages except for the number of firms.

Table 2 presents summary statistics for the entire sample over the 2005 – 2014 period. The sample begins with 38,165 firms in 2005 and grows steadily to 59,856 firms by 2014. The share of firms with any foreign liabilities remains consistently around 22 percent throughout the period. Among these firms, approximately 10 percent have equity liabilities vis-à-vis foreign residents, a share that also shows little variation over time. The average number of firms in the sample with a positive equity share in their foreign liabilities is approximately 1,000, showing that the analysis captures a substantial and diverse portion of the corporate sector and not only a handful of often very large firms in the economy.

Table 3: Summary Statistics by Firm Size

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Firms with Foreign Liabilities (%)										
Below Median	7	7	7	7	7	7	7	7	7	6
Above Median	39	38	39	38	38	37	37	36	36	36
Out of Which: Equity Liabilities (%)										
Below Median	7	9	8	9	10	9	10	12	14	16
Above Median	11	11	11	11	11	11	11	12	12	12
Mean Equity Share (%)										
Below Median	52	47	49	52	54	50	49	47	48	47
Above Median	48	49	48	50	52	51	51	50	49	50

Notes: Firms below the median are firms with assets below the median size, and firms above the median are firms with assets above the median size in each year. All statistics are in percentage terms.

Table 3 presents summary statistics for our key variable of interest, disaggregated by firm size, with firms categorized as either above or below the median based on their total assets. These conditional statistics highlight differences in the presence and composition of foreign liabilities across firm size.

The top panel shows that larger firms (above the median) are significantly more likely to hold foreign liabilities. On average, 38 percent of large firms report foreign debt or

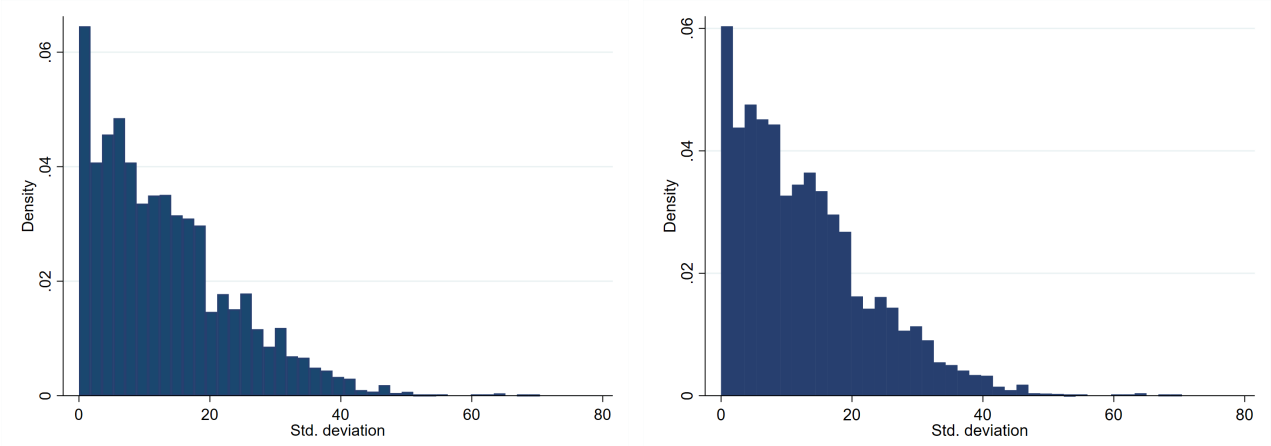
equity exposure, compared to just 7 percent of smaller firms, and these proportions remain stable over the sample period.

The middle panel shows that among firms with foreign liabilities, the fraction holding foreign equity liabilities is similarly consistent over time. However, smaller firms exhibit a gradual increase in this fraction, from 7 percent in 2005 to 16 percent in 2014. In contrast, the fraction for larger firms remains stable, hovering around 11–12 percent.

Finally, the bottom panel indicates that the mean equity share in foreign liabilities is remarkably stable, averaging close to 50 percent across both size groups. This suggests that, while larger firms are more likely to have foreign liabilities overall, the composition of these liabilities—in terms of equity shares—is similar for both small and large firms.

Figure 2 shows the distribution of the firm-specific standard deviation of the foreign equity share over the sample period. As can be seen, the share of equity in their foreign liabilities varies considerably over time. Notably, this variability is not predominantly driven by larger firms, as shown in panel (b).

Figure 2: Firm-Level Standard Deviation of Foreign Equity Share



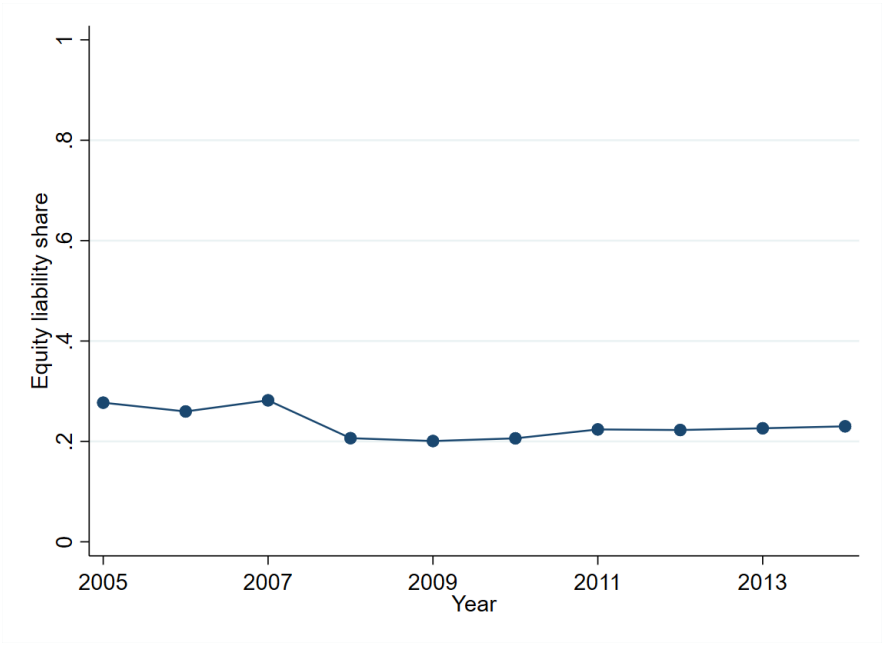
(a) All Firms

(b) Firms Above Median Assets

Notes: The histograms show the firm-level standard deviation of foreign equity share over the 2005–2014 period. Panel (a) includes all firms in the dataset, while Panel (b) includes only firms with assets above the median in each year.

The statistics presented so far suggest that the aggregate equity share in foreign liabilities remains relatively stable over time. This observation is confirmed by Figure 3, which displays the equity share in foreign liabilities for the whole Slovenian economy using the *External Wealth of Nations* database developed by Lane and Milesi-Ferretti (2018). In fact, the macroeconomic literature often describes the composition of liability stocks as a fundamental, slow-moving variable (see, for instance, Faria and Mauro (2009)). However, while aggregate figures appear stable, our analysis reveals substantial variation at the micro-level, highlighting the relevance of firm-level dynamics in understanding broader economic trends.

Figure 3: Slovenia's Aggregate Foreign Equity Share



Notes: The total equity share of Slovenia's external liabilities is constructed as the sum of FDI and portfolio equity expressed as a ratio to total liabilities using the dataset created by Lane and Milesi-Ferretti (2018).

3.2 Firms' crisis vulnerability and foreign capital structure

3.2.1 Empirical specification

In this section, we examine whether the composition of foreign liabilities at a firm level matters for a country's susceptibility to external shocks. Specifically, we exploit the global financial crisis shock in 2009 to measure the differential response of firms with a positive foreign equity share in their foreign liabilities relative to firms with foreign liabilities but without foreign equity. For our measure of firm performance, we follow the relevant literature and use firms' sales growth as our dependent variable.

To formally analyse the relationship between firms' crisis vulnerability and their foreign capital structure, we estimate several variations of the following difference-in-differences model

$$Y_{igt} = \lambda_t + D_g + \gamma_g \cdot t + \delta \left(Post_t \cdot D_g \right) + \beta X_{igt} + \epsilon_{igt} \, , \tag{3}$$

where Y_{igt} is sales growth of firm-i in group-g at time t, λ_t are time-fixed effects, $\gamma_g t$ is a group-specific linear time trend, D_g is an indicator function that equals 1 if the foreign equity share of a firm is greater than 0, $Post_t$ is the post-crisis indicator function taking

the value 1 after 2008, and X_{igt} is a vector of firm-specific controls. Among these controls, we include size, openness, the liquidity ratio, productivity, the amount of tangible assets, age, age squared, leverage, and a dummy variable that is equal to 1 if a firm is publicly-listed (PLC).[14]

Next, given the panel structure of our data, we also control for unobserved heterogeneity across firms α_i and estimate a two-way fixed effects model

$$Y_{igt} = \alpha_i + \lambda_t + D_g + \gamma_g \cdot t + \delta \left(Post_t \cdot D_g \right) + \beta X_{igt} + \epsilon_{igt} \,, \tag{4}$$

where all other explanatory variables are the same as in (3). In both models, our main coefficient of interest is δ, which captures the difference in the performance of firms with a positive foreign equity share relative to those without after the global financial crisis.

In the last step, we examine how the effect of a positive foreign equity share on a firm's performance evolved in the post-crisis period. This will provide some insight into when firms with a positive foreign equity share benefited the most. To do this, we estimate the following version of the model in (3) and (4)

$$Y_{igt} = \alpha_i + \lambda_t + D_g + \sum_{t=2005,\, t \neq 2009}^{2015} \delta_t \cdot D_{gt} + \beta X_{igt} + \epsilon_{igt}. \tag{5}$$

In this model, D_{gt} is the indicator function interacted with year dummies to capture how the effect of having a positive foreign equity share on firm performance evolves over the years following the crisis. We omit 2009, when the shock hit Slovenia, to use it as a reference year, allowing us to gauge the time-varying effect of a positive foreign equity share on performance relative to the year when the shock occurred.

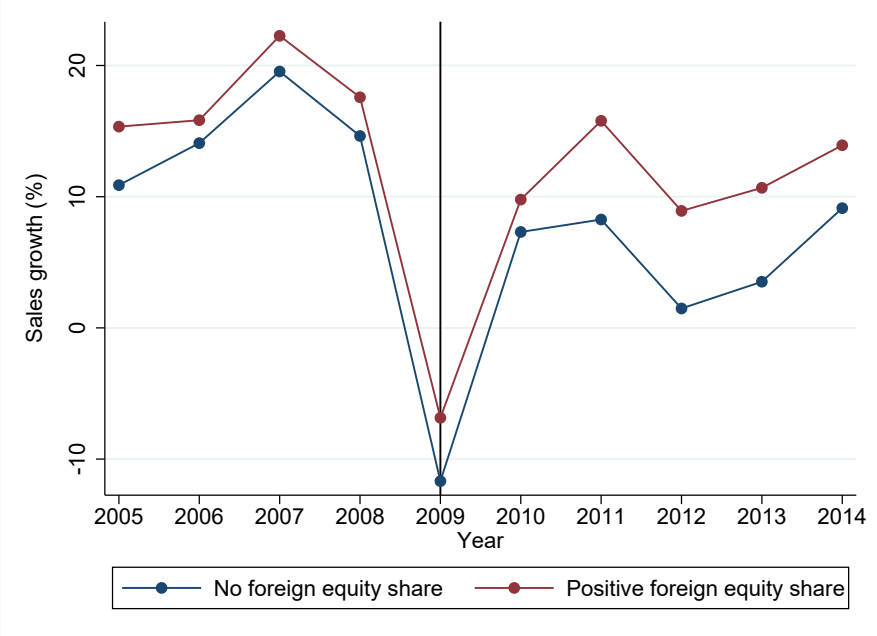
Threats to identification. We rely on the parallel trend assumption for the difference-in-difference estimation to be valid. This requires that, in the absence of a crisis, firms' sales growth in the treatment and control groups would have followed the same time trend. To support our identifying assumption, we plot the evolution of sales growth rates for both groups of firms. As can be seen from Figure 4, these trends were very similar before the crisis. However, once the crisis hit, the sales growth paths of the two groups diverged.

The parallel trends assumption would be violated if there was some anticipation effect. For example, it could be argued that firms with a positive foreign equity share in foreign liabilities might have predicted the crisis much earlier than firms without foreign equity because they are more integrated in global supply chains and, therefore, more informed about global economic conditions. However, since we use annual data and thus focus on a relatively long time span for each observation, we deem this not to be very

[14] For a detailed description of the variables used in the analysis, see appendix A.

likely. The effect of the global financial crisis should be fully incorporated into all firms' balance sheets by the end of the year 2009. Moreover, it might well be argued that the global financial crisis and its consequences were generally unforeseen.

Figure 4: Sales Growth Trends



Notes: This figure shows the average sales growth rates of firms with and without foreign equity shares. The vertical line denotes the year when the global financial crisis shock hit Slovenia.

With multiple time periods, we can examine "pre-trends" to assess the plausibility of the parallel trends assumption.[15] Another approach to empirically evaluate the parallel trend assumption is to include group-specific linear time trends in the model. If estimates change significantly, this could indicate that the common trend assumption might be violated.

Besides the parallel trend assumption, one could argue that our identification might suffer from selection bias. It is conceivable that foreign investors discriminate between more and less resilient firms. As a result, they might have ex-ante chosen to invest (i.e. provide equity investment) into those firms that are more likely to be resilient and weather shocks more easily. To the extent that foreign investors could accurately predict Slovenian firms' resilience, the effect we estimate might be driven by factors other than access to stable (external) funding. However, such factors should be captured by firm fixed effects, which we control in some of our specifications.

Another potential concern regarding our identification strategy is that the compo-

[15]However, as Roth (2020) shows, pre-testing has its limitations (i.e. low power in detecting pre-trends), and the results should be interpreted with caution.

sition of each group could have changed over time, leading to biased results. To improve the comparability of the treatment and the control group, we employ the entropy balancing method, a generalization of conventional matching methods proposed by Hainmueller (2012) and Hainmueller and Xu (2013). We create balanced samples by re-weighting covariates in the control group to match the first moments of covariates in the treatment group. This allows us to identify the impact of the crisis on firm performance by comparing firms with and without a positive foreign equity share in foreign liabilities that are as similar as possible in terms of observables while controlling for time-specific factors.[16]

3.2.2 Results

Table 4 reports results from estimating (3) and (4). For brevity, we only report the interaction term δ. In the first two columns, we run difference-in-differences regressions, controlling for time-fixed effects, firm-specific controls, and group-specific linear time trends. We find that in both columns, the interaction term is positive and statistically significant at the 10 percent level, indicating that firms with a positive foreign equity share were weathering the global financial crisis better. In columns (3) and (4), we estimate two versions of a two-way fixed effects model: one without a group-specific linear time trend and the other with a group-specific linear time trend. The sign and the magnitude of our results remain robust. This should also alleviate the concern mentioned above regarding a possible selection bias. However, it is worth noting that when we include a group-specific linear time trend, the effect of a positive foreign equity share is rendered insignificant.[17]

Column (5) shows the results when we first apply the entropy balancing method and then re-weight the control group observations such that the mean of our conditioning variables is the same in the treatment and the control group. Again, our estimates support the previous findings, i.e., firms with a positive foreign equity share seemed to have weathered the global financial crisis relatively better. Our results align with the findings

[16]The synthetic control method (Abadie and Gardeazabal (2003), Abadie et al. (2010))—while developed in a context where a single sizeable unit is treated—could also be applied to the case where there are multiple treated units. However, as shown by Abadie (2021)), this creates several practical complications for estimation and inference. The entropy balancing method, in turn, already considers a setting with multiple treated units, and instead of producing a separate synthetic control for each treated unit, "[...] calculate[s] a single synthetic control to match aggregate values of the predictors between the treated and non-treated samples." (Abadie (2021), p. 418)

[17]The reduced precision of the point estimate might be explained by the fact that we were already estimating a large number of parameters, and adding a linear time trend might lead to a problem of overfitting. Moreover, note that including group-specific linear time trends is not definite proof that the parallel trend assumption is valid. As argued by Wolfers (2006), Lee and Solon (2011) and more recently by Rambachan and Roth (2020), this simple linear extrapolation of the pre-trends may be too simplistic and potentially even a misleading approach. We also experiment by including group-specific piece-wise-linear time trends. Under this specification, the time trend absorbs all the effect in column (2) but not in column (4). Results are available upon request.

of Alfaro and Chen (2010) and Alfaro and Chen (2012), who study the role of FDI on a firm's performance. They find that firms with FDI performed better than local firms with similar characteristics but without FDI.[18]

Note that we control for a measure of firm openness in all our specifications, defined as sales outside of the domestic market. This suggests that our main result seems to be driven mainly by domestic sales. Indeed, estimating our baseline specifications with domestic and foreign sales growth as dependent variables confirms this conjecture (see appendix C). This also addresses the potential concern that our main finding is driven by a potential correlation between regional sales exposure and the likelihood of receiving foreign equity financing.

Table 4: Foreign Equity Share and Firm Performance

	(1) Sales growth	(2) Sales growth	(3) Sales growth	(4) Sales growth	(5) Sales growth (w/matching)
δ	1.992*	2.576*	3.576**	2.231	2.688**
	(0.974)	(1.405)	(1.376)	(1.628)	(0.962)
Firm FE	No	No	Yes	Yes	No
Time FE	Yes	Yes	Yes	Yes	Yes
Group-specific time trend	No	Yes	No	Yes	No
N	70,337	70,337	70,337	70,337	70,337
R^2	0.097	0.097	0.111	0.111	0.114

Notes: Robust and clustered (at sector level) standard errors in parentheses.
*** Significant at the 1% level.
** Significant at the 5% level.
* Significant at the 10% level.

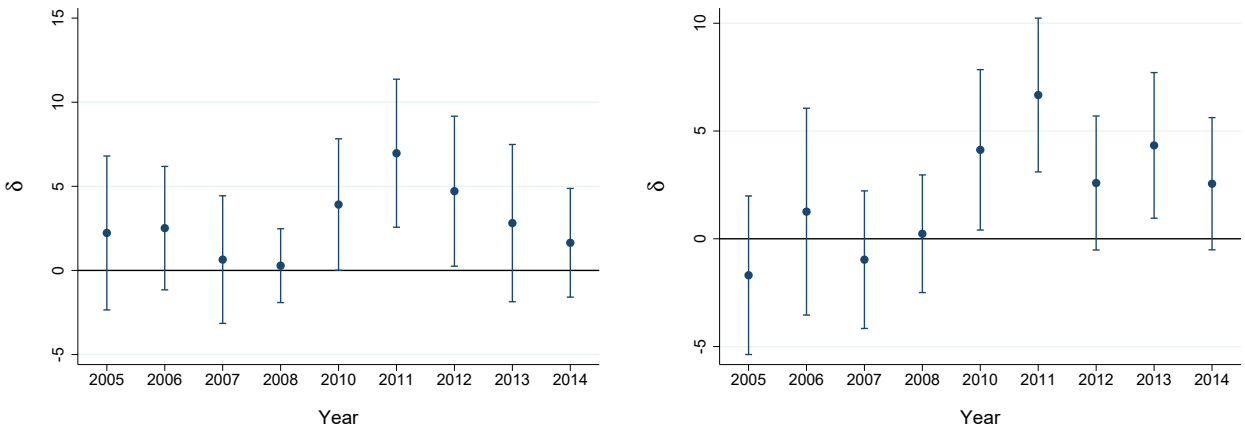
We also conduct some robustness checks to investigate whether our results continue to hold when using various approaches (see appendix D). First, we restrict our sample to the period between 2005 – 2011 and re-estimate our models for this shorter period. This helps avoid any confounding effect stemming from the banking crisis that Slovenia experienced in 2012. Results in Table D.4 in the appendix remain virtually unchanged relative

[18]Following the literature (e.g., Alfaro and Chen (2012)), we measure firm performance by the annual percentage change in the sales level. We opt for this measure because it is less likely to be convoluted by accounting practices or balance sheet optimization.

to the baseline. Second, we re-run the model with a narrow definition of foreign equity, excluding intra-trade credit and loans. The results are broadly in line with the findings reported for our benchmark specifications (see Table D.5 in the appendix). Finally, we also re-estimate our baseline specification using different outcome variables. We use alternative performance measures like the profitability ratio (EBIT divided by total assets) and the net investment rate. Again, results are consistent with our baseline findings, yet in some specifications, the estimated effect is insignificant (see Tables D.6 and D.7 in the appendix).

So far, we have presented the average effect—pooled over time—of having a positive foreign equity share on performance. In Figure 5, we plot point estimates of the effect relative to the year 2009 when the global financial crisis hit Slovenia (see the model in (5)). This allows us to shed some light on when the effect of having a positive foreign equity share was the largest. While the positive effect of having a positive foreign equity share materialized already in the first year after the crisis, the effect was most pronounced in 2011, and then it slowly diminished. As discussed above, under this specification, we can also test pre-trends and provide some evidence that the crisis trends do not differ across the two groups. We find that coefficients in the pre-crisis period are insignificant, which indicates that the difference in the performance of firms without and with foreign equity was not significantly different before the crisis. This further confirms that the parallel trend assumption is valid.

Figure 5: Time-Varying Effect of Foreign Equity Share on Firm Performance



(a) Difference-in-Differences

(b) Two-way Fixed Effects

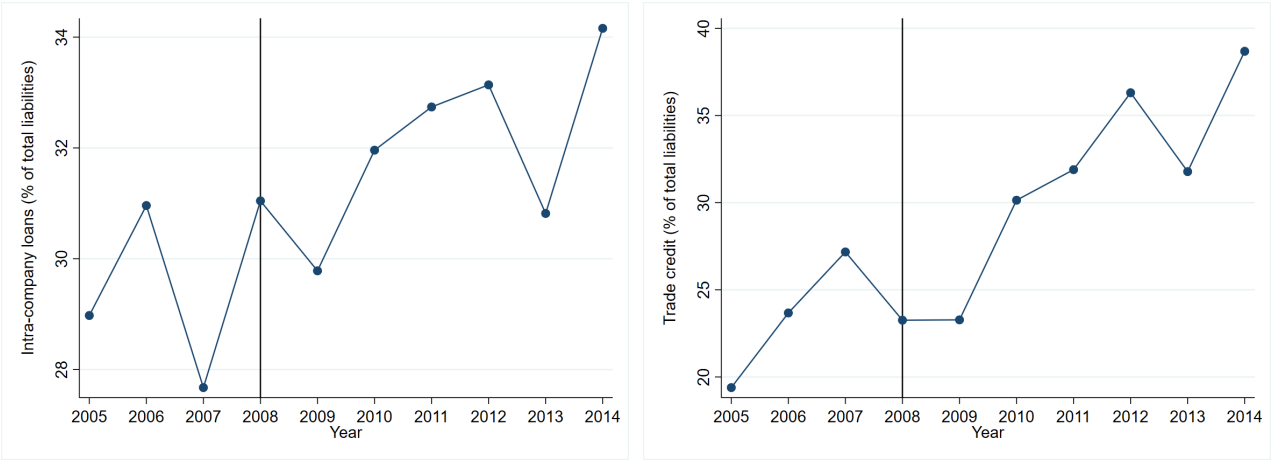
Notes: The figure shows point estimates together with 90 percent confidence intervals. All coefficients measure the effect relative to 2009, when the global financial crisis shock hit Slovenia. Standard errors are robust and clustered at the sector level.

Discussion. We find that firms with a positive foreign equity share performed better after the global financial crisis. As argued by the literature, this could be because FDI is indeed a more stable source of financing for firms and is less prone to sudden outflows.

Moreover, it could give firms access to an internal capital market when external capital markets are tight or distressed. Santioni et al. (2019) show on a sample of Italian firms that internal—within business groups—capital markets are crucial during crises because they are an alternative source of financing for firms.

To provide some descriptive evidence for this hypothesis, Figure 6 plots the evolution of intra-firm trade credit and intra-firm loans over time. We can see that prior to 2010, both shares remained relatively stable, but there was a substantial increase in 2010, and after that, both shares continued to grow. This suggests that intra-firm loans, and especially intra-firm trade credit, became very important in the post-crisis era when other financing options became scarce.

Figure 6: Selected Components of Foreign Equity



(a) Intra-Firm Loans

(b) Intra-Firm Trade Credit

Notes: This figure displays the average shares of intra-firm loans and intra-firm trade credit relative to total liabilities over the 2005–2014 period. "Intra-firm" refers to transactions between a parent company and its subsidiary. See appendix A for detailed variable definitions.

In addition, we corroborate our hypothesis by estimating whether the differential effect of having a positive equity share is larger for industries with a higher degree of external financial dependence. We follow the methodology by Rajan and Zingales (1998) and introduce a triple-interaction term using an industry-level measure of external financial dependence. Their approach relies on the assumption that the amount of external finance that firms demand to operate reflects a technologically determined exogenous factor that is industry-specific and assumed to be country- and time-invariant.

The measure of external financial dependence is provided by Duygan-Bump et al. (2015). The authors follow the approach described in Cetorelli and Strahan (2006) and define external financial dependence as the proportion of capital expenditures financed with external funds.[19] One would expect that the estimated effect of having a positive

[19]Their respective measures for different industries are matched by mapping the provided 3-digit NAICS code with the NACE Rev. 2 (on which we have information in our dataset).

equity share (and possibly access to more stable external funding) is larger for firms that operate in industries that are relatively more dependent on external financing. Once we exclude the construction sector, which has particularly suffered during the recession and at the same time exhibits one of the highest measures of external financial dependence (see also Duygan-Bump et al. (2015)), our estimates confirm this conjecture.[20] As seen from Table 5, the estimated coefficient of our newly added interaction term with external financial dependence is positive and highly significant in all specifications.[21]

Table 5: Foreign Equity Share, External Financial Dependence, and Firm Performance

	(1) Sales growth	(2) Sales growth	(3) Sales growth (w/matching)
δ	2.092***	3.295**	2.928***
	(0.449)	(1.168)	(0.619)
$\delta \cdot$ External Financial Dependence	4.130**	4.153**	5.364**
	(1.595)	(1.579)	(1.874)
Firm FE	No	No	No
Time FE	Yes	Yes	Yes
Group-specific time trend	No	Yes	No
N	57,629	57,629	57,629
R^2	0.104	0.104	0.124

Notes: Robust and clustered (at the sector level) standard errors in parentheses.

*** Significant at the 1% level.

** Significant at the 5% level.

* Significant at the 10% level.

[20] We also had to exclude one shipping company from our estimation. After the crisis, the respective firm experienced a substantial negative drop in sales (i.e. negative sales growth of more than 100 percent). Given that the water transportation industry has one of the highest measures of external financial dependence, the induced noise stemming from including these few observations in the estimation increases the standard errors to such a large degree that the estimated coefficient of the interaction term is rendered insignificant.

[21] Note that we only apply this approach to the specifications where we do *not* control for firm-fixed effects as the constant measure of external financial dependence should be already captured by this time-invariant factor.

3.2.3 Were firms with a positive foreign equity share less likely to default in the aftermath of the crisis?

The previous section shows that firms with a positive foreign equity share performed better than firms with a zero foreign equity share during the crisis period. In this section, we further corroborate this finding by analyzing the underlying factors that predict firms' survival rates. Specifically, we investigate whether having a positive foreign equity share reduces the likelihood of default following the global financial crisis.

We follow the approach by Kim et al. (2015) and estimate both linear and non-linear versions of a binary choice model

$$\mathrm{P}\big(\mathbb{1}[\text{Default}]_{i,t>2008}\big) = \mathbb{1}[\text{Foreign Equity Share} > 0]_{i,-1} + X_{i,-1}, \tag{6}$$

$$\mathrm{P}\big(\mathbb{1}[\text{Default}]_{i,t>2008}\big) = \mathrm{G}\big(\mathbb{1}[\text{Foreign Equity Share} > 0]_{i,-1} + X_{i,-1}\big), \tag{7}$$

where (6) is a Linear Probability model (LPM) and (7) is a Logit model, with $\mathrm{G}(\cdot)$ being the cumulative distribution function of a standard logistic distribution.

In both models, $\mathbb{1}\left[\text{Default}\right]_{i,t>2008}$ is an indicator for whether the firm defaulted after 2008, $\mathbb{1}\left[\text{Foreign Equity Share} > 0\right]_{i,-1}$ is an indicator for having a positive foreign equity share in 2008, and $X_{i,-1}$ are firm-specific controls in the year 2008. As in Section 3.2.1, we include control variables such as firm size, leverage, openness, liquidity ratio, productivity, the value of tangible assets, age, age squared, and a dummy variable indicating whether the firm is publicly listed (PLC). We are interested in the coefficient of $\mathbb{1}\left[\text{Foreign Equity Share}\right]_{i,-1}$, which captures differential probabilities of default for firms with a positive and zero foreign equity share in the aftermath of the crisis.

Table 6 reports the results from estimating models (6) and (7). We find that firms with a positive foreign equity share in the pre-crisis period were less likely to default after the crisis. The result is very robust and holds across both models. We also find that leverage is an important determinant of the default probability. More leveraged firms in the pre-crisis period were more likely to default after the crisis. Interestingly, firm size, measured by assets, also shows predictive power for default probability, with larger firms being more likely to default. Notably, this relationship cannot be attributed to higher leverage among larger firms, as our analysis explicitly controls for leverage.[22] Furthermore, more productive, more liquid, younger, and firms with more tangible assets were less likely to default after the global financial crisis.

As a robustness check, we also restrict our sample to firms that defaulted in 2009 and during the period 2009–2010. The results remain basically unchanged. In all specifications, we find that having a positive foreign equity share in 2008 reduces the probability

[22] Although beyond the scope of this paper, further investigation into the reasons behind this finding would be an interesting avenue for future research.

of default in the aftermath of the crisis.[23]

Table 6: Default Probabilities in the Aftermath of the Crisis

	(1) LPM	(2) Logit
$\mathbb{1}$ [Foreign Equity Share > 0]	-0.0372***	-0.637***
	(0.00864)	(0.181)
Leverage	0.00148***	0.0124***
	(0.000136)	(0.00165)
Log Size (Assets)	0.0175***	0.239***
	(0.00338)	(0.0293)
Openness	-8.53e-05	-0.00111
	(0.000188)	(0.00285)
Liquidity Ratio	-1.78e-05	-0.00502***
	(1.12e-05)	(0.00135)
Productivity	-8.30e-05**	-0.000745
	(3.01e-05)	(0.000671)
Tangible Assets	-0.000224	-0.00448*
	(0.000203)	(0.00237)
Age	-0.00209	-0.0302**
	(0.00138)	(0.0128)
Age Squared	4.29e-05	0.000534
	(4.16e-05)	(0.000410)
PLC	0.00645	-0.0305
	(0.0159)	(0.267)
N	7,599	7,599
(Pseudo) R^2	0.043	0.0735

Notes: Robust and clustered (at sector level) standard errors are reported in parentheses. The dependent variable equals 1 if the firm defaulted after 2008, and 0 otherwise. Appendix A provides further details on variable definitions.

*** Significant at the 1% level; ** Significant at the 5% level; * Significant at the 10% level.

[23] Results are available upon request.

3.3 Determinants of firm's foreign capital structure

3.3.1 Empirical specification

We now turn to the question of what factors determine firms' existing foreign capital structure. In terms of empirical specification, we start by following the macro literature tradition and regress the (time-series) mean of the dependent variable for the available years on the (time-series) mean of the explanatory variables (see Faria and Mauro (2009)). Our baseline regression is thus equivalent to a between-estimator regression. However, given the findings mentioned above regarding the time variation in the foreign equity share at the firm level, we also exploit this variation and run a panel fixed effects regression as a robustness check. In our baseline specifications, we focus on the intensive and extensive margin of the existing equity share in the firm's foreign liabilities as typically done in the related literature (see, for instance, Varela and Salomao (2018)).

The choice of our explanatory variables follows the corporate finance literature that examines determinants of firms' overall capital structure (see, among others, Harris and Raviv (1991), Rajan and Zingales (1995), Lemmon et al. (2008), Frank and Goyal (2009)). These controls include firm size, productivity, the tangibility of assets, growth, capital intensity, firm age, and profitability. We also include variables such as openness, which might be relevant for explaining the composition of foreign liabilities. As mentioned before, we control for the overall equity share in firms' total liabilities (see equation (2)). We also include a dummy for publicly listed companies and control for fixed effects at the sector level.[24]

3.3.2 Results

Column (1) in Table 7 presents the results of a probit regression where our dependent variable equals one if a firm has any foreign equity in its foreign liabilities. We find that larger firms (both in terms of assets and employment), more open, and more productive firms tend to have a higher probability of having a positive equity share in their foreign liabilities. The same holds for younger firms. Moreover, more profitable firms also seem to have a higher probability of exhibiting a positive equity share.[25] On the other hand, firms with more tangible assets have a lower probability of having some equity in foreign liabilities. This finding is consistent with the corporate finance literature that examines potential determinants of firms' overall capital structure. For example, assets such as property, plants, and equipment are more accessible for outsiders to value than intangibles and can be more easily pledged as collateral. Firms with more tangible assets

[24] For instance, Frank and Goyal (2009) show that firms in industries where the median firm has high leverage tend to have high leverage as well. As a result, the equity share might be lower. We account for this finding by controlling for sector-fixed effects.

[25] As in section 3.2, we proxy profitability with the firm's sales growth.

thus tend to have higher leverage and a lower equity share in their liabilities (Frank and Goyal (2009)).

Table 7: Cross-Sectional Estimates for Existing Foreign Capital Structure

	(1) $\mathbb{1}$ [Foreign Equity Share > 0]	(2) Log Share of Foreign Equity
Log Size (Assets)	0.140***	0.070***
	(0.017)	(0.013)
Log Size (Employment)	0.107***	0.094***
	(0.019)	(0.014)
Openness	0.011***	0.008***
	(0.000)	(0.000)
Productivity	0.862***	1.168***
	(0.238)	(0.203)
Tangible Assets	-0.004***	-0.002***
	(0.001)	(0.000)
Growth	-0.148***	-0.180***
	(0.051)	(0.037)
Capital Intensity	0.000	0.000*
	(0.000)	(0.000)
Age	-0.028***	-0.017***
	(0.002)	(0.002)
Profitability	0.139***	0.122***
	(0.035)	(0.029)
PLC	0.025	-0.073
	(0.082)	(0.069)
Sector FE	Yes	Yes
N	15,392	15,392
(Pseudo) R^2	0.138	0.100

Notes: Robust and clustered (at sector level) standard errors are reported in parentheses. All regressions control for the overall equity share in firms' total liabilities (see section 3.1). The equity share is constructed as the sum of foreign capital and all intra-company loans from the rest of the world (where the foreign creditor owns more than 10 percent of the respective firm) divided by total liabilities to the rest of the world. Appendix A provides further details on variable definitions.

*** Significant at the 1% level; ** Significant at the 5% level; * Significant at the 10% level.

Similarly, we also estimate a negative coefficient of firms' growth. In the literature,

it is typically argued that firms with more investments (i.e., higher growth potential) should accumulate more debt over time (see, for instance, Frank and Goyal (2009)). One of the reasons mentioned in the literature is that a manager of a fast-growing company has an incentive to finance its investment with debt, as this type of liability is not state-contingent, and expected future profits will not have to be shared with creditors. Finally, we find no significant effect of capital intensity or being a publicly-listed company on the probability of having a positive equity share. In column (2), one can see that all these results also hold for the intensive margin. Again, larger, more open, and more productive firms have a higher equity share in their foreign liabilities. Similarly, younger and more profitable firms seem to exhibit a higher equity share.

Some of the results above might raise concerns regarding our analysis presented in the previous section. For example, Maggiori et al. (2020) and Salomao and Varela (2018) show that firm size and productivity tend to be relevant for a firm's decision to borrow in (short-term) foreign currency debt. Given that firms with a positive equity share in foreign liabilities also seem to be larger and more productive, it could be argued that the analysis in the previous section captures the effect of firms' debt currency composition, which would be a different balance sheet effect (i.e. currency denomination as opposed to debt vs equity financing). While we do not have firm-specific data on the currency composition of foreign debt, aggregate data on the country's overall external debt liability structure shows that the share of Slovenia's external debt denominated in foreign currency (after the introduction of the Euro) is less than one percent (see Figure B.4 in the appendix). This suggests that the volume of the corporate sector's (short-term) debt denominated in foreign currency is relatively small. We would thus argue that the issue of foreign currency debt is unlikely to be a major concern in our analysis.

4 Conclusion

The composition of a country's external liabilities is a key predictor of balance of payments crises, with equity being a more stable financing source than debt. This study confirms at the micro-level that firms with a positive foreign equity share were more resilient to external shocks, such as the global financial crisis, outperforming in sales growth and demonstrating higher survival rates.

We also identify that larger, more open, and more productive firms are more likely to maintain a higher equity share in their foreign liabilities. These insights, derived from firm-level data, complement macroeconomic studies by highlighting the drivers of external capital structures and their implications for financial stability.

From a policy perspective, these findings underscore the critical importance of fostering a financial environment that encourages stable, equity-based foreign investments in the corporate sector. Policymakers can use this evidence to prioritize attracting foreign

direct investment and reducing reliance on volatile forms of external debt. Enhancing transparency and reducing barriers to equity-based financing, particularly for small and medium-sized enterprises, could be pivotal in increasing financial resilience across sectors.

Moreover, in assessing a country's vulnerability to external shocks, policymakers should integrate firm-level characteristics into their evaluations. Even when detailed firm-level data on foreign liabilities is unavailable, macro-level indicators such as the corporate sector's openness, size, and productivity can provide valuable proxies for assessing systemic risks. By combining firm-level insights with aggregate statistics on a country's net foreign asset position, governments and financial institutions can better anticipate and mitigate the effects of sudden shifts in financial flows.

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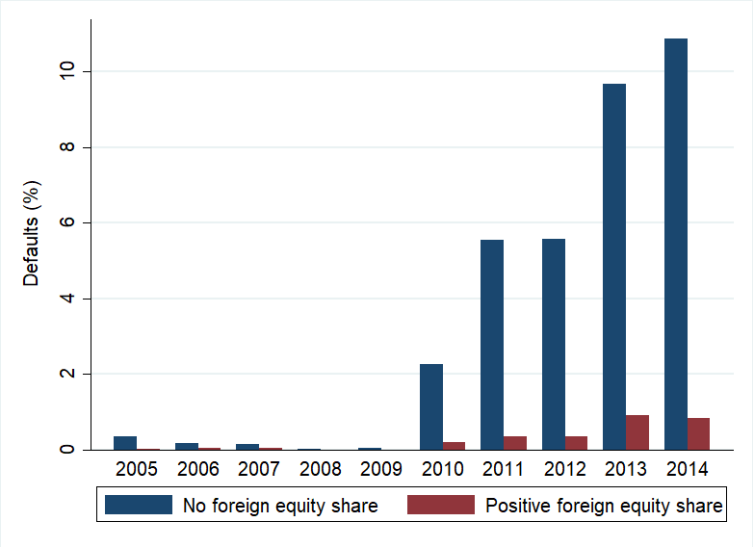
A Definition of the variables

Table A.1: Variables description

Variable	Definition
Sales growth	The difference in the log of net sales.
EBIT (Earnings before interest and taxes)	EBIT is constructed as operating profit adjusted for operating loss, which is the definition of the Agency of the Republic of Slovenia for Public Legal Records and Related Services.
Foreign equity share	The foreign equity share is constructed as the sum of foreign capital, long and short-term loans, trade and consumption loans, as well as financial leasing from the rest of the world (where the foreign creditor owns more than 10 percent of the respective firm) divided by total liabilities to the rest of the world.
Size	Logarithm of total assets. In some specifications, size is measured as the logarithm of employment (average number of employees based on the number of work hours in the period). In Table 1 in the main text, assets and employment are expressed in levels.
Openness	Net sales outside the domestic market divided by total net sales.
Productivity	Real value added per full-time equivalent (FTE) employee.
Tangible assets	The sum of tangible assets (i.e., plant, property and equipment) divided by total assets.
Growth	As a proxy for growth, the variable is calculated as the change in log assets.
Capital intensity	This variable is constructed as total assets divided by total sales.
Age	The variable age corresponds to the number of years since the firm's foundation.
Leverage	Defined as all short- plus long-term financial liabilities divided by total assets.
Liquidity ratio	Current assets minus inventories divided by short-term liabilities.
Interest expenses	Calculated as interest expenses over total assets.
PLC	A dummy equal to one if a firm is publicly listed (PLC).
Intra-firm trade credit	Trade and consumption loans from foreign-related firms, where foreign ownership is larger than 10%.
Intra-firm loans	Short- and long-term loans from foreign-related firms, where foreign ownership is larger than 10%.

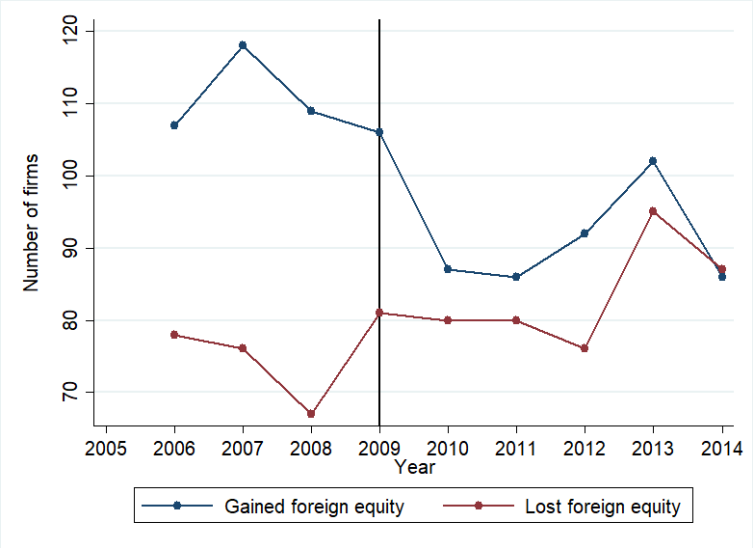
B Additional graphs

Figure B.1: Bankruptcy Rates Over Time



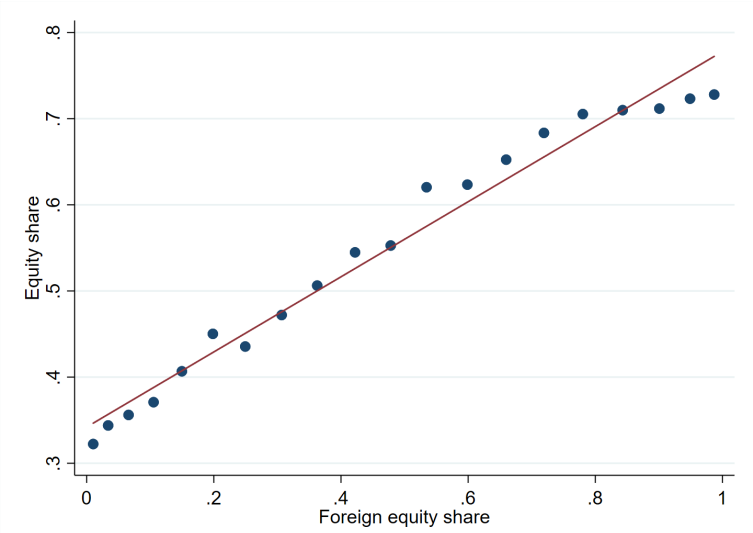
Notes: This figure shows the bankruptcy rates over time for firms with no foreign equity and firms with a positive foreign equity share.

Figure B.2: Changes in Firms' Foreign Equity Status Over Time



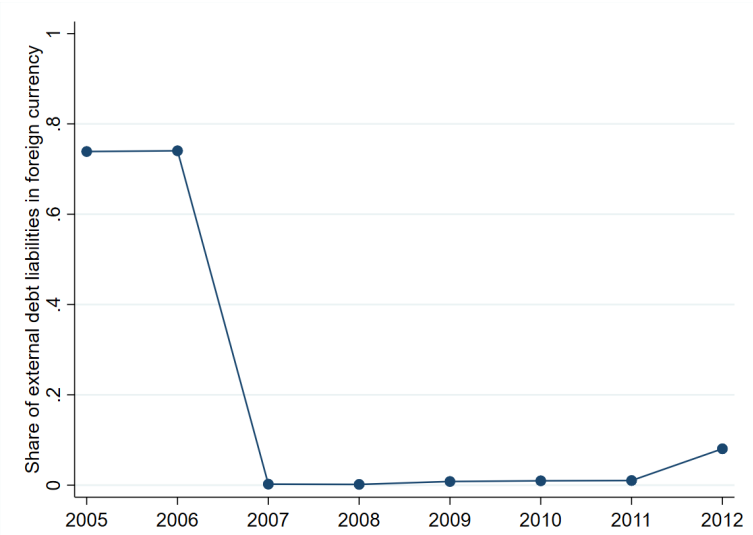
Notes: This figure shows the number of firms that changed their foreign equity status over time. Firms gaining a positive foreign equity share are represented in blue, while those losing their positive foreign equity share are shown in red. The vertical line denotes the year when the global financial crisis hit Slovenia.

Figure B.3: Relationship Between Firm's Foreign Equity Share and Overall Equity Share



Notes: This binned scatter plot of firm's foreign equity share in total foreign liabilities and their overall equity share in total liabilities, using the sample from 2005 to 2014.

Figure B.4: Currency Composition of the International Investment Position



Notes: The graph shows the share of external debt liabilities denominated in foreign currency, as reported in Bénétrix et al. (2015).

C Additional results

Table C.2: Foreign Equity Share and Firm Performance (Domestic Sales)

	(1) Dom. Sales growth	(2) Dom. Sales growth	(3) Dom. Sales growth	(4) Dom. Sales growth	(5) Dom. Sales growth (w/matching)
δ	1.694	3.219***	3.344**	3.092	2.372*
	(1.178)	(0.945)	(1.465)	(1.971)	(1.229)
Firm FE	No	No	Yes	Yes	No
Time FE	Yes	Yes	Yes	Yes	Yes
Group-specific time trend	No	Yes	No	Yes	No
N	69,624	69,624	69,624	69,624	69,624
R^2	0.075	0.075	0.051	0.051	0.071

Notes: Robust and clustered (at a sector-level) standard errors in parentheses.
*** Significant at the 1% level.
** Significant at the 5% level.
* Significant at the 10% level.

Table C.3: Foreign Equity Share and Firm Performance (Foreign Sales)

	(1) For. Sales growth	(2) For. Sales growth	(3) For. Sales growth	(4) For. Sales growth	(5) For. Sales growth (w/matching)
δ	-0.451	2.378	5.193***	2.063	1.403
	(0.860)	(3.171)	(1.665)	(2.678)	(0.874)
Firm FE	No	No	Yes	Yes	No
Time FE	Yes	Yes	Yes	Yes	Yes
Group-specific time trend	No	Yes	No	Yes	No
N	46,176	46,176	46,176	46,176	46,1764
R^2	0.031	0.031	0.022	0.022	0.034

Notes: Robust and clustered (at a sector-level) standard errors in parentheses.
*** Significant at the 1% level.
** Significant at the 5% level.
* Significant at the 10% level.

D Robustness checks

Table D.4: Foreign Equity Share and Firm Performance (2005–2011)

	(1) Sales growth	(2) Sales growth	(3) Sales growth	(4) Sales growth	(5) Sales growth (w/matching)
δ	2.347**	0.550	3.501**	0.286	3.020**
	(1.053)	(2.182)	(1.583)	(1.919)	(1.193)
Firm FE	No	No	Yes	Yes	No
Time FE	Yes	Yes	Yes	Yes	Yes
Group-specific time trend	No	Yes	No	Yes	No
N	48,315	48,315	48,315	48,315	48,315
R^2	0.103	0.103	0.127	0.127	0.125

Notes: Robust and clustered (at a sector-level) standard errors in parentheses.
*** Significant at the 1% level.
** Significant at the 5% level.
* Significant at the 10% level.

Table D.5: Foreign Equity Share and Performance (Narrow Definition of Foreign Equity)

	(1) Sales growth	(2) Sales growth	(3) Sales growth	(4) Sales growth	(5) Sales growth (w/matching)
δ	1.669*	1.628	3.713**	1.657	1.980*
	(0.938)	(1.834)	(1.570)	(2.073)	(1.022)
Firm FE	No	No	Yes	Yes	No
Time FE	Yes	Yes	Yes	Yes	Yes
Group-specific time trend	No	Yes	No	Yes	No
N	70,337	70,337	70,337	70,337	70,337
R^2	0.097	0.097	0.111	0.111	0.115

Notes: Robust and clustered (at a sector-level) standard errors in parentheses.
*** Significant at the 1% level.
** Significant at the 5% level.
* Significant at the 10% level.

Table D.6: Foreign Equity Share and Firm Performance (EBIT / Total Assets)

	(1) EBIT / Total assets	(2) EBIT / Total assets	(3) EBIT / Total assets	(4) EBIT / Total assets	(5) EBIT / Total assets (w/matching)
δ	1.304*	0.570	1.618***	0.073	0.893
	(0.651)	(0.562)	(0.437)	(0.650)	(0.630)
Firm FE	No	No	Yes	Yes	No
Time FE	Yes	Yes	Yes	Yes	Yes
Group-specific time trend	No	Yes	No	Yes	No
N	63,032	63,032	63,032	63,032	63,032
R^2	0.456	0.456	0.437	0.437	0.444

Notes: Robust and clustered (at a sector-level) standard errors in parentheses.
*** Significant at the 1% level.
** Significant at the 5% level.
* Significant at the 10% level.

Table D.7: Foreign Equity Share and Net Investment

	(1) Net investment	(2) Net investment	(3) Net investment	(4) Net investment	(5) Net investment (w/matching)
δ	1.758**	-0.320	5.569***	-0.769	0.398
	(0.725)	(1.725)	(0.636)	(1.571)	(0.957)
Firm FE	No	No	Yes	Yes	No
Time FE	Yes	Yes	Yes	Yes	Yes
Group-specific time trend	No	Yes	No	Yes	No
N	69,261	69,261	69,261	69,261	69,261
R^2	0.057	0.057	0.105	0.106	0.052

Notes: Following Kalemli-Ozcan et al. (2019), the net investment rate is calculated as the annual change in fixed tangible assets. Robust and clustered (at a sector-level) standard errors in parentheses.
*** Significant at the 1% level.
** Significant at the 5% level.
* Significant at the 10% level.