

Discussion of M S Mohanty and Suresh Sundaresan's paper

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Summary

Madhusudan Mohanty and Suresh Sundaresan examine the importance of the legal rights of creditors on a firm's decision to hedge its foreign currency debt. They observe that firms sometimes hedge their foreign currency exposures and sometimes leave them unhedged. While there are a number of potential drivers of a firm's hedging decision, an important driver that has previously not been explored is the strength of the bankruptcy code and the rights of creditors in default. Mohanty and Sundaresan make an important contribution by highlighting the importance of bankruptcy laws to a firm's decision to hedge foreign currency exposures. They present a theoretical model of this choice with clear testable implications and then test the model in two very different empirical settings to show that bankruptcy laws matter for hedging decisions.

Theory tells us that firms should hedge foreign currency debt when bankruptcy is costly. While the motive to hedge foreign currency debt is strong at the time of debt issuance, the subsequent incentives would be to leave it unhedged because once debt is hedged, the default risk of debt goes down and this results in wealth transfers from shareholders to debtholders. Creditors, of course, understand these incentives. They would require higher spreads, shorter loan maturities and more covenants, and they would increase collateral requirements to compensate for the risks that come with unhedged exposures. Thus, not hedging FX debt avoids a wealth transfer from shareholders to creditors, while it also increases the risk of default.

The theoretical model in the paper suggests that, when creditor rights are strong, agency conflicts are smaller and the benefits of hedging will exceed the costs. By contrast, when creditor rights are weak, firms will leave their debt unhedged and offer higher spreads on foreign currency loans. The key testable predictions of the theory are (a) FX exposure will drive credit spreads; (b) FX exposures will be high when the cost of hedging is large; and (c) FX exposures will also be large when incentive conflicts between shareholders and creditors are large. The prediction is that borrowers are more likely to hedge FX debt when creditor rights are strong.

The paper tests the theory in two ways. First, it examines whether aggregate corporate spreads in a country contain information about the unhedged currency exposures of its firms. It shows that that credit spreads respond to exchange rate movements (after controlling for sovereign spread). It then regresses the estimated country-level FX exposures to creditor rights in a country. The results show that unhedged exposures are smaller in countries with strong creditor rights. In other words, firms hedge currency risks when creditor rights are strong. In addition, the depth of foreign exchange markets and the presence of natural hedges (as would be the case for exporting countries) also matter for currency hedging decisions. These are important results as they show that hedging decisions respond to both the costs and the benefits of hedging, with costs including not only the out-of-pocket costs of hedging but also incentive conflicts between shareholders and debtholders.

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These cross-country results are supplemented with a quasi-natural experiment around the enactment of the new insolvency and bankruptcy code in India in May 2016, which strengthened creditor rights. This shock to creditor rights is examined in a differences-in-differences setting to test if hedging incentives increased for high foreign currency debt firms (treatment) relative to firms with a low foreign currency debt ratio.

The paper finds a positive relationship between the new bankruptcy code and the probability of currency hedging by firms with a high share of foreign currency debt. The probability that firms with high foreign currency debt will hedge increased significantly after the new bankruptcy law came into effect in India. Among the factors playing a role in hedging decisions, the most important is the availability of a natural hedge through export revenues. Firms with a larger fraction of their sales in foreign currencies are more likely to issue unhedged debt. By contrast, growth opportunities significantly increase the likelihood of hedging currency and interest rate risk.

Comments

Mohanty and Sundaresan present a structural model of a firm with dollarised debt and with revenues produced in the domestic currency. The model yields several testable hypotheses relating a firm's hedging decisions to the legal provisions for bankruptcy, deadweight losses, and contract enforcement. I like the fact that the model, while simple, provides a rich setting to generate several testable predictions on how FX exposures drive credit spreads and how incentives to hedge depend on agency costs between creditors and shareholders and the lack of liquidity in hedging markets. The model yields the key testable prediction that a lack of enforcement of creditor rights can lead to greater FX exposure.

Empirical analysis: cross-country evidence

The rest of my comments focus on the empirical sections. I will start with a discussion of the cross-country evidence and then discuss the quasi-natural setting. As mentioned before, the first stage of the cross-country evidence is to estimate country-by-country regressions of the aggregate corporate spread over the sovereign spread and change in log exchange rates (where negative values imply depreciation of local currency against the foreign currency). The coefficient of interest is the coefficient on the change in exchange rates (FX exposures). If the local currency depreciates, foreign liabilities increase. This reduces a firm's net worth, thereby increasing corporate spreads. Thus, we would expect FX exposures to be negative if the foreign currency liabilities exceed foreign currency assets on corporate balance sheets.

To address the concern that reverse causality or omitted factors may be driving the correlation between corporate spread and exchange rate movements, the paper instruments exchange rate changes by gold prices and lagged exchange rates. The exclusion restriction is that these instruments affect corporate spreads only through contemporaneous exchange rate movements and not directly. However, one could think of gold prices directly correlating with macroeconomic variables that could directly affect spreads. Lagged exchange rates may also be driven by the same omitted factors that drive current exchange rate changes. It is unclear if the lagged value of exchange rates actually helps in isolating the causal effect of exchange rate changes on corporate spreads.

In the first stage results, we notice that about 60% of the countries have negative FX exposure coefficients. This is consistent with a depreciation of local currency increasing the probability of default and hence higher spreads. For the other 40% of cases, the exposure coefficients are positive. In these cases, local currency depreciation improves credit quality and leads to lower spreads. While we would expect this for countries with current account surpluses, the evidence is not so clear, as the exposure coefficients do not seem to be systematically related to the current account-to-GDP ratios. One possible explanation is that the specification is missing some variables that affect both exchange rate movements and corporate spreads. A possibility is that, in some countries, local currency depreciation results in stronger cash flows from export sales but also greater liabilities. The question is whether the effect on liabilities exceeds those on the assets. Thus, it may be appropriate to include additional variables such as the foreign-liabilities-to-GDP ratio and the export-to-sales ratio in the first stage regression.

The second stage is to regress the estimated absolute value of exposure coefficients (which measure the extent to which liabilities and assets remain unhedged) on creditor rights and other variables that affect hedging incentives of firms in a country. The key testable prediction is that hedging should increase with the strength of creditor rights. These results are consistent with the predictions of the model. However, the cross-country evidence presents interpretation challenges because of the omitted variables problem. For example, other country variables (GDP growth rate, for example) could be driving both creditor rights and the benefits and costs of hedging FX exposures.

Empirical analysis: quasi-natural experiment

The second experiment in the paper is to examine the effect of the new insolvency and bankruptcy code introduced in India in May 2016. How does the enactment of the new bankruptcy law, which strengthened creditor rights, change the incentives of affected firms to hedge foreign currency debt? This is an interesting empirical setting in which to examine the effect of creditor rights on such incentives. The paper explores whether the new bankruptcy had a meaningful impact on the propensity to hedge currency and interest rate risk on foreign currency debt. The analysis allows the authors to go deeper into firm-specific factors that affect hedging decisions. It also presents a clear identification strategy to isolate the impact of the change in the law from other institutional and industry-specific factors.

The law could be considered exogenous from the perspective of a firm and one could examine the effect of a shock to creditor rights on hedging decisions in a difference-in-differences setting. Mohanty and Sundaresan also have access to a unique data set from the Reserve Bank of India (RBI) taken from the reports that Indian firms are required to submit to the RBI when seeking approval to issue foreign currency debt. This is loan-level data with details about loans. Importantly, the data include the intention to hedge along with details of the hedging instrument that the firm plans to use.

The challenge with this empirical setting is that the law affected all firms. So, how do we factor out the effect of macroeconomic changes in driving hedging intentions? The strategy adopted in the paper is to classify firms with more foreign currency debt as treatment firms (these firms are expected to increase their hedging of foreign currency debt) and use the low foreign currency debt firms as controls. The difficulty here is that creditor rights became strong for both sets of firms. If intention to hedge

increases due to changes in other macroeconomic variables contemporaneous with the enactment of the new law, and if these macroeconomic factors affected high foreign-currency debt firms more than control firms, then we would naturally expect high foreign currency debt firms to hedge more than low foreign currency debt firms do. While these caveats should be kept in mind in interpreting results, the findings are nevertheless very interesting. We see that the intention to hedge significantly increased for high foreign currency debt firms after the enactment of the law relative to low foreign currency debt firms.

The paper could also examine loan spreads in more detail. The question is whether loan spreads decline when firms decide to hedge their foreign currency debt, all else equal. Once we have a model that determines which firms hedge, then we can use econometric techniques to figure out what the spreads would have been if the firms that actually hedged their foreign currency debt had decided not to hedge. The summary statistics show that yield spreads are higher for debt that is likely to be hedged compared to debt that is not to be hedged. However, this is not a meaningful comparison because of self-selection. It is quite likely that riskier firms are more likely to hedge and that they also have to pay higher spreads. We don't have a counterfactual here since we don't know what the spreads would have been if these firms had decided not to hedge. But, it would be possible to use selection models to make headway on this question.

Conclusion

The paper raises the important research question of why firms keep their foreign currency borrowing unhedged. Many emerging market economy firms do not hedge their dollar borrowing. Is this connected with bankruptcy law provisions, illiquid FX hedging markets, or natural hedges that firms have through their operations? How important are creditors' rights in a firm's decision to hedge? It is important for both academics and policymakers to understand hedging incentives and why currency mismatches exist.

The paper shows how bankruptcy law affects the incentives of firms to hedge currency exposures on their foreign debt. The unhedged exposures affect default risk and hence credit spreads. A contribution of the paper is to show that an important channel through which creditors' rights affect spreads is by affecting the incentives of firms to hedge their foreign currency exposures. This is an important result.

The paper also contributes to the literature on why firms hedge. It provides new results on the importance of FX derivative markets, natural hedges, and growth opportunities on incentives to hedge FX risks. The paper provides an important link between bankruptcy law, incentive conflicts between different claimants, and firms' hedging decisions.