

# DISSERTATION PROPOSAL

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## **Essays in Financial Economics: CDS and Sovereign Bond Market Liquidity, CDS as Sovereign Debt Collateral, Currency Risk and Pricing Kernel Volatility**

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341-H Posner Hall

The first essay studies how naked credit default swaps (CDS) trading affects liquidity of the underlying bond market. A central policy debate during the recent sovereign debt crisis in Europe became whether to ban naked CDS trading, and how that would affect liquidity of the underlying bond market. This paper builds a search model of bond and CDS markets and shows that naked CDS trading improves bond liquidity. The ability to simultaneously search and trade in the CDS market lowers the opportunity cost of searching for a trade in the bond market. As a result, the existence of naked CDS buyers has a positive externality in the bond market by attracting traders into both the CDS and the bond market and, thereby, lowering search frictions in the bond market. The model mechanism helps to reconcile contradictory empirical patterns of how liquidity in sovereign bond markets changed following naked CDS bans in Europe.

The second essay studies the effects of covered CDS on sovereign issuers and shows that CDS can serve as collateral and thereby support more sovereign borrowing. A defining friction of sovereign debt is the lack of collateral that can back sovereign borrowing. By giving more bargaining power to lenders in ex-post debt renegotiations, CDS becomes a commitment device for lenders to extract more repayment from the debtor country. This ex-post disciplining effect during debt renegotiations better aligns the sovereign's ex-ante incentives with that of the lender. As a result, CDS alleviates agency frictions that are present in any lending contracts but are particularly difficult to mitigate in sovereign debt context.

The third essay (joint with Federico Gavazzoni and Chris Telmer) investigates empirical predictions of lognormal asset pricing models. A basic tenet of lognormal asset pricing models is that a risky currency is associated with a low pricing kernel volatility. Empirical evidence implies that a risky currency is associated with a relatively high interest rate. Taken together, these two statements associate high-interest-rate currencies with low pricing kernel volatility. We document evidence suggesting that the opposite is true. We approximate the volatility of the pricing kernel with the volatility of the short-term interest rate. We find that, across currencies, relatively high interest rate volatility is associated with relatively high interest rates. This contradicts the prediction of lognormal models. One possible reason is that our approximation of the volatility of the pricing kernel is inadequate. We argue that this is unlikely, in particular for questions involving currencies. We conclude that lognormal models of the pricing kernel are inadequate for explaining currency risk and that future work should place increased emphasis on distributions that incorporate higher moments.