

Semivariance and Semiskew Risk Premiums in Currency Markets *

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Abstract

Using the model-free methodology proposed in the literature, a variance and skew swaps are extracted from currency options for several foreign exchange rates. Moreover, the variance and skew swaps can be decomposed into semivariance and semiskew swaps, these semiswaps are conditional to the evolution of the foreign exchange rate, and it is shown to have higher explanatory power for currency excess return. These semivariances enable the definition of a variance-skew swap that also possesses some explanatory power but is less informative than the semivariance swaps. From these quantities higher moment semirisk premiums can be computed and measure how tail risks are priced by the market. These semivariance and semiskew swaps are more informative than the standard or undecomposed variance and skew swaps, a result that contrasts with existing results for the equity index option market. This property seems to be related to the stochastic skewness nature of the smile that is specific to the currency market. Also, results show that crash risk extracted from currency options is short lived suggesting that foreign exchange long term views are better captured by second order related moments.

JEL Classification: G11; G12; G13

Keywords: Variance risk premium, Variance-skew risk premium, Skew risk premium, Semi-measures, Currency risk premium.

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