Expected Currency Depreciation upon Sovereign Default

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September 2018

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- Looks at determinants of ICD
  - negatively related to sovereign CDS
  - positively related to FX option-implied vols
  - negatively related to realized local equity market returns
  - negatively related to measures of liquidity in funding markets

Predictive Regressions

	1 week	1 month	3 months	6 months	1 year
Panel A: no controls					
ICD_t	0.749**	0.673*	0.667***	0.840***	0.691***
t-stat	[1.963]	[1.905]	[2.691]	[3.656]	[5.477]
R^2	0.008	0.031	0.103	0.314	0.378
N	1663	1647	1605	1542	1416
Panel C: controlling for liquidity					
ICD_t	0.802**	0.644*	0.646**	0.861***	0.689***
t-stat	[2.073]	[1.825]	[2.465]	[3.655]	[6.488]
R^2	0.013	0.056	0.125	0.330	0.459
N	1635	1619	1577	1514	1388
Panel E: controlling for global factors					
ICD_t	0.783**	0.673*	0.715***	0.920***	0.713***
t-stat	[2.013]	[1.893]	[2.833]	[3.978]	[5.383]
R^2	0.017	0.031	0.111	0.340	0.359
N	1605	1589	1547	1484	1358

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Panel B: controlling for IRD					
ICD_t	0.794**	0.670*	0.716***	0.933***	0.683***
t-stat	[2.039]	[1.888]	[2.903]	[4.180]	[4.566]
R^2	0.009	0.029	0.115	0.375	0.391
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Panel D: controlling for uncertainty					
ICD_t	0.984**	0.766**	0.839***	1.030***	0.548***
t-stat	[2.416]	[2.252]	[3.720]	[8.103]	[2.762]
R^2	0.023	0.090	0.292	0.652	0.503
N	1377	1361	1319	1256	1130
Panel F: controlling for all					
ICD_t	0.986**	0.726**	0.840***	1.080***	0.569***
t-stat	[2.408]	[2.199]	[3.724]	[10.053]	[5.367]
R^2	0.039	0.154	0.390	0.755	0.644
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- Impementable trading strategy: distribution of returns of such strategy, Sharpe ratio, maximum draw-down, etc?
- OOS tests of forecast accuracy
  - vs. random walk model (done in the paper)
  - vs. VRP predictive model
  - how about using VRP + ICD?

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- Why not using country i's GDP as explanatory variable? Large country default should have larger impact on EUR/USD than small country default, everything else equal

ICD_T Definition/Interpretation

- Basic model
  - P_i: all-upfront CDS premium (in % of initial notional) for contract in currency i
  - X: exchange rate (EUR/USD)
  - R: recovery rate upon credit event
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- Thus, ICD_T defined as:

$$ICD_T = 1 - \frac{P_{EUR,T}}{P_{USD,T}} = 1 - \frac{\hat{\mathbb{E}}\left[e^{-\int_0^\tau r_s ds}(1-R)\frac{X_\tau}{X_0}|\tau < T\right]}{\hat{\mathbb{E}}\left[e^{-\int_0^\tau r_s ds}(1-R)|\tau < T\right]}$$

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- ICD_T does not measure the difference between (a) the FX rate conditional on a default and (b) the FX rate conditional on no default within T periods

Potential Issues with ICD Interpretation

- Assume $r_t = r$ is constant, but assume some correlation between R and X_t

$$ICD_T = 1 - \frac{\hat{\mathbb{E}}\left[(1-R)\frac{X_\tau}{X_0}|\tau < T\right]}{\hat{\mathbb{E}}\left[1-R|\tau < T\right]} = \hat{\mathbb{E}}\left[\frac{X_0 - X_\tau}{X_0}\middle|\tau < T\right] + \frac{\hat{\text{cov}}\left(R, \frac{X_\tau}{X_0}|\tau < T\right)}{1 - \hat{\mathbb{E}}\left[R|\tau < T\right]}$$

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- Magnitude of that term? Assume

$$\begin{aligned}
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- Correction term $\approx 0.80\%$ small. Good!

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- Change in standard ISDA definitions (2003 vs. 2014, which trades wider)