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Discussion | Global Risks in the Currency Market
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ABFER 6th Annual Conference

Singapore

24 May, 2018

Background to Currency Risks

- An important recent literature in foreign exchange markets has taken great strides in deepening our understanding of currency excess returns
- Lustig, Roussanov and Verdelhan (*RFS*, 2011)

$$E\left[R_{i,t+1}\right] = \beta_{i,1}\lambda_{dol} + \beta_{i,2}\lambda_{slope}$$

→ currency excess returns can be understood in a standard linear return-beta relationship once currency-specific factors are developed

→ two currency-specific factors can account for the cross-section of currency excess returns:

1. a "dollar" factor: average return of all currencies against USD
2. a "slope" factor: return on the currency carry trade

But let's take a deeper look…

Currency-Specific Risk Factors

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→ $\beta_{i,2}$ will vary substantially

Currency-Specific Risk Factors

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$$E\left[R_{i,t+1}\right] = \beta_{i,1}\lambda_{dol} + \beta_{i,2}\lambda_{slope}$$

Interpretation: "domestic" risk premium. E.g., a "dollar" risk premium for the U.S. investor. Compensates for "home country risk"

→ "yen" risk premium for Japanese investor, "sterling" risk premium for British investor etc…

→ In the paper's theory, $\beta_{i,1}$ equals 1 no matter which FX is purchased

Interpretation: "global" risk premium. Non-diversifiable common risk to which countries have heterogenous exposure

→ $\beta_{i,2}$ will vary substantially

A Can of Worms?

- Verdelhan (*JF*, 2018)
- The "dollar" factor is a global factor
  - Not all currencies have a beta of 1 on the dollar factor
  - Sorting currencies by their dollar beta generates a large spread in average currency excess returns
  - But what about the previous home factors?
    - Are the yen factor, sterling factor, Kazakhstan tenge factor all global (systematic) factors as well? Is this the new "factor zoo"?

This Paper

- So where does this paper fit in this story?
- Re-examines the role of the "dollar" factor as a global factor
  - But takes a different approach to Verdelhan (*JF*, 2018)
  - Uses numeraire invariant test portfolios
  - Unconventional approach but I like it!
    - Quasi *domestic* experimental setting

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Example 1: Buy $1 Facebook share

American investor gross return:

$$(1+r)$$

Japanese investor gross return:

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Example 1: Buy $1 Facebook share

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- Example 2: Buy $1 Facebook share and short sell $1 Apple share
- **American** investor gross return:

$$(1+r_{FB}) - (1+r_{AAPL})$$

- **Japanese** investor gross return:

$$(1+r_{FB})(1+e) - (1+r_{AAPL})(1+e)$$

$$\approx (1+r_{FB}) - (1+r_{AAPL})$$

This Paper

Main Findings

1. "Dollar" factor is important for explaining currency excess returns
2. But not all the time!
3. There is a regime structure in the pricing ability of the "dollar" factor.
   - The "dollar" factor determines currency excess returns only when the U.S. interest rate is relatively low (i.e, when AFD>0)

The Rise and (unexpected) Fall of the Dollar Factor

Primary issue: confusion over the central message of the paper

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Rise of the Dollar factor

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Rise of the Dollar factor

Empirical. Q. How successful is the "dollar" factor?

A. Good (at times) → regime model

	full				$AFD < 0$ (high US int. rate)				$AFD > 0$ (low US int. rate)			
trades	corr.	β_{5-th}	β_{95-th}	sign.	corr.	β_{5-th}	β_{95-th}	sign.	corr.	β_{5-th}	β_{95-th}	sign.
45	0.75	0.07	0.24	(45)	0.05	-0.28	-0.11	(38)	0.73	0.15	0.33	(45)
10	0.80	0.10	0.22	(10)	0.12	-0.27	-0.13	(10)	0.75	0.17	0.33	(10)
120	0.66	0.03	0.25	(105)	-0.07	-0.30	-0.06	(90)	0.69	0.10	0.35	(120)

The Rise and (unexpected) Fall of the Dollar Factor

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Theoretical. Q. Can a modified version of Lustig et al. (2014) account for these results?

A. Yes! Simulations of the model match up well.

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Fall of the Dollar factor

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Fall of the Dollar factor

- Efforts are made to then distance the "dollar" factor from the model

"…the dollar's pricing ability is built mechanically into the modified LRV model, hence the dollar factor (DOL) may not represent a separate source of global risk"

- A search begins for new factors among a large set of candidates

"global risks still present a challenge to the empirical research of the currency markets"

Suggestions

1. Can the analysis be framed in a different way? *i.e., don't throw the baby out with the bathwater.*
   - We know the "dollar" factor is not the real fundamental factor (it's a proximate factor). But why down play it's pricing ability?
   - Perhaps better to ask: what are the macro-fundamentals driving the time-variation in the importance of the dollar factor?

Suggestions

1. Can the analysis be framed in a different way? *i.e., don't throw the baby out with the bathwater.*
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2. Can this help tame the "home-country/systematic" factor zoo?
   - We don't want 175 different "home country" global factors
   - Is Dollar the only "home country risk" really worth considering a "global" factor? Use the numeraire invariant portfolios to rule out others.
   - If so, can that tell us something new about the "yen" factor, "sterling" factor, "tenge" factor etc?

Conclusions

- I enjoyed reading the paper. Must read for anyone interested in better understanding currency returns
- Clever idea to use zero-cost portfolios – turns global asset pricing question into a domestic asset pricing question since everyone has the same returns.
  - Could more be done to exploit this technique?
- Interesting new findings on the "dollar" factor. Contributes to recent evidence (Verdelhan, *JF* 2018).
- But I found the final message surprising/confusing. Seems to build a new/ alternative case for the dollar factor only to then discard it.
  - Could the message focus on fundamentals of the dollar factor?