Discussion of
"The Returns to Currency Speculation"

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UIP

- Uk interest rate $= 5\%$, US interest rate $= 2\%$. Invest in UK?

  1. Naive: Yes, Make 3% more

  2. Traditional: No, Pound will depreciate 3% (on average)

  3. Fact: Pound seems to go *up!*

  4. Evidence

$$\$ \text{ Return}_{t+1} = a + b(R_t^f - R_t^d) + \varepsilon_{t+1}$$

     $b \geq 1$. Small R^2, but still you make money.

  5. Economically large: *All* interest differential (and more?) is expected return, *none* expected depreciation (≤ 1 year)

- This paper:

  1. Confirm and update evidence

  2. Sharpe ratio is large, survives quoted bid/ask spreads

  3. Merge with new, fascinating flow/price, "downward sloping demand" literature.

- Conclusion: "Price impact" is large, *marginal* Sharpe ratio is zero.

Evidence

Con: Much to do. i in a_i is important. Pooled or cross-sectional does *not* work.

$$\$ \text{ Return}^i_{t+1} = a_i + b_i(R^i_t - R^d_t) + \varepsilon^i_{t+1};\ t = 1, 2, ...T$$

Pro:

- Common pattern across all assets:
  1. Dividend yield forecasts stock returns
  2. Long yield - short yield forecasts long-short bond returns
  3. Foreign - domestic yield forecasts foreign - domestic returns

- More in common with stocks, bonds

  1. "Follow yield," "All price variation = ER"

  2. "Missing adjustment" (short run, i.e. ≤ 1 year)

  3. All together.

     (a) "Bad times", P/D is low, R^f is low $\rightarrow R^f < R^{(10)}$, $R^{f,US} < R^{f,UK}$.

     (b) All risk premia are high.

  4. Cross-predictability?

     (a) R^f, term spread, bond forecast factor also forecast stock excess returns

     (b) One common forecaster, as in bonds? Term $\rightarrow$ fx?

- In sum:

  1. Pervasive common pattern makes FX phenomenon believable.

  2. But.. Common timing & pattern needs common explanation. *All* microstructure, limits to arbitrage?

Is "Price impact" large, marginal Sharpe Ratio 0?

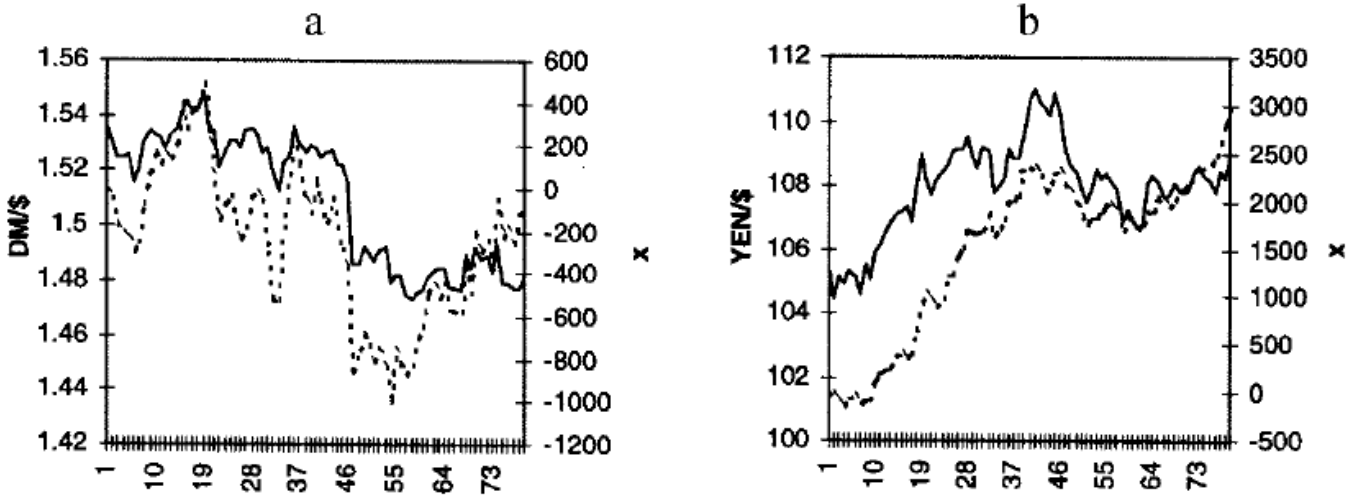


FIG. 1.—Four months of exchange rates (solid) and cumulative order flow (dashed), May 1–August 31, 1996: *a*, deutsche mark/dollar; *b*, yen/dollar.

- Fact: *Net* order flow *is associated with* price changes. ("order flow" not "trades")

- Don't jump to: *Any* order *causes* price changes.

"A buy order of 1 billion dollars increases the execution spot exchange rate by 0.54 percent" (p.20, top.)

1. Price and order flow: correlation or causation?

- Association of Δp with order flow: "Price pressure" (trade$\longrightarrow \Delta p$) or "Price discovery" ($\Delta p \longrightarrow$trade)?

- Regress $y_{t+1} - y_t$ on net order flow (daily data, Brandt and Kavajecz 2004 JF)

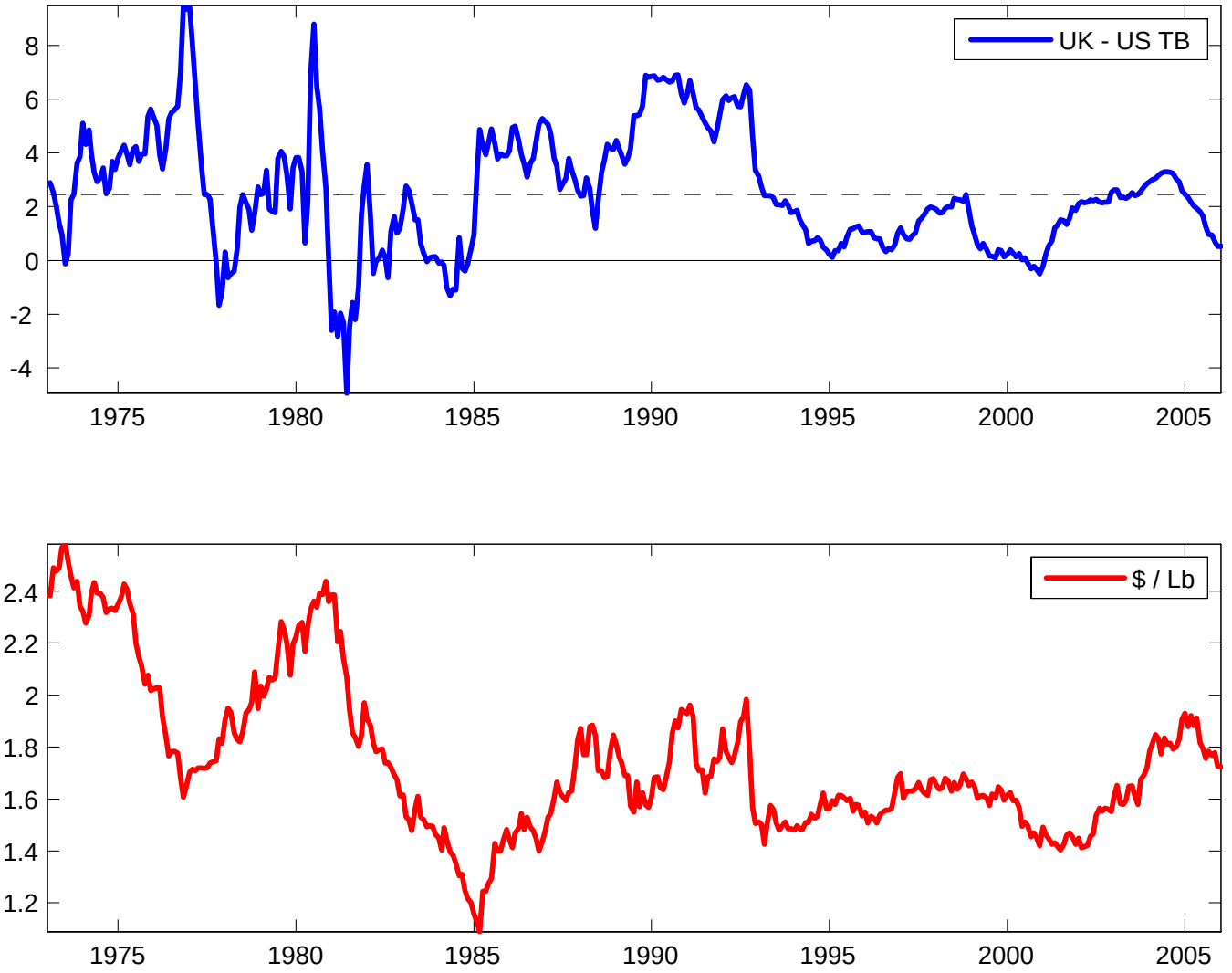
  1. *Price change of off-the-run bonds is associated with on-the-run order flow.*

	Own Net Orderflow by Maturity (×100)						On-the-run Net Orderflow by Maturity (×100)					
Maturity	0–6 months	6–12 months	1–2 years	2–5 years	5–10 years	10–30 years	0–6 months	6–12 months	1–2 years	2–5 years	5–10 years	10–30 years
Just off-the-run												
0–6 months	−0.13	−0.04	−0.06	−0.03	−0.02	0.46*	−0.21***	−0.37***	−0.69**	0.43**	−0.28	−0.30
6–12 months	−0.80*	0.15	−0.16	0.08	−0.04	0.15	−0.15**	−0.56***	−0.47***	−1.08***	−0.54	−0.34
1–2 years	−0.42	0.00	−0.31	−0.04	−0.46*	−0.64*	−0.61**	−0.52**	−0.99***	−1.77***	−0.98**	−0.45*
2–5 years	−0.70	−0.01	−0.59	0.33	0.11	−0.02	−0.42**	−0.40**	−0.82**	−1.32**	−1.25***	−0.72**
5–10 years	0.25	−0.10	−0.59	−0.35	−0.33	−0.40	−0.93**	−0.32	−0.57	−1.00***	−1.46***	−1.08**
10–30 years	−0.24	0.37*	−0.55	0.21	0.02	−0.03	−0.02	−0.55*	−0.33	−1.39**	−1.09***	−1.13***

  2. *Price change of each bond is driven by 2-5 year order flow.*

- $\longrightarrow$Association of Δp, net order flow need not measure "price impact" of a trade

2. Carry trade is long term, slow moving



- "Carry trade" goes on *for many years at a time.* Easy to sneak on a position!

-(Looks just like interest rates. a_i is vital.)

3. **Gross and Net, Swaps**

- *Gross* volume, order flow is huge compared to *net* order flow associated with Δp.
  1. Evans and Lyons 1999: DM/$ average $300billion/day!
  2. Does each billion push exchange rates by 0.5%?

- Most fx trading is high frequency bets.
  1. Any "asymmetric information," "price impact" is about day to day movements, not interest differentials.
  2. Easy to hide "carry trade" in this.

- Don't have to buy billions of spot or forward currency!
  1. Simple cash-settled return swap: I agree to pay you $ *interest*, you agree to pay me $\mathcal{L}$ *interest*. No up-front payment, only interest *difference* changes hands ex-post.
  2. Transactions costs, yes, but do not swallow up 2-3% interest differentials!

Summary

- Phenomenon is economically large: all (and maybe more) interest rate spread is expected return, none expected depreciation. (1 year and less horizon).

- Paper: "price impact" is large, marginal sharpe ratio is zero, this does not measure an economically interesting risk premium

- Big question: $R^{UK} = 5\%$, $R^{US} = 2\%$

  1. Nobody (else) *wants* to buy $\mathcal{L}$? (Risk premium)

  2. Nobody (else) *can* buy $\mathcal{L}$? (This paper)

- My doubts:

  1. Then why common pattern, timing across assets?

     (a) Price impact in stocks, bonds too?

     (b) Just happens to be associated with relative business cycles ($R^{UK} - R^{US}$)?

  2. Is the price impact of carry trades really so large?

     (a) Flow-price *association* does not mean *price impact.*

     (b) Even if there is impact, positions are very slow moving –years.

     (c) $\rightarrow$Easy to hide such trades in 1 trillion/day volume of speculators.

  3. Even if spot or forward price impact is large, implement with swaps, etc.

- Order flow/price change, "downward sloping demands," "liquidity" are fascinating, and may have big impacts on non-microstructure finance. Just not on this issue.