Discussion of: "The Share of Systematic Variation in Bilateral Exchange Rates", by Adrien Verdelhan

Barbara Rossi
ICREA-UPF, BGSE and CREI

ECB Conference, 2013

Plan

- Very much enjoyed reading the paper!

- **Selective Review of Results**

- Ideas

Contributions of this paper

- I. Are risk factors capable of explaining exchange rate movements?

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- II. Why should we care?

Review: Risk Factors

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- 2) A new "Dollar Risk Factor"

Review II: Estimating the Risk Factors

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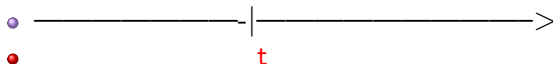
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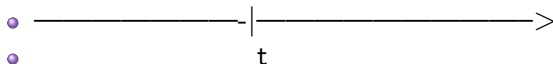
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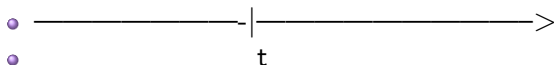 - [P1 | P2 | P3 | P4 | P5 | P6 | P7 | P8]

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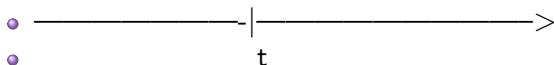 - [P1 | P2 | P3 | P4 | P5 | P6 | P7 | P8]
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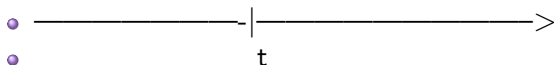 - $\forall t$, order countries in Portfolios according to their interest rate level
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- I. Are risk factors important in explaining exchange rates? Yes (reassuring)

$$\Delta s_{i,t+1} = \alpha + \beta i_t^{diff} + \delta Carry_{i,t+1} + \tau Dollar_{i,t+1} + \gamma i_t^{diff} Carry_{i,t+1} + \varepsilon_{t+1}$$

Table 2: Carry and Dollar Factors: Monthly Tests in Developed Countries

Country	α	β	γ	δ	τ	R^2	$R_\$^2$	$R_{no\,\$}^2$	W	N
Australia	0.07	-0.44	0.77	0.16	0.74	25.59	20.05	7.71	***	312
	(0.23)	(0.60)	(0.49)	(0.13)	(0.13)	[5.77]	[5.72]	[4.31]		
Canada	-0.11	-0.02	-0.61	0.21	0.34	19.38	13.11	8.14	***	312
	(0.11)	(0.63)	(0.42)	(0.06)	(0.07)	[6.94]	[4.34]	[4.97]		
Denmark	-0.01	-0.20	0.53	-0.16	1.51	86.08	83.63	3.97	***	312
	(0.07)	(0.38)	(0.13)	(0.03)	(0.04)	[1.67]	[2.03]	[3.99]		
Euro Area	0.07	-0.52	0.10	-0.28	1.62	80.60	76.22	-0.05	***	143
	(0.11)	(0.86)	(0.23)	(0.05)	(0.08)	[3.58]	[3.99]	[4.81]		
France	-0.15	-0.10	0.80	-0.13	1.38	90.97	87.58	12.30	***	181
	(0.07)	(0.34)	(0.14)	(0.03)	(0.04)	[1.48]	[1.93]	[5.90]		
Germany	-0.21	-0.03	0.79	-0.03	1.42	91.00	88.35	22.83	***	181
	(0.09)	(0.34)	(0.17)	(0.04)	(0.04)	[1.36]	[1.75]	[6.20]		
Italy	-0.03	0.26	0.68	-0.07	1.24	68.97	64.59	2.16	***	177
	(0.22)	(0.69)	(0.20)	(0.11)	(0.10)	[5.25]	[6.92]	[6.13]		

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  - Typically its explanatory power is low or coefficient have wrong sign
  - **=> This paper shows that risk factors do have in-sample explanatory power**

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- **Ideas**

- The paper uses carry risk factors based on grouping countries on the basis of their interest rate differentials relative to the benchmark country

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  - Taylor rule fundamentals (Taylor rule interest rate differentials)
  - external imbalances
  - etc... (see Rossi, 2013, for a recent overview)

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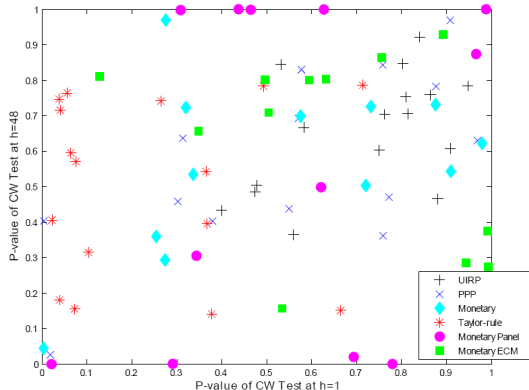Figure 8. In-sample Predictive Ability of Economic Models
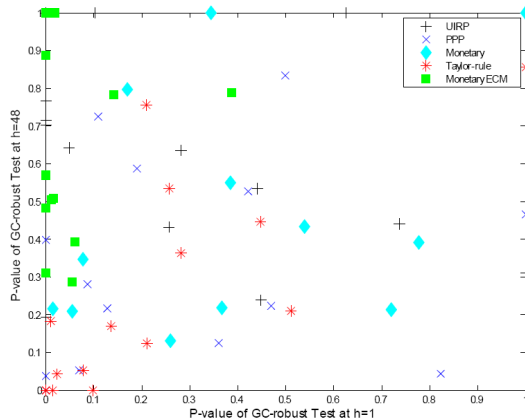
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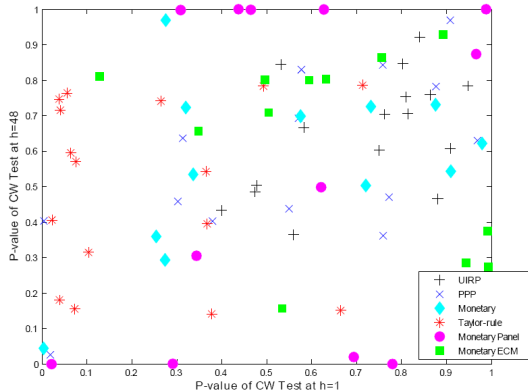- The predictive ability remains out-of-sample as well

Figure 7. Out-of-sample Predictive Ability of Economic Models

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- => It might be interesting to evaluate whether they are useful in this context as well...?

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  - (The author obviously has thought of this, and he looks at factors extracted from exchange rates and compares it with the "Dollar factor" in the appendix... it might be interesting to examine factors extracted from exchange rates and interest rates jointly or separately and see how they compare with both risk factors).

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  - Why not using the random walk without drift benchmark?

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- I enjoyed reading it and also learning more about the carry trade literature in general!