

Dollar Prospects: Do Fundamentals Really Matter?

David E. Rapach Jack K. Strauss

Department of Economics, Saint Louis University

Simon Center for Regional Forecasting, Saint Louis University

Slides available at

<http://pages.slu.edu/faculty/rapachde/Research.htm>

(Last revision of slides: October 23, 2008)

Simon Center for Regional Forecasting Conference
October 23, 2008

- Exchange rate forecasting is still haunted by the specter of Meese and Rogoff (1983)
 - Models based on **fundamentals** cannot beat the naïve driftless random walk (**no change**) forecast
- Some progress has been made, however
 - Evidence has accumulated that exchange rates are predictable at **long** horizons (2–5 years)
 - Qualification: Thorny statistical issues make it more difficult to judge long-horizon predictability
 - Short-horizon predictability (1 year or less) still appears very limited or nonexistent
- Overall, do fundamentals matter for forecasting dollar exchange rates?
 - In light of the literature and the results we present here, in true academic fashion, we unequivocally say, “**Sort of**”

- Purchasing Power Parity (PPP)
 - Law of one price writ large
 - Relative price levels
- Harrod-Balassa-Samuelson (HBS)
 - Relative price levels (following PPP)
 - Productivity differences
 - Relative price of tradable vs. nontradable goods
- Uncovered Interest Parity (UIP)
 - Interest rate differentials
- Monetary model
 - Relative money supplies
 - Relative real income levels
- Equity market variables
 - Relative dividend yields
 - Relative volatility

- Cyclical External Imbalance
 - Country's external constraint has implications for exchange-rate dynamics
 - Trade and valuation channels
- Taylor rule
 - Relative inflation rates
 - Relative output gaps

Forecasting Results, 1983:1–2008:1

Relative RMSFE: Fundamental-Based Model vs. RW 1-Quarter Horizon

Model	AUS	CAN	CHE	DEU	GBR	JPN
PPP	1.040	1.016	0.994	0.999	1.035	1.002
HBS	1.043	1.024	1.000	1.004	1.040	1.007
UIP	1.047	1.024	0.998	1.013	1.015	0.979
Monetary	1.048	1.008	1.009	1.026	1.051	1.011
Relative D/P	1.041	0.993	1.007	1.022	1.033	1.026
Relative MV	1.013	1.022	1.018	1.020	1.034	1.002
NXA	1.040	1.031	1.039	1.041	1.073	0.978
Taylor rule	1.032	1.024	1.006	1.013	1.025	0.998
Combine	1.026	1.006	0.993	1.001	1.024	0.990

Forecasting Results, 1983:1–2008:1

Relative RMSFE: Fundamental-Based Model vs. RW 1-Year Horizon

Model	AUS	CAN	CHE	DEU	GBR	JPN
PPP	1.107	1.080	0.987	0.972	1.159	1.131
HBS	1.095	1.105	1.011	1.000	1.144	1.173
UIP	1.033	1.108	1.027	1.092	1.091	1.023
Monetary	1.152	1.109	1.036	1.265	1.268	1.075
Relative D/P	1.072	0.983	1.035	1.041	1.165	1.114
Relative MV	1.056	1.059	1.069	1.073	1.100	1.055
NXA	1.133	1.124	1.052	1.065	1.252	0.941
Taylor rule	1.071	1.093	1.060	1.079	1.084	1.008
Combine	1.065	1.028	0.989	1.020	1.089	0.986

Forecasting Results, 1983:1–2008:1

Relative RMSFE: Fundamental-Based Model vs. RW 2-Year Horizon

Model	AUS	CAN	CHE	DEU	GBR	JPN
PPP	1.157	1.111	0.927	0.848	1.405	1.294
HBS	1.155	1.141	0.948	0.910	1.382	1.231
UIP	1.106	1.159	1.078	1.233	1.176	1.076
Monetary	1.192	1.045	1.012	1.717	2.316	1.123
Relative D/P	1.130	1.109	1.036	1.009	1.350	1.151
Relative MV	1.119	1.110	1.092	1.206	1.212	1.057
NXA	1.165	1.145	0.920	0.953	1.270	0.919
Taylor rule	1.132	1.170	1.101	1.068	1.180	1.011
Combine	1.103	1.045	0.930	0.968	1.197	0.951

Forecasting Results, 1983:1–2008:1

Relative RMSFE: Fundamental-Based Model vs. RW 3-Year Horizon

Model	AUS	CAN	CHE	DEU	GBR	JPN
PPP	1.151	1.138	0.717	1.085	1.183	1.038
HBS	1.123	1.072	0.777	1.030	1.464	1.022
UIP	1.288	1.206	1.212	1.449	1.437	1.135
Monetary	1.311	0.936	0.960	2.097	3.523	1.167
Relative D/P	1.193	1.148	1.014	0.944	1.361	1.122
Relative MV	1.166	1.177	1.113	1.279	1.304	1.059
NXA	1.174	1.174	0.860	0.903	1.218	0.967
Taylor rule	1.215	1.221	1.073	1.013	1.195	0.991
Combine	1.138	1.031	0.809	0.747	1.294	0.912

Forecasting Results, 1983:1–2008:1

Relative RMSFE: Fundamental-Based Model vs. RW 4-Year Horizon

Model	AUS	CAN	CHE	DEU	GBR	JPN
PPP	1.165	1.145	0.697	1.273	1.201	1.201
HBS	1.043	0.948	0.787	1.112	1.800	1.139
UIP	1.236	1.184	1.546	1.541	2.109	1.533
Monetary	1.434	0.923	1.007	2.709	4.000	1.350
Relative D/P	1.192	1.258	0.955	0.992	1.385	1.107
Relative MV	1.264	1.248	1.117	1.302	1.261	1.024
NXA	1.190	1.213	0.853	0.968	1.241	0.955
Taylor rule	1.262	1.292	1.081	1.002	1.340	0.973
Combine	1.119	0.987	0.682	0.613	1.402	0.932

Dollar Prospects (?)

Combination Forecasts Based on Fundamentals Available Through 2008:1 (US\$/FC)

Model	AUS	CAN	CHE	DEU	GBR	JPN
2008:1	0.9180	0.9729	1.0060	1.5813	1.9890	0.0095
2008:4	0.8985	0.9663	1.0103	1.5758	1.9632	0.0097
2009:4	0.8528	0.9519	1.0048	1.5578	1.9050	0.0100
2010:4	0.8137	0.9347	1.0103	1.5629	1.8525	0.0105
2011:4	0.7813	0.9174	1.0255	1.5846	1.8056	0.0110
10/2/2008	0.6713	0.7994	0.8623	1.2865	1.6335	0.0102