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Estimation of De Facto Exchange Rate Regimes: Synthesis of the Techniques for Inferring Flexibility and Basket Weights

Discussion by

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Comments on: "Estimation of De Facto Exchange Rate Regimes: Synthesis of the Techniques for Inferring Flexibility and Basket Weights" Jeffrey Frankel and Shang-Jin Wei

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- Exchange rate regimes matter
- Much work focused on identifying them
- Particularly at IMF

Jeff and Shang-Jin's Contribution

- Some countries target a basket of currencies
- Methodology for simultaneously identifying currency weights and exchange rate flexibility

Frankel-Wei Basic Specification

$$\%\Delta(E^{SDR/thb}) = C$$

$$+ \; [\; w1*\%\Delta(E^{SDR/Jap.}) + w2*\%\Delta(E^{SDR/\$US}) + (1-w1-w2)*\%\Delta(E^{SDR/UK}) \;]$$

$$+ \; \beta*[\; \%\Delta(E^{SDR/thb}) + \%\Delta R \;]$$

Frankel-Wei Basic Estimates of β approx. 2000–2004

1. Indonesia	.736	11. Russia	.101
2. Chile	.675	12. Malta*	.073
3. Botswana*	.636	13. China	.035
4. Mexico	.398	14. Fiji*	.031
5. Thailand	.368	15. Norway	.029
6. Canada	.366	16. Seych.*	.029
7. Pap. N.G.*	.308	17. Latvia*	.009
8. Australia	.175	18. Denmk.	.001
9. Samoa*	.161	19. Malaysia	0
10. Vanuatu*	.104	20. HK	-.027

* IMF-designated basket-peg

Hypothesis #1 for too-low beta: endogeneity of $\%\Delta(E^{SDR/thb})$

$$\%\Delta(E^{SDR/thb}) = C$$

$$+ \; [\quad w1*\%\Delta(E^{SDR/Jap.}) + w2*\%\Delta(E^{SDR/\$US})$$
$$+ (1-w1-w2)*\%\Delta(E^{SDR/UK}) \;]$$

$$+ \; \beta*[\; \%\Delta(E^{SDR/thb}) + \%\Delta R \;]$$

Hypothesis #2 for too-low beta: faulty restriction that currency coefficients sum to one

$$\%\Delta(E^{SDR/thb}) = C$$

$$+ \; [\; w1 * \%\Delta(E^{SDR/Jap.}) + w2 * \%\Delta(E^{SDR/\$US})$$
$$+ (1-w1-w2) * \%\Delta(E^{SDR/UK}) \;]$$

$$+ \; \beta * [\; \%\Delta(E^{SDR/thb}) + \%\Delta R \;]$$

Un-Restricting the Currency Weights
Canada 2002-2005

	Frankel-Wei	Kamin	Kamin Unrestricted
JPY	.324	.201	-.061
USD	.449	.784	.024
EUR	.337	.322	-.360
GBP	-.110	-.306	-.527
EMP	.366	.441	.462

Un-Restricting the Currency Weights
Australia 2000-2003

	Frankel-Wei	Kamin	Kamin Unrestricted
JPY	.250	.221	.449
USD	.294	.397	.941
EUR	.554	.503	.902
GBP	-.098	-.121	.052
EMP	.175	.175	.170

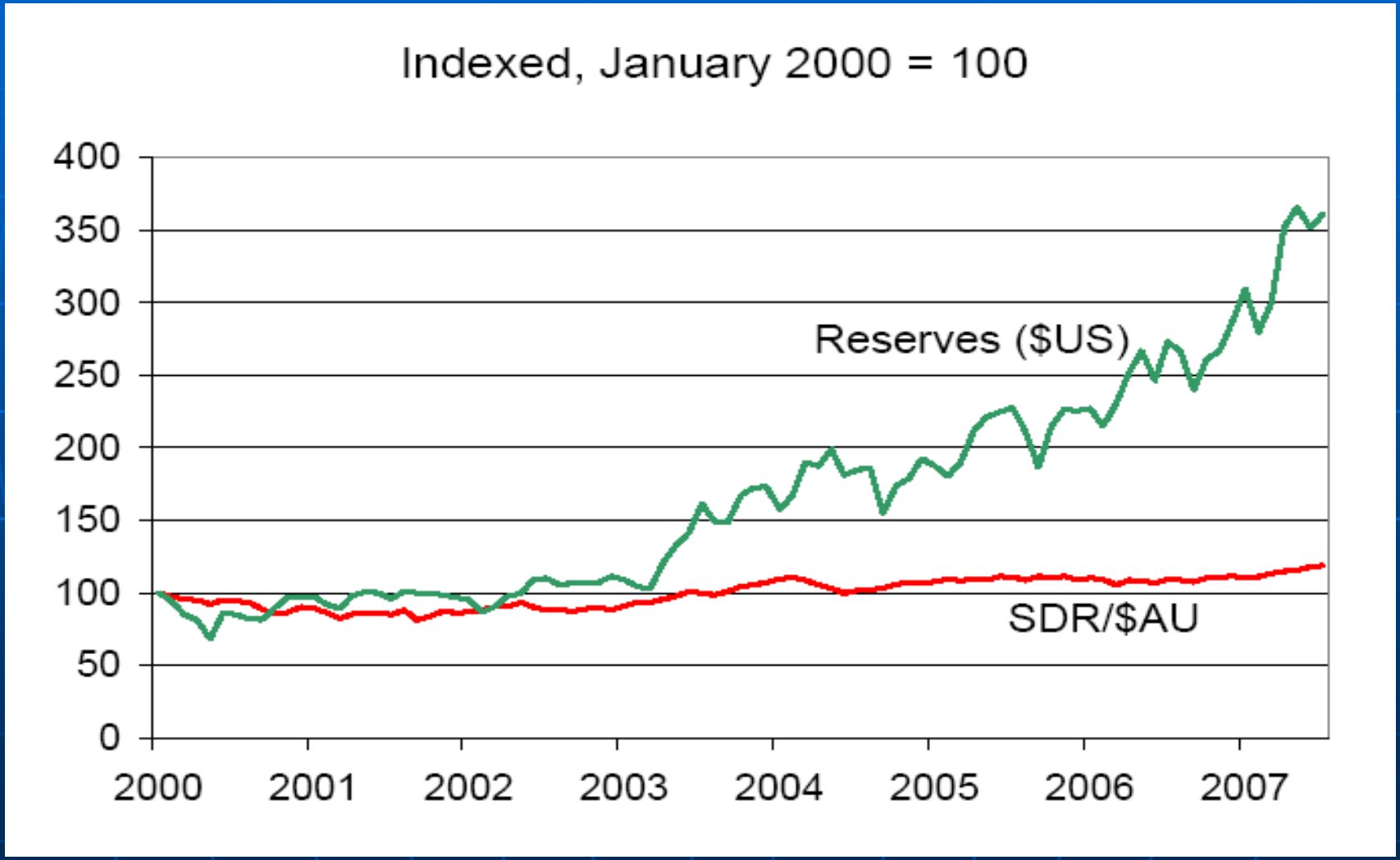
Hypothesis #3 for too-low betas: %ΔR term not accurately capturing exchange market intervention

$$\%\Delta(E^{SDR/thb}) = C$$

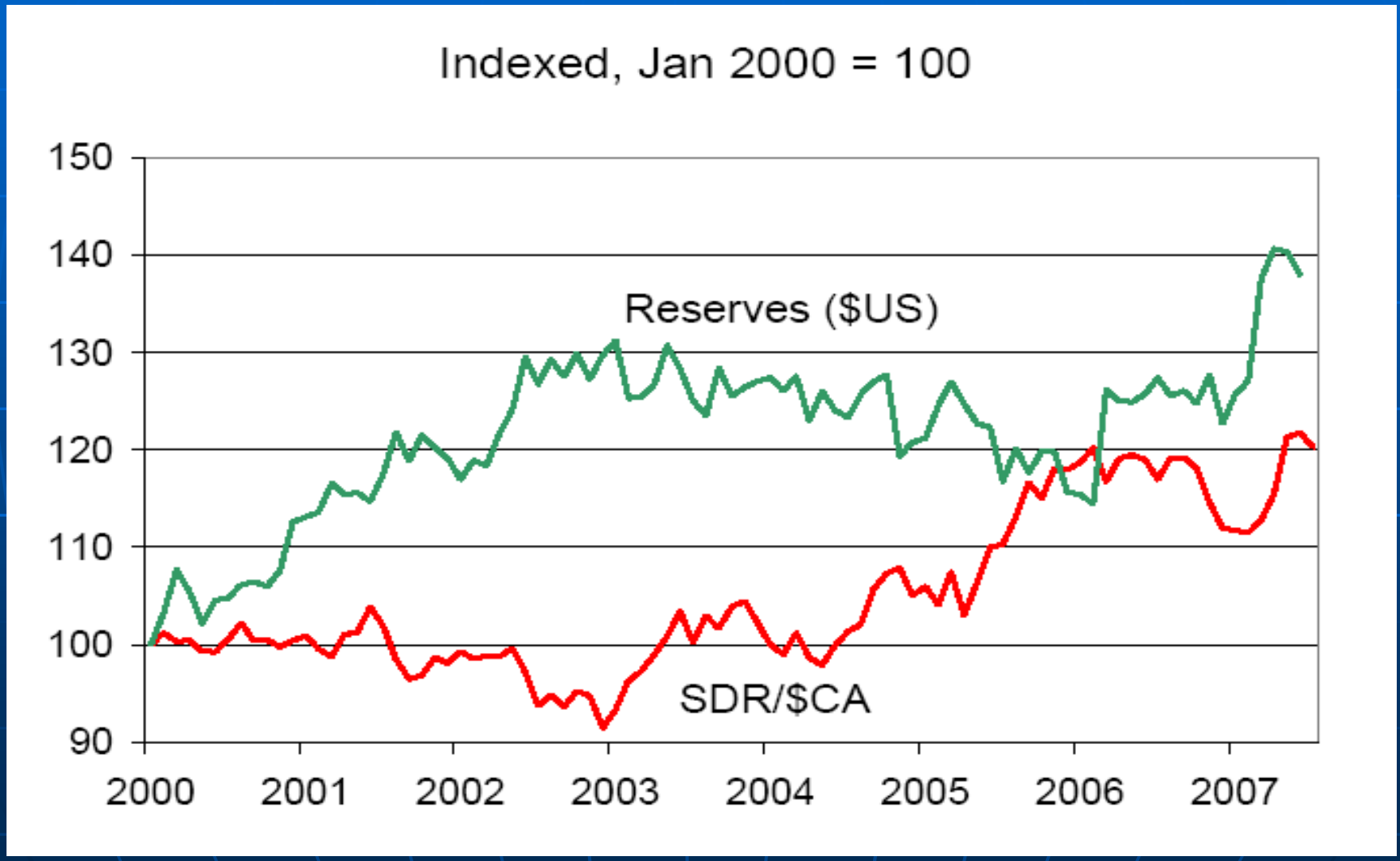
$$+ \; [\; w1*\%\Delta(E^{SDR/Jap.}) + w2*\%\Delta(E^{SDR/\$US}) + (1-w1-w2)*\%\Delta(E^{SDR/UK}) \;]$$

$$+ \; \beta*[\; \%\Delta(E^{SDR/thb}) + \%\Delta R \;]$$

Australia


Indexed, January 2000 = 100
400
350
300
250
200
150
100
50
0
2000
2001
2002
2003
2004
2005
2006
2007
Reserves ($US)
SDR/$AU

Canada


Indexed, Jan 2000 = 100
150
140
130
120
110
100
90
Reserves ($US)
SDR/$CA
2000
2001
2002
2003
2004
2005
2006
2007

Implications

- Reserves data need to cleansed of movements not reflecting interventions to target the exchange rate
- Scaling changes in reserves and exchange rates by their relative variance can boost beta's
- but may lead to misleading results if country intervenes frequently

Does estimating currency weights and exchange rate flexibility simultaneously lead to better estimates?

Separating the Currency Weights from the EMP
Canada 2002-2003

	Frankel-Wei	Kamin	Kamin Unrestricted		
			(1)	(2)	(3)
JPY	.324	.201	-.061	.435	--
USD	.449	.784	.024	1.140	--
EUR	.337	.322	-.360	.821	--
GBP	-.110	-.306	-.527	-.300	--
EMP	.366	.441	.462	--	.443

Separating the Currency Weights from the EMP
Fiji 2000-2003

	Frankel-Wei	Kamin	Kamin Unrestricted		
			(1)	(2)	(3)
JPY	.086	.099	.079	.072	--
USD	.229	.267	.217	.170	--
EUR	.187	.170	.133	.116	--
GBP	.029	.037	.022	.034	--
AUD	.436	.427	.428	.465	
EMP	.031	.033	.033	--	.177

Separating the Currency Weights from the EMP
Thailand 2000-2003

	Frankel-Wei	Kamin	Kamin Unrestricted		
			(1)	(2)	(3)
JPY	.121	.084	-.028	.364	--
USD	-1768	.782	.527	.623	--
EUR	.255	.213	.025	.274	--
GBP	-.043	-.079	-.161	.040	--
KRW	.022				
SGD	.068				
AUD	.107				
MYR	1768				
EMP	.368	.433	.443	--	.321

Conclusion

- Interesting and provocative paper
- Novel methodology
- Helpful for countries that may target more than a single currency
- Requires careful attention to data, especially reserves
- Complement to, not substitute for, institutional analysis