

EUROZONE – A SENSIBLE ABSORPTION OF RISK CAPITAL?

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Abstract. *This paper aims to prove that in countries with no inter-zonal real estate divergence caused by lack of uniform economic development, labor migration trends or other causes, the real estate price movements tend to be correlated with currency movements, thus a certain vulnerability to hot money exists however it may be manageable.*

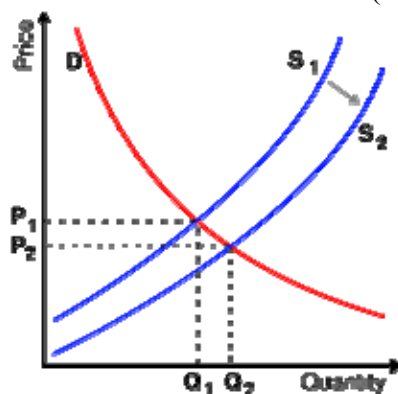
Globalization, the important phenomenon of the late XXth century which advocates free movement of capital internationally as well as free trade, generally allocates risk capital into 3 classes: direct investment, stock market investment and real estate investment.

Direct investment, is prone to follow cheap labor and low corporate tax rates: recent outsourcing trends show that India, China and Eastern Europe, all large beneficiaries of the outsourcing process, are all countries that provide less expensive, educated labor and competitive tax rates.

Outsourcing generates global deflation and immediate domestic deflation since decisions to outsource are made in principal on *domestic* estimated demand rather than on export plans (Source: of 50 officers of US companies that answered yes to outsourcing on a Labor Department questionnaire who were polled, 38 had no export plans).

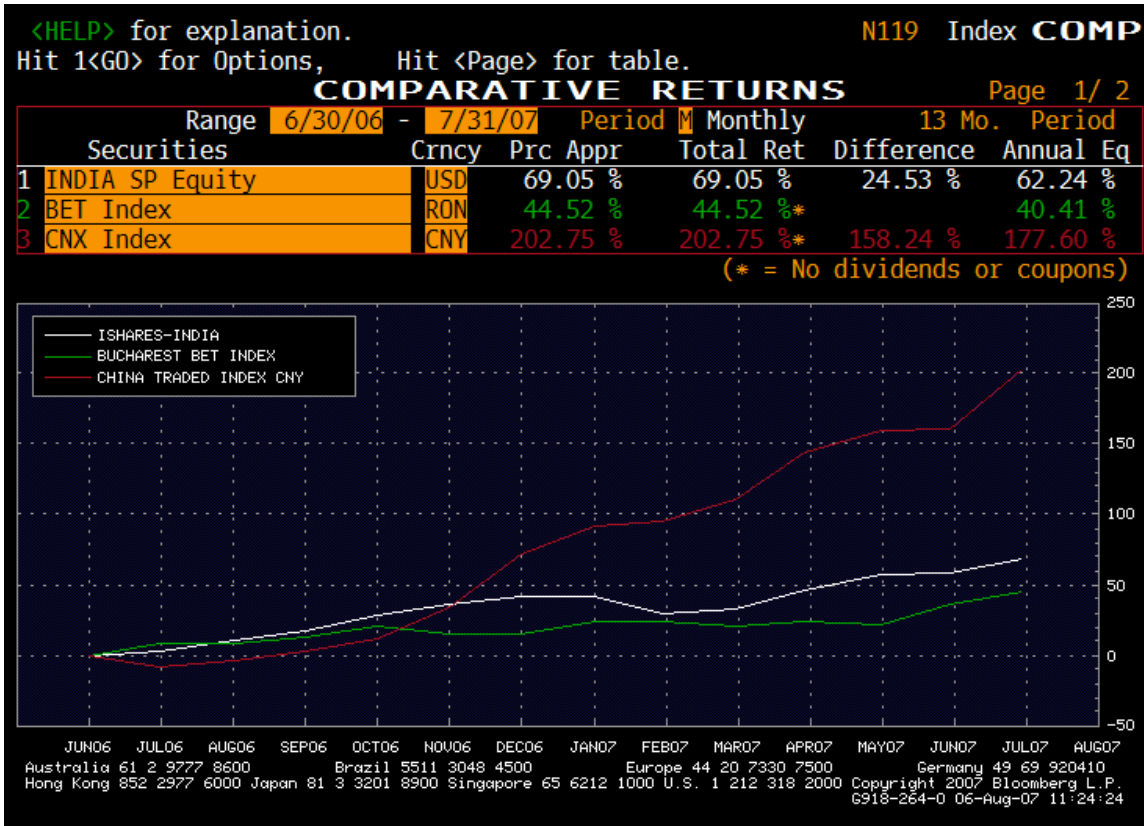
For developed countries, if we assume that at the limit, over a large period of time, all M&A deals will lead to oligopoly, achieve pricing power and ultimately lead to price increases, outsourcing is a countering phenomenon if all domestic labor force can be reallocated, since it offers a competitive opportunity to lower prices and keep the same margins since cost is lower, creating a positive supply shock (see graph).

Outsourcing as a percentage of GDP kept a constant mean and has reached double digit levels between 1997 and 2007 in countries such as Bulgaria and Romania, as well as strong 1 digit numbers in countries such as China and India (source Bloomberg).

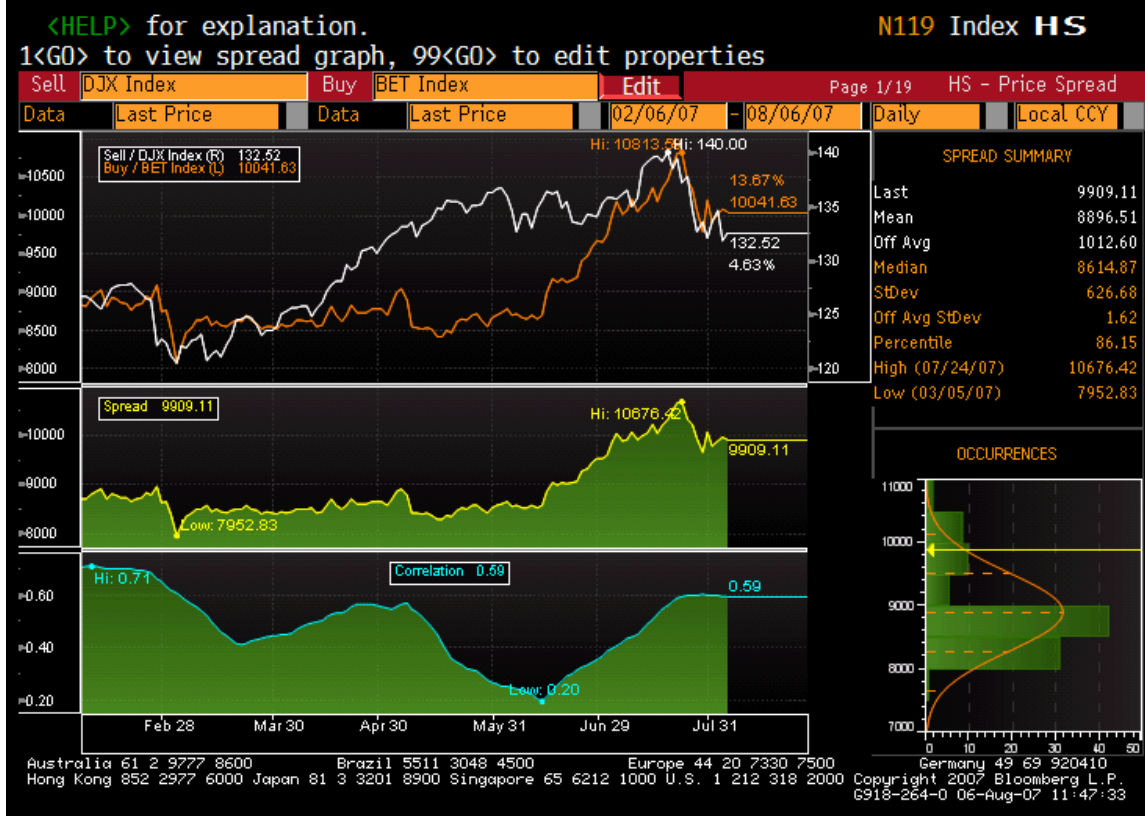
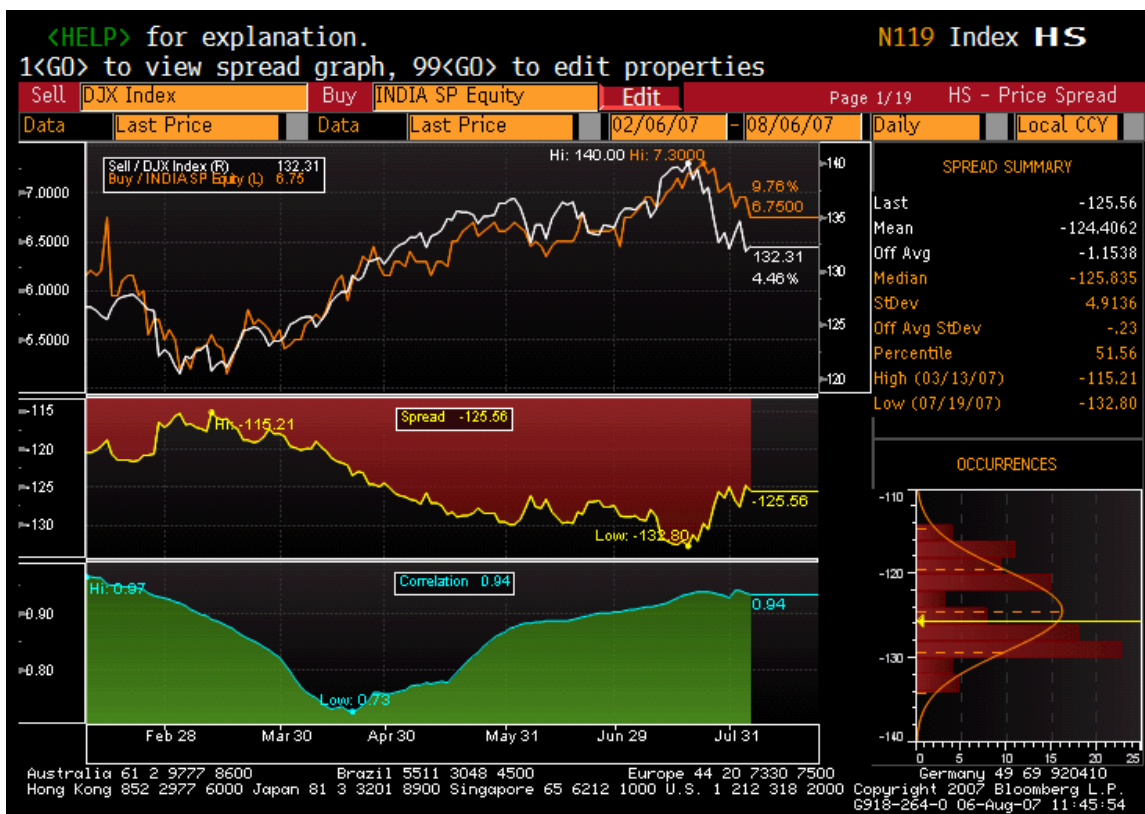


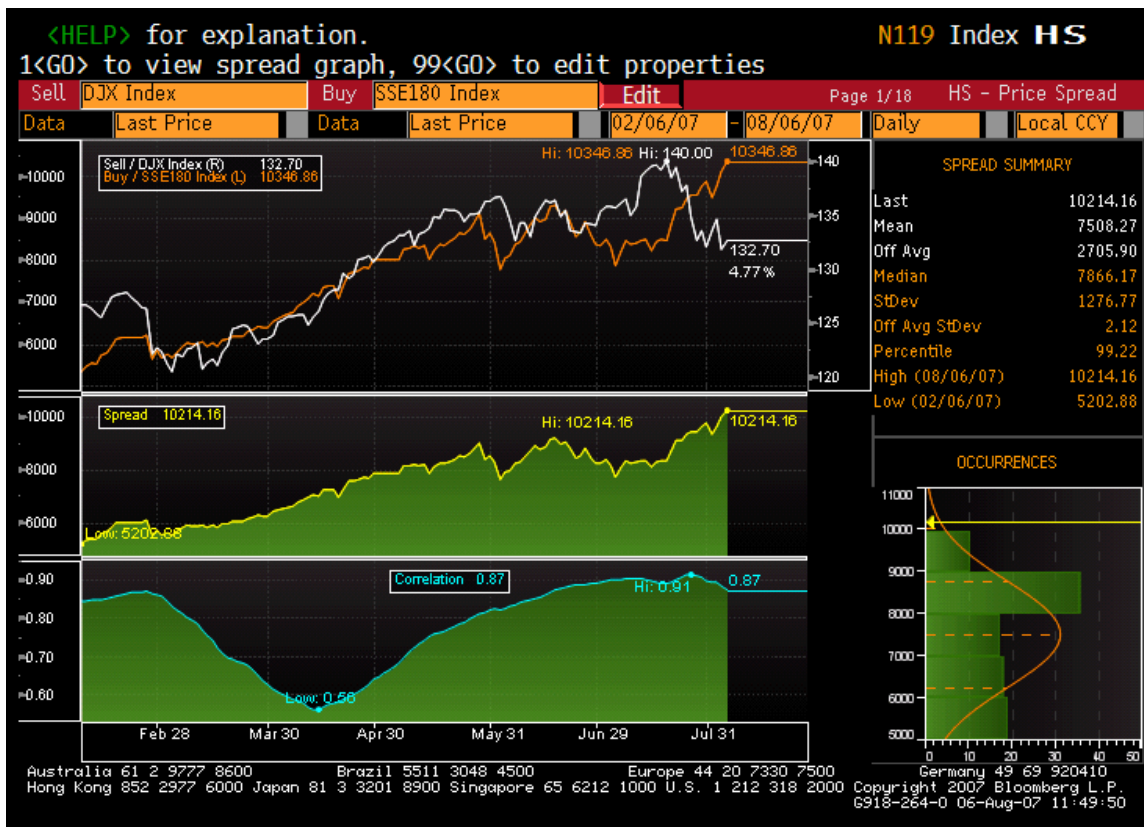
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The stock market investment decision rests on diversification and growth. In the era of outsourcing and free capital movement, growth is linked to skilled labor and mobility, thus direct investment should relate to stock market returns. This hypothesis is proven by the spectacular ascent of stock markets in the beneficiaries of outsourcing – see attached stats for China, India and Romania.



The increased integration of the stock markets between developed and developing countries is a recent phenomenon whose origin we think also to be globalization. Recent reversal of historical negative correlations between emerging markets stock market performance and the mature stock exchanges shown in the 60s and the 70s can be explained by the fact that in the globalization post cold-war era of no tariffs and low transportation costs, direct investment will find global opportunities, leading to global industrial competition given that no insulated demand pockets exist. Therefore diversification between the emerging markets stock market investments and the more mature markets is no longer justified by a negative correlation coefficient between their performances (see following graphs where recent correlation between Dow Jones and the India, China and Romania Stock Exchange indexes is strongly positive).





The link between direct investment, outsourcing and stock market returns is strong since the utilization of production factors can be geographically chosen selectively:

Since production can be achieved with a certain ratio of labor to capital, and for countries with no capital flow restrictions, capital does not get more expensive in a country or other as at least multinational corporations can engage in carry trades and borrow capital in the least expensive place (see recent carry trades done out of Japan), the skill and cost of the labor market would be the main driver of the reason to invest or move production if corporate tax would be equalized across vast zones. This because the cost of the steady-state labor ratio as defined by the Solow-Swan neoclassical growth model can be reduced by less expensive steady-state labor, therefore providing an incentive to invest, and decreasing the capital intensity. Thus the “required” growth rate of capital to keep the capital-labor ratio steady $g_K^r = (dK/dt)/K = n$ is less than in mature economies. Some food for thought thus exists why Japan was left with negative interest rates for a long time during the 1990s depression all else equal, since the capital surplus did not evaporate due to the availability of lower cost labor zones such as the outsourcing beneficiaries, thus the interest rate has not been bid up for a long time.

A legitimate question thus emerges whether real estate investment is a distinct, uncorrelated asset class.

Real estate investment is also dependent on the 2 factors mentioned above, diversification and growth. Once the investment is made, real estate investors would compare their investments with the historical stock market returns. An intuitive benchmark for comparison purposes would be the historical 7% US expectation.

We are arguing that real estate investors beyond their first home would enter the investment if a 7% per year cumulative return exists and would attempt to exit their investment if the 7% expectation is not met.

Let’s suppose that this investment decision would be unchanged if the exchange rate of the currency of the country in which the investment will take place belongs to a country that has not had a currency shock for the past 5 years and which has not had yearly depreciation of more than 10% in the past 1 year against a trade-weighted basket of

international currencies, thus allowing the real estate investment to act as a natural hedge against currency depreciation.

For the US, UK, Australia, South Africa and Romania, we regress on a monthly basis the yearly cumulative difference between the appreciation of the domestic housing market index as calculated by the national housing regulator and the 7% stock market yearly return expectation, against the monthly change of the domestic exchange rate against a foreign trade-weighted basket of currencies. We normalize the starting point for the 2 data sets at 100.

$$\Delta FX = a + b \Delta (\text{House Index} - 7\%/12) + \varepsilon$$

Basket Name:	User Defined	
Start Date:	2/28/2001	7/31/2007
Period:	Monthly	
Base Currency:	USD	

Average Annual Excess Return:	-5.22%
Annualized Standard Deviation:	6.80%
Sharpe Ratio:	-0.77

Long Basket	Weight	ShortBasket	Weight	Normalized Weight
Currency		Currency		
USD	1	JPY	8	0.285714
		EUR	5	0.178571
		GBP	4	0.142857
		CHF	1	0.035714
		BRL	5	0.178571
		NZD	1	0.035714
		AUD	1	0.035714
		SEK	1	0.035714
		HKD	1	0.035714
		DKK	1	0.035714

Date	FX change	USD	OFHEO Index change	Housing – 7%
2/28/2001		100.00		100.00
3/30/2001		105.41		100.86
4/30/2001		104.16		101.71
5/31/2001		106.10		102.57
6/29/2001		106.56		103.16
7/31/2001		106.47		103.70
8/31/2001		103.55		104.25
9/28/2001		104.56		104.79
10/31/2001		105.43		105.22
11/30/2001		104.16		105.65
12/31/2001		104.19		106.08
1/31/2002		106.75		106.62
2/28/2002		105.15		107.15
3/29/2002		103.92		107.68
4/30/2002		101.62		108.29
5/31/2002		99.91		108.90
6/28/2002		98.02		109.52

Date	FX change	USD	OFHEO Index change – 7%	Housing
7/31/2002		101.97		110.23
8/30/2002		98.70		110.95
9/30/2002		102.92		111.67
10/31/2002		102.09		112.18
11/29/2002		101.93		112.70
12/31/2002		98.14		113.22
1/31/2003		96.64		113.65
2/28/2003		96.57		114.09
3/31/2003		94.93		114.53
4/30/2003		91.50		114.94
5/30/2003		89.67		115.35
6/30/2003		89.14		115.76
7/31/2003		90.75		116.32
8/29/2003		90.53		116.88
9/30/2003		86.16		117.45
10/31/2003		85.10		118.54
11/28/2003		84.01		119.63
12/31/2003		81.26		120.72
1/30/2004		80.87		121.29
2/27/2004		80.91		121.87
3/31/2004		80.13		122.45
4/30/2004		82.86		123.35
5/31/2004		82.76		124.26
6/30/2004		81.98		125.16
7/30/2004		82.48		126.61
8/31/2004		80.97		128.06
9/30/2004		79.89		129.51
10/29/2004		77.86		130.33
11/30/2004		74.95		131.15
12/31/2004		73.94		131.97
1/31/2005		74.90		132.86
2/28/2005		74.18		133.75
3/31/2005		75.81		134.65
4/29/2005		74.34		135.82
5/31/2005		75.99		136.99
6/30/2005		76.53		138.17
7/29/2005		77.28		139.27
8/31/2005		75.86		140.37
9/30/2005		76.39		141.47
10/31/2005		77.13		142.45
11/30/2005		78.08		143.44
12/30/2005		78.46		144.42
1/31/2006		76.51		145.16
2/28/2006		76.52		145.89
3/31/2006		77.23		146.63
4/28/2006		74.25		147.07
5/31/2006		74.82		147.51
6/30/2006		74.61		147.94
7/31/2006		74.58		148.32

Date	FX change	USD	OFHEO Index change – 7%	Housing
8/31/2006		74.51		148.69
9/29/2006		75.36		149.06
10/31/2006		74.48		149.48
11/30/2006		73.19		149.90
12/29/2006		73.70		150.32
1/31/2007		74.32		150.46
2/28/2007		73.59		150.61
3/30/2007		72.83		148.65
4/30/2007		72.22		147.45
5/31/2007		72.34		146.25
6/29/2007		72.20		145.25
7/31/2007		70.80		143.5

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.928678
R Square	0.862444
Adjusted R Square	0.860634
Standard Error	4.61209
Observations	78

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	10135.8337	10135.83	476.5012	1.793E-34
Residual	76	1616.62432	21.27137		
Total	77	11752.458			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Upper 95.0%</i>
Intercept	173.4049	4.02485506	43.08352	3.71E-55	165.388704	181.42111	179.740672
X Variable 1	-0.69036	0.03162576	-21.8289	1.79E-34	-0.753344	-0.627367	-0.6146884

Basket Name: User Defined
 Start Date: 3/30/2001 End Date: 7/31/2007
 Period: Monthly
 Base Currency: GBP

Average Annual
 Excess Return: 5.00%
 Annualized
 Standard Deviation: 6.01%
 Sharpe Ratio: 0.83

Long Basket		ShortBasket			
Currency	Weight	Normalized Weight	Currency	Weight	Normalized Weight
GBP		1	JPY	7	0.304348

USD	7	0.304348
CHF	2	0.086957
CAD	1	0.043478
EUR	1	0.043478
AUD	1	0.043478
SEK	1	0.043478
CZK	1	0.043478
IDR	1	0.043478
HKD	1	0.043478

Date	FX change	GBP	UK Housing Index change – 7%
3/30/2001		100	100.00
4/30/2001	100.3828		100.44
5/31/2001	99.24196		100.67
6/29/2001	100.4112		101.40
7/31/2001	99.88571		102.08
8/31/2001	99.30561		102.34
9/28/2001	101.6553		104.40
10/31/2001	101.5054		103.65
11/30/2001	99.55165		103.83
12/31/2001	103.8183		104.97
1/31/2002	102.186		105.07
2/28/2002	101.99		106.09
3/29/2002	102.0514		106.06
4/30/2002	102.3749		108.88
5/31/2002	99.85368		110.33
6/28/2002	102.5601		112.60
7/31/2002	105.7833		114.20
8/30/2002	104.4181		115.97
9/30/2002	106.6192		117.56
10/31/2002	106.6366		118.44
11/29/2002	106.0993		119.80
12/31/2002	107.5823		120.78
1/31/2003	109.6137		121.88
2/28/2003	103.9782		121.57
3/31/2003	104.6931		122.72
4/30/2003	105.251		122.12
5/30/2003	106.2593		122.79
6/30/2003	108.2785		123.31
7/31/2003	106.844		123.65
8/29/2003	104.2444		124.32
9/30/2003	106.405		125.04
10/31/2003	108.3501		126.52
11/28/2003	109.108		127.10
12/31/2003	111.3102		128.40
1/30/2004	113.9259		128.42
2/27/2004	117.9319		130.48
3/31/2004	115.4581		131.35
4/30/2004	114.5998		132.57
5/31/2004	117.5711		133.69

6/30/2004	116.9353	133.93
7/30/2004	118.3579	135.22
8/31/2004	116.5062	134.74
9/30/2004	116.6448	134.55
10/29/2004	115.9089	133.92
11/30/2004	118.2505	134.24
12/31/2004	118.7064	133.51
1/31/2005	118.319	132.98
2/28/2005	120.6685	132.99
3/31/2005	120.7503	132.07
4/29/2005	121.7275	132.13
5/31/2005	118.6156	132.00
6/30/2005	118.5394	131.30
7/29/2005	117.0934	130.97
8/31/2005	119.0999	130.48
9/30/2005	118.1546	129.73
10/31/2005	119.8135	130.24
11/30/2005	118.5342	129.55
12/30/2005	117.4044	129.35
1/31/2006	119.7382	130.24
2/28/2006	118.35	129.57
3/31/2006	117.976	130.29
4/28/2006	120.7994	129.74
5/31/2006	123.2269	129.56
6/30/2006	122.7267	129.29
7/31/2006	124.0816	129.85
8/31/2006	127.4231	130.03
9/29/2006	126.326	130.78
10/31/2006	127.9395	130.96
11/30/2006	130.4786	131.73
12/29/2006	131.4531	132.34
1/31/2007	133.4693	132.10
2/28/2007	132.4046	132.24
3/30/2007	132.1523	132.15
4/30/2007	134.1579	132.49
5/31/2007	133.9934	132.41
6/29/2007	136.5644	132.88
7/31/2007	136.3332	132.38

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.808837
R Square	0.654217
Adjusted R Square	0.649607
Standard Error	6.262775
Observations	77

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	5565.623804	5565.624	141.8993	5.7185E-19
Residual	75	2941.676085	39.22235		
Total	76	8507.299889			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Upper 95.0%</i>
Intercept	18.02319	8.109625307	2.222445	0.029267	1.86798762	34.1784	34.1783993
X Variable 1	0.777463	0.065266387	11.91215	5.72E-19	0.64744561	0.90748	0.90748029

Basket Name: User Defined
 Start Date: 2/28/2001 End Date: 7/31/2007
 Period: Monthly
 Base Currency: AUD

Average Annual
 Excess Return: 5.75%
 Annualized
 Standard Deviation: 8.54%
 Sharpe Ratio: 0.67

Long Basket

ShortBasket

Currency	Weight	Normalized Weight	Currency	Weight	Normalized Weight
AUD	1	1	JPY	8	0.228571
			EUR	5	0.142857
			GBP	4	0.114286
			CHF	1	0.028571
			BRL	5	0.142857
			NZD	1	0.028571
			USD	8	0.228571
			SEK	1	0.028571
			HKD	1	0.028571
			DKK	1	0.028571

Date	FX AUD change	AU Housing Index change – 7%
2/28/2001	100	100
3/30/2001	95.98153	97.25
4/30/2001	100.4283	98.55
5/31/2001	100.7426	98.75
6/29/2001	102.2309	99.15
7/31/2001	101.8729	99.45
8/31/2001	103.6722	99.65
9/28/2001	96.81032	99.85
10/31/2001	100.0241	100.05
11/30/2001	103.0667	101.25
12/31/2001	100.7544	101.55
1/31/2002	102.5733	102.35
2/28/2002	103.6693	103.25
3/29/2002	105.9136	104.55
4/30/2002	105.3766	104.65
5/31/2002	110.0138	106.85
6/28/2002	107.808	106.95
7/31/2002	107.2951	107.05

8/30/2002	106.3879	107.15
9/30/2002	108.6819	108.05
10/31/2002	110.7664	108.35
11/29/2002	112.2182	108.95
12/31/2002	109.3078	109.25
1/31/2003	113.3713	110.57
2/28/2003	117.8458	114.85
3/31/2003	115.755	114.95
4/30/2003	116.9667	115.95
5/30/2003	120.3195	118.45
6/30/2003	124.04	120.21
7/31/2003	121.4344	120.55
8/29/2003	121.296	120.65
9/30/2003	122.9635	120.95
10/31/2003	127.4384	121.25
11/28/2003	129.3757	121.45
12/31/2003	131.4322	121.55
1/30/2004	133.53	121.85
2/27/2004	135.7188	122.45
3/31/2004	133.8882	122.65
4/30/2004	129.5056	122.75
5/31/2004	128.8245	122.85
6/30/2004	125.3213	122.85
7/30/2004	126.9709	122.95
8/31/2004	125.7453	123.05
9/30/2004	129.0549	124.56
10/29/2004	130.4733	124.85
11/30/2004	131.1619	125.25
12/31/2004	131.3421	125.65
1/31/2005	132.1912	125.95
2/28/2005	134.2657	126
3/31/2005	133.5925	126.15
4/29/2005	133.2625	126
5/31/2005	131.3385	126.1
6/30/2005	133.5053	127.05
7/29/2005	133.6855	127.15
8/31/2005	131.6694	127
9/30/2005	133.801	127.25
10/31/2005	132.4573	127.25
11/30/2005	132.0151	127.35
12/30/2005	131.6833	128.45
1/31/2006	133.7444	127.95
2/28/2006	130.9363	128.8
3/31/2006	127.2448	128.85
4/28/2006	130.9704	129.95
5/31/2006	130.5538	129.85
6/30/2006	128.5334	130.65
7/31/2006	132.819	131.95
8/31/2006	132.3484	132.54
9/29/2006	130.4223	132.65
10/31/2006	134.2661	134.45
11/30/2006	135.1831	134.65
12/29/2006	135.9708	135
1/31/2007	134.9054	135.25
2/28/2007	135.8646	136.35
3/30/2007	138.4857	138.19
4/30/2007	141.4568	139.45

5/31/2007	141.383	141
6/29/2007	145.0225	142.65
7/31/2007	143.2874	143.25

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.969583
R Square	0.940092
Adjusted R Square	0.939304
Standard Error	3.319903
Observations	78

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	13144.70158	13144.7	1192.614	3.29E-48
Residual	76	837.65357	11.02175		
Total	77	13982.35494			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-2.24971	3.639695286	-0.6181	0.538355	-9.4988	4.999382
X Variable 1	1.042839	0.030197246	34.53425	3.29E-48	0.982696	1.102982

Basket Name: User Defined
 Start Date: 2/28/2001 End Date: 7/31/2007
 Period: Monthly
 Base Currency: ZAR

Average Annual Excess Return: 2.62%
 Annualized Standard Deviation: 16.61%
 Sharpe Ratio: 0.16

Long Basket			ShortBasket		
Currency	Weight	Normalized Weight	Currency	Weight	Normalized Weight
ZAR		1	JPY	7	0.233333
		1	EUR	5	0.166667
			GBP	4	0.133333
			CHF	1	0.033333
			BRL	5	0.166667
			NZD	1	0.033333
			USD	4	0.133333
			SEK	1	0.033333
			HKD	1	0.033333
			DKK	1	0.033333

Date	FX ZAR change	SA House Index change – 7%
2/28/2001	100	100.00
3/30/2001	100.5149	103.82
4/30/2001	99.89938	103.51

5/31/2001	102.6946	109.91
6/29/2001	102.968	114.24
7/31/2001	100.7876	113.82
8/31/2001	96.92455	115.91
9/28/2001	91.65401	117.80
10/31/2001	88.84129	119.58
11/30/2001	81.4752	120.80
12/31/2001	70.13077	121.75
1/31/2002	75.65423	124.90
2/28/2002	75.50157	127.90
3/29/2002	75.53955	130.51
4/30/2002	79.32963	133.78
5/31/2002	85.64533	134.57
6/28/2002	81.00374	131.80
7/31/2002	85.39366	135.80
8/30/2002	80.92715	130.50
9/30/2002	84.95497	133.77
10/31/2002	89.77363	137.10
11/29/2002	97.84065	140.48
12/31/2002	103.2337	144.05
1/31/2003	103.6622	144.71
2/28/2003	110.3378	154.89
3/31/2003	112.5784	157.91
4/30/2003	119.3805	167.80
5/30/2003	106.1894	168.47
6/30/2003	115.3658	169.80
7/31/2003	119.7616	173.71
8/29/2003	120.4503	174.74
9/30/2003	123.7023	177.80
10/31/2003	123.9316	178.47
11/28/2003	132.8039	182.90
12/31/2003	124.0847	183.05
1/30/2004	117.5066	183.71
2/27/2004	125.9005	189.57
3/31/2004	132.3717	194.48
4/30/2004	123.163	195.46
5/31/2004	132.7721	202.71
6/30/2004	140.4115	212.46
7/30/2004	138.8809	219.70
8/31/2004	129.7379	227.72
9/30/2004	132.368	230.50
10/29/2004	137.6269	234.40
11/30/2004	140.496	237.73
12/31/2004	142.7891	239.85
1/31/2005	137.254	242.49
2/28/2005	140.4733	245.81
3/31/2005	133.937	246.57
4/29/2005	135.46	246.23
5/31/2005	123.5934	248.48
6/30/2005	127.7453	253.57
7/29/2005	130.4662	263.50
8/31/2005	132.9779	273.57
9/30/2005	134.0491	275.70
10/31/2005	128.6809	276.23
11/30/2005	135.1117	278.90
12/30/2005	138.9468	280.85

1/31/2006	142.2343	283.60
2/28/2006	139.9705	284.60
3/31/2006	140.941	287.25
4/28/2006	140.3599	290.45
5/31/2006	126.3272	291.35
6/30/2006	118.4012	292.15
7/31/2006	122.5498	300.55
8/31/2006	118.3441	302.85
9/29/2006	111.0088	303.61
10/31/2006	116.2257	309.61
11/30/2006	118.275	315.23
12/29/2006	121.7962	318.48
1/31/2007	119.3376	320.27
2/28/2007	118.5954	322.60
3/30/2007	117.5349	323.23
4/30/2007	119.9392	324.90
5/31/2007	119.7968	325.20
6/29/2007	121.3167	325.48
7/31/2007	118.1428	325.62

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.683344
R Square	0.466959
Adjusted R Square	0.459945
Standard Error	14.62296
Observations	78

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	14236.43	14236.43	66.57803	5.45E-12
Residual	76	16251.14	213.8308		
Total	77	30487.58			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	76.69816	5.032064	15.24189	8.11E-25	66.67593	86.7204
X Variable 1	0.184097	0.022562	8.159536	5.45E-12	0.139161	0.229034

Basket Name: User Defined
 Start Date: 3/31/2005 End Date: 7/31/2007
 Period: Monthly
 Base Currency: RON

Average Annual
 Excess Return: 13.20%
 Annualized
 Standard Deviation: 6.69%
 Sharpe Ratio: 1.97

Long Basket

ShortBasket

Currency	Weight	Normalized Weight	Currency	Weight	Normalized Weight
RON		1	JPY	7	0.233333
			EUR	9	0.3
			USD	4	0.133333
			CHF	3	0.1
			TRY	1	0.033333
			NZD	1	0.033333
			CAD	1	0.033333
			SEK	1	0.033333
			HKD	1	0.033333
			AUD	2	0.066667

Date	B+H	SRMA
3/31/2005	100	100
4/29/2005	100.908929	101.235
5/31/2005	99.83536	101.125
6/30/2005	100.402078	101.236
7/29/2005	103.970746	102.897
8/31/2005	105.057623	104.65
9/30/2005	102.821089	104.235
10/31/2005	100.675662	104.125
11/30/2005	100.593014	103.85
12/30/2005	100.251242	103.65
1/31/2006	103.172963	106.35
2/28/2006	106.852504	109.95
3/31/2006	107.971073	113.52
4/28/2006	110.490211	120.45
5/31/2006	110.376242	123.55
6/30/2006	110.052747	123.25
7/31/2006	111.152375	128.36
8/31/2006	112.677811	133.58
9/29/2006	112.781384	135.55
10/31/2006	113.513971	136.85
11/30/2006	118.919155	146.25
12/29/2006	121.457903	154.58
1/31/2007	120.806636	155.68
2/28/2007	121.808163	165.32
3/30/2007	123.93974	172.85
4/30/2007	126.735192	185.84
5/31/2007	128.766942	203.45
6/29/2007	135.646651	215.25
7/31/2007	133.632841	235.65

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.974942
R Square	0.950512
Adjusted R Square	R 0.948679

Standard Error	2.442559
Observations	29

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	3093.947	3093.947	518.5883	3.7E-19
Residual	27	161.0846	5.966095		
Total	28	3255.031			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	74.5738	1.700936	43.8428	1.25E-26	71.08377	78.06383
X Variable 1	0.278076	0.012211	22.77253	3.7E-19	0.253021	0.303131

For all 5 regressions, an R^2 and t-stat nil hypothesis rejection shows that the link between house prices and exchange rate trends is strong and cannot be ignored.

For the countries with floating exchange rate regimes, USA, UK and Australia, the slope is higher, thus a higher percentage of the exchange rate volatility is explained by house price movements. For the countries with fixed exchange rate regimes, Romania and South Africa, the slope is lower.

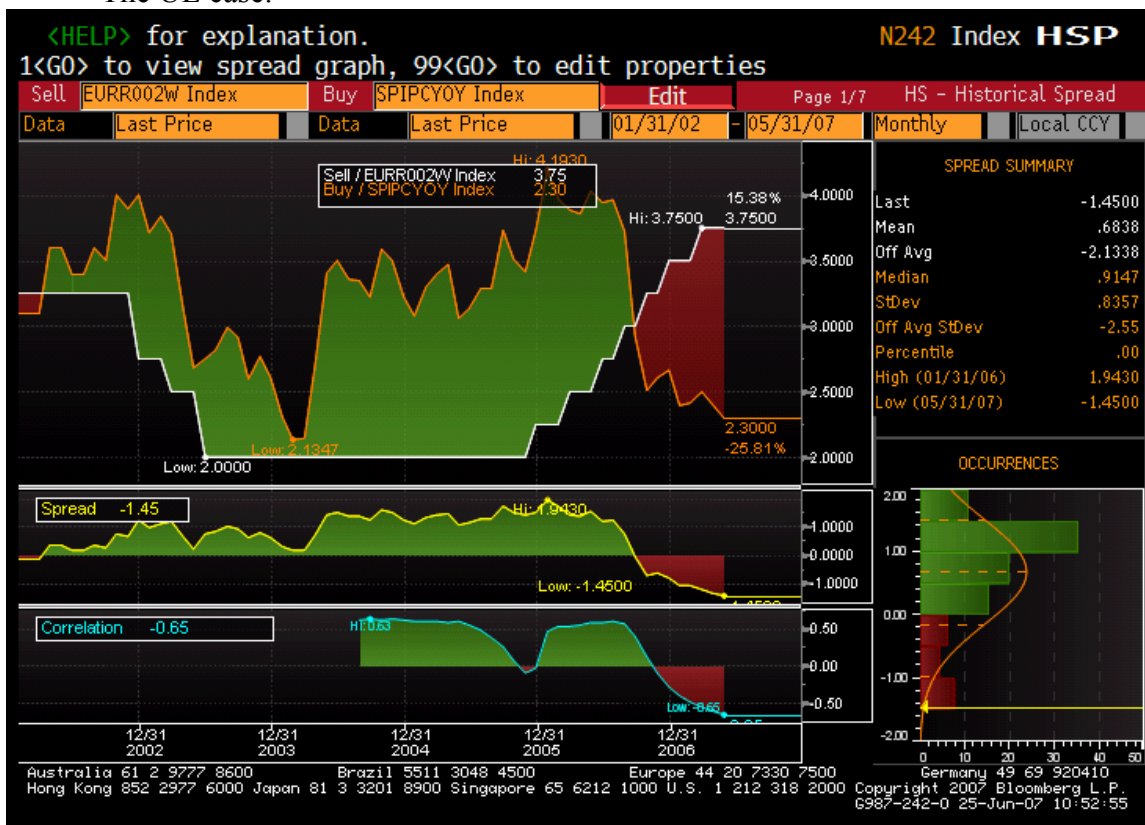
The US example seems to suggest that the unwinding of the perceived real estate bubble is associated with devaluation. However the annualized negative trend of the USD against the trade-weighted basket of currencies is still within the annual negative 10% band as we assumed a priori. A further analysis (see last 5 data points) after the subprime mortgage crisis shows that investors exiting the real estate market are causing a more severe depreciation, although more severe expectations are contained since the subprime MBS recent crisis has been pinpointed to only the subprime sector and contagion to the higher MBS tranches has not occurred (source: US Treasury, 2007). The negative slope shows that the real estate market investments in the US are hedges to the US dollar. However since the US benefits from abundant internal capital due to high stock market PER multipliers besides a positive capital account, notwithstanding the balance of payments deficit, a vulnerability to hot money does not exist. Thus people trying to diversify their holdings are investing in the real estate market and the real estate market still benefits from allocations out of a pure diversification reason.

For all other countries examined, except the EU, the slope of the regressions is positive thus large capital inflows or outflows can cause perturbations.

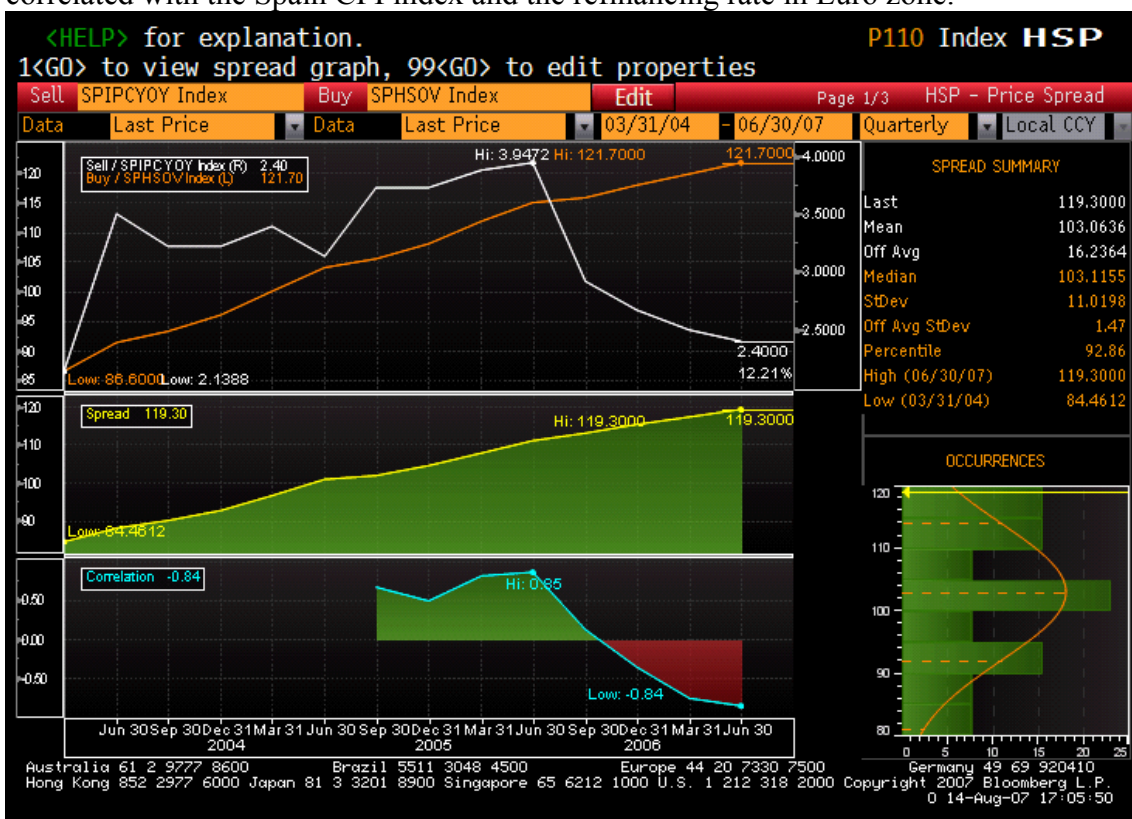
The UK example with the lower R^2 below but high positive slope seems to suggest that the recent appreciation of the pound is faster than the growth of the real estate index and investors are not entering anticipating a bubble in the real state market, consistent with current specialist opinions and waiting for a correction level associated with the bubble break. The Bank of England has kept high interest rates throughout the measurement period. This weaker R^2 has been expected since the UK real estate market has been perceived by many analysts to be in a bubble. It would be interesting to monitor in future if a downturn in the strength of the pound would induce the unwinding of the bubble, or a more mild reversal of the index.

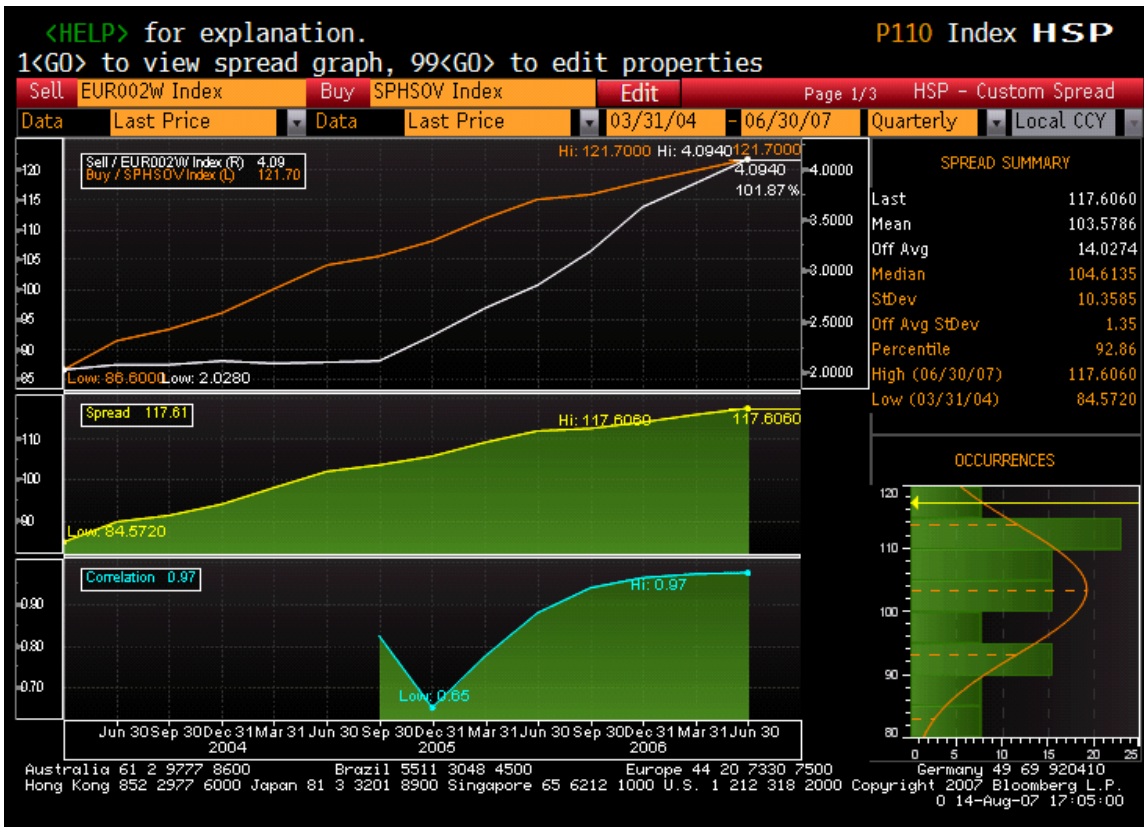
The Australian and Romanian examples are strong and show strong currency appreciation partly induced by strong performance of real estate investments and continued real estate investments induced by expected continuing strong real estate performance.

The UE case:

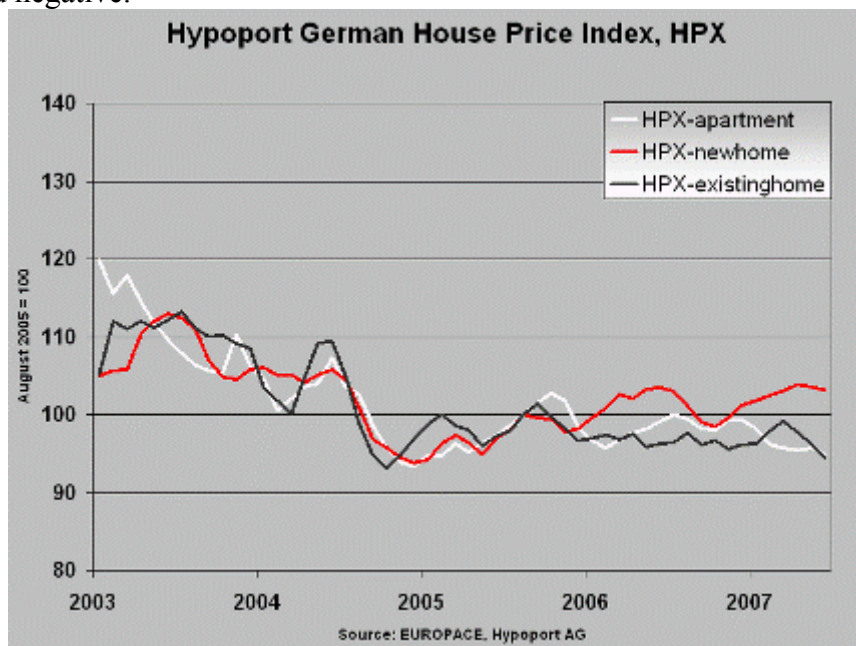


In Spain the CPI fell below the ECB refinancing rate prior to the adoption of the Euro. Thus the country met the Maastricht criteria and could adhere to the Euro. Post adoption, due to the sudden high investment, the CPI index rose above the EU average refinancing rate, which induced self-perpetuating higher inflation than in the rest of the Euro zone until Spain adopted a direct inflation targeting and its CPI was driven below the ECB refinancing rate. During this time, the Spain real estate displayed strong growth (see graph), having been correlated with the Spain CPI index and the refinancing rate in Euro zone.





At the same time the real estate index in other EU countries, such as Germany (see graph) turned negative.



Thus because of the lack of concerted correlation between real estate indexes in EU members, a calculation of the overall influence of the real estate market against the Euro would not be pertinent. Thus for the Euro zone the real estate analytics should be drilled down to individual countries. The euro appears to be an export-driven currency, in which the budget/ capital account fundamentals have a higher bearing on the direction of the currency, allowing the Euro zone to be able to cushion hot money without high currency moves.

REFERENCES

1. Calvo, G., and Reinhart, C. (2002). "Fear of Floating." *Quarterly Journal of Economics*, 117: 379-408.
2. Levy-Yeyati, E. and F. Sturzenegger (2004). "Classifying Exchange Rate Regimes: Deeds vs. Words." *European Economic Review*.