



Capital Market Services, LLC

350 Fifth Avenue, Suite 6400

New York, NY 10118

www.cmsfx.com

trading@cmsfx.com

John Bollinger's Forex Letter

Volume 1, Number 7
15 November 2004

Rally Round the Maypole

I recently had the pleasure and privilege of being invited to speak at the International Federation of Technical Analysts annual conference. This year it was held in Madrid, Spain and I must say that it was one of the best conferences ever. Next year the conference will be in Canada and the Spanish have set the bar high for my northern friends. My IFTA topic was an update of a study that first appeared in my book, "Bollinger on Bollinger Bands". That study updated the original recommendations for the default parameters for Bollinger Bands made in the mid '80s.

In the early 1980s my initial studies suggested that the default parameters for Bollinger Bands ought to be a 20-period simple moving average with the bands spread above and below that average by two standard deviations where the data used to calculate the volatility was the same data used to calculate the average. This was based on the kinds of things I traded and my trading style. I was an intermediate-term swing trader primarily interested in US equities. For applications that required shorter spans, bands of 1.5 standard deviations for 10-day averages were suggested. For longer spans, 2.5 standard deviations for 50-day moving averages were suggested. For longer spans a change in granularity was recommended, from daily to weekly, for example. The suggested parameters were based on empirical studies made at the time mostly of NYSE stocks and a lesser number over-the-counter issues. In addition, some futures contracts were studied, gold, bonds, ginnies, S&P, Swiss frank, Deutsch mark and Value Line, as part of the development process.

In preparing the studies for BoBB rigorous testing of the period from 1990 to 1999 was conducted using data from six markets, the S&P 500, gold bullion, the NASDAQ Composite, IBM, the Deutsch mark and the Nikkei 225. The methodology employed in the BoBB study was to calculate the percentage containment at 20 periods and then set the standard deviation multiplier for 10- and 50-period bands to achieve the same containment figures for those periods. By containment we mean the percentage of closes inside the bands. These studies, which were conducted in 2000 and 2001, suggested that the original parameters needed to be revised for the current markets. The new parameters recommended in BoBB were 1.9 standard deviations at 10 periods, 2.0 at 20 periods and 2.1 at 50 periods.

©2004 Bollinger Capital Management and Capital Market Services, LLC This report is intended solely for distribution to professional and business customers of Capital Market Services, LLC. It is not intended to be distributed to private investors or private customers. Any information in this report is based on data obtained from sources considered to be reliable, but no representations or guarantees are made by Bollinger Capital Management with regard to the accuracy of the data. The opinions and estimates contained herein constitute our best judgement at this date and time, and are subject to change without notice. Bollinger Capital Management accepts no responsibility or liability whatsoever for any expense, loss or damages arising out of, or in any way connected with, the use of all or any part of this report. No part of this report may be reproduced or distributed in any manner without the permission of Bollinger Capital Management.

In preparation for the IFTA conference a much wider set of studies was conducted, employing 15 world stock-market indices for one set of studies and five currency pairs for the other. A total of four studies were conducted, stock-market indices—prices and returns, forex—prices and returns. We'll focus on the results of the forex studies here. The currency pairs used were euro / US dollar, British pound / US dollar, US dollar / Swiss frank, US dollar / Japanese yen and euro / Japanese yen. Seven years of data were used, encompassing a period from mid-1997 through mid-2004. This provided a two-and-a-half year overlap with the prior study and four-and-a-half years of new data.

For the price study the baseline for containment was established by averaging the five containment percentages at 20-periods, 89%, 87.8%, 87.9%, 88.1% and 89%, for an average of 88.3%. Then bands of 10, 30 and 50 days were calculated and widths were set to contain the same 88.3% of the data points (closes). The precise numbers obtained were 1.88, 2.03 and 2.09 which were rounded to 1.9, 2.05 and 2.10—precisely the same as in the last study, except for the 30-period number which was not calculated in the prior study and which I included by popular demand

The returns study produced containments of 95%, 95.3%, 94.4%, 94.8% and 95.6% at 20 days for an average of 95%. This is shy of the 95.5% one would expect, confirming the existence of too many large changes, known in the parlance as fat tails. Fitting the other three time frames to contain 95% produced bands ranging from 1.92 to 2.02. A curious sidelight of these studies is that there were more excursions above the upper band in the price study and more below the lower band in the returns study. In all the studies we found evidence of the fat tails that securities prices typically exhibit, that is to say we find more large positive and negative changes in these series than we would expect.

Another interesting thing that came out of the study was a key difference between the equity markets and the forex markets. In the equity markets we can clearly see emotions driving investors in the distribution of the closes outside the bands; there are far more closes beneath the lower bands than closes above the upper bands. This is because fear is so much more of an urgent emotion than greed and when the selling gets urgent closes outside the lower band are easy to achieve. The forex markets paint a decidedly more balanced picture. We believe this is due to the pair's nature of forex trading, long euro / short dollar for example, balancing fear on both sides of the equation. The implication is that in the forex markets tops and bottoms should look more or less alike, whereas in the equities markets we should find that tops and bottoms are quite different. Just another example of how assumptions about markets can get one in trouble if one doesn't test them.

These, then, are the numbers we recommend for today's forex markets.

Periods	Deviations
10	1.90
20	2.00
30	2.05
50	2.10

For periods longer than 50 we continue to recommend a change in granularity, hourly to daily, daily to weekly, etc.

Well, so much for theory, let's have a look at what is happening in the markets. We are at a crucial position for the euro. Last month we reported Squeezes against the dollar evident in multiple timeframes indicating an important juncture in the markets. To recap, using 20-period Bollinger Bands Squeezes were evident on the daily, weekly and monthly charts of the euro versus the dollar. Those same Squeezes were also evident on the daily charts using 20-, 50- and 100-day Bollinger Bands. In short, we were in an area which earlier technicians would have described as a compression area.

A strong rally for the euro followed taking it to a marginal new high for the dollar and expanding both the daily and weekly bands. However, the rally failed just into new high territory leaving behind a Wyckoff Up Thrust pattern and the possibility that the rally was just a Head Fake on the longer-term charts. (A look at the short-term charts reveals a minor topping pattern for the euro that is being tested as this is being written.) If this is in fact an Up Thrust, then it would be very bullish for the dollar. However, we haven't seen any real dollar strength to confirm. Also an Up Thrust in this situation would be a Head Fake in Bollinger Band terms, a very reliable pattern which any strength in the dollar would confirm.

A bit of supporting evidence comes from a technique I don't normally track, but saw reported last Saturday at the IFTA conference, a Sequential sell signal. Sequential is a long and complicated system that looks to identify major over-bought and over-sold turning points. Sequential was developed in the mid '70s by Tom DeMark and Larry Williams. If you would like to learn more about it, Sequential is discussed in two Tom Demark books, "The New Science of Technical Analysis" and "New Market Timing Techniques". Tom is an extremely creative and iconoclastic technician whose work is really like no others. These books are challenging to read and will make you think, which is as high a complement as I can think of.

Lagniappe: I have found it helpful over the years to think of the major forex structure as a triangle with the US dollar at one point, the euro at the second point and the yen at the third. Prior to the euro either the Swiss frank or the Deutsch mark was used. Each leg of the triangle represents an important cross rate. Now imagine that triangle floating in space. As the yen rises, the dollar falls, etc. the triangle tilts. Now to complete the picture think of the vertical axis of the space in which the triangle floats as being denominated by real assets, the price of gold, agricultural and industrial commodities, real estate and so on. The tilts of the triangle represent shifts in relative advantage amongst the currencies. The altitude of the center of the triangle represents a mechanical linkage of the forex markets to the real world. Combined you have a unique framework for visualizing and understanding the forex markets. (More on this next time. Hint: The triangle is flat when the major crosses are at long-term equilibrium.)

Forex Bollinger Bands Study: Price Table

	10 periods		20 periods		30 periods		50 periods		Averages	
eurusd	1	93	6.1%	91	5.9%	95	6.2%	113	7.4%	6.4%
	0	1363	88.9%	1364	89.0%	1365	89.0%	1350	88.1%	88.7%
	-1	77	5.0%	78	5.1%	73	4.8%	70	4.6%	4.9%
usdjpy	1	100	6.5%	107	7.0%	102	6.7%	111	7.2%	6.8%
	0	1349	88.0%	1346	87.8%	1355	88.4%	1360	88.7%	88.2%
	-1	84	5.5%	80	5.2%	76	5.0%	62	4.0%	4.9%
gbpusd	1	97	6.3%	105	6.8%	105	6.8%	107	7.0%	6.8%
	0	1344	87.7%	1347	87.9%	1340	87.4%	1354	88.3%	87.8%
	-1	92	6.0%	81	5.3%	88	5.7%	72	4.7%	5.4%
usdchf	1	96	6.3%	94	6.1%	90	5.9%	76	5.0%	5.8%
	0	1353	88.3%	1350	88.1%	1342	87.5%	1363	88.9%	88.2%
	-1	84	5.5%	89	5.8%	101	6.6%	94	6.1%	6.0%
eurjpy	1	91	5.9%	90	5.9%	100	6.5%	124	8.1%	6.6%
	0	1365	89.0%	1364	89.0%	1360	88.7%	1342	87.5%	88.6%
	-1	77	5.0%	79	5.2%	73	4.8%	67	4.4%	4.8%
Averages			6.2%		6.4%		6.4%		6.9%	
			88.4%		88.3%		88.2%		88.3%	
			5.4%		5.3%		5.4%		4.8%	

Forex Bollinger bands study: returns table

	10 periods		20 periods		30 periods		50 periods		Averages	
eurusd	1	34	2.2%	44	2.9%	39	2.5%	41	2.7%	2.6%
	0	1464	95.5%	1457	95.0%	1460	95.2%	1452	94.7%	95.1%
	-1	35	2.3%	32	2.1%	34	2.2%	40	2.6%	2.3%
usdjpy	1	39	2.5%	33	2.2%	38	2.5%	33	2.2%	2.3%
	0	1454	94.8%	1461	95.3%	1457	95.0%	1459	95.2%	95.1%
	-1	40	2.6%	39	2.5%	38	2.5%	41	2.7%	2.6%
gbpusd	1	33	2.2%	43	2.8%	36	2.3%	36	2.3%	2.4%
	0	1459	95.2%	1447	94.4%	1461	95.3%	1456	95.0%	95.0%
	-1	41	2.7%	43	2.8%	36	2.3%	41	2.7%	2.6%
usdchf	1	41	2.7%	39	2.5%	38	2.5%	40	2.6%	2.6%
	0	1450	94.6%	1453	94.8%	1448	94.5%	1448	94.5%	94.6%
	-1	42	2.7%	41	2.7%	47	3.1%	45	2.9%	2.9%
eurjpy	1	32	2.1%	31	2.0%	33	2.2%	32	2.1%	2.1%
	0	1454	94.8%	1466	95.6%	1455	94.9%	1462	95.4%	95.2%
	-1	47	3.1%	36	2.3%	45	2.9%	39	2.5%	2.7%
Averages			2.3%		2.5%		2.4%		2.4%	
			95.0%		95.0%		95.0%		94.9%	
			2.7%		2.5%		2.6%		2.7%	

Euro versus US dollar, daily



Euro versus US dollar, weekly



©2004 Bollinger Capital Management and Capital Market Services, LLC This report is intended solely for distribution to professional and business customers of Capital Market Services, LLC. It is not intended to be distributed to private investors or private customers. Any information in this report is based on data obtained from sources considered to be reliable, but no representations or guarantees are made by Bollinger Capital Management with regard to the accuracy of the data. The opinions and estimates contained herein constitute our best judgement at this date and time, and are subject to change without notice. Bollinger Capital Management accepts no responsibility or liability whatsoever for any expense, loss or damages arising out of, or in any way connected with, the use of all or any part of this report. No part of this report may be reproduced or distributed in any manner without the permission of Bollinger Capital Management.

Euro versus US dollar, monthly



Good trading,

John Bollinger, CFA, CMT

© Copyright 2004 Bollinger Capital Management and Capital Market Services LLC

©2004 Bollinger Capital Management and Capital Market Services, LLC This report is intended solely for distribution to professional and business customers of Capital Capital Market Services, LLC. It is not intended to be distributed to private investors or private customers. Any information in this report is based on data obtained from sources considered to be reliable, but no representations or guarantees are made by Bollinger Capital Management with regard to the accuracy of the data. The opinions and estimates contained herein constitute our best judgement at this date and time, and are subject to change without notice. Bollinger Capital Management accepts no responsibility or liability whatsoever for any expense, loss or damages arising out of, or in any way connected with, the use of all or any part of this report. No part of this report may be reproduced or distributed in any manner without the permission of Bollinger Capital Management.