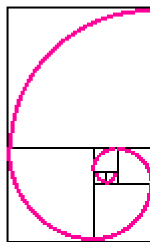
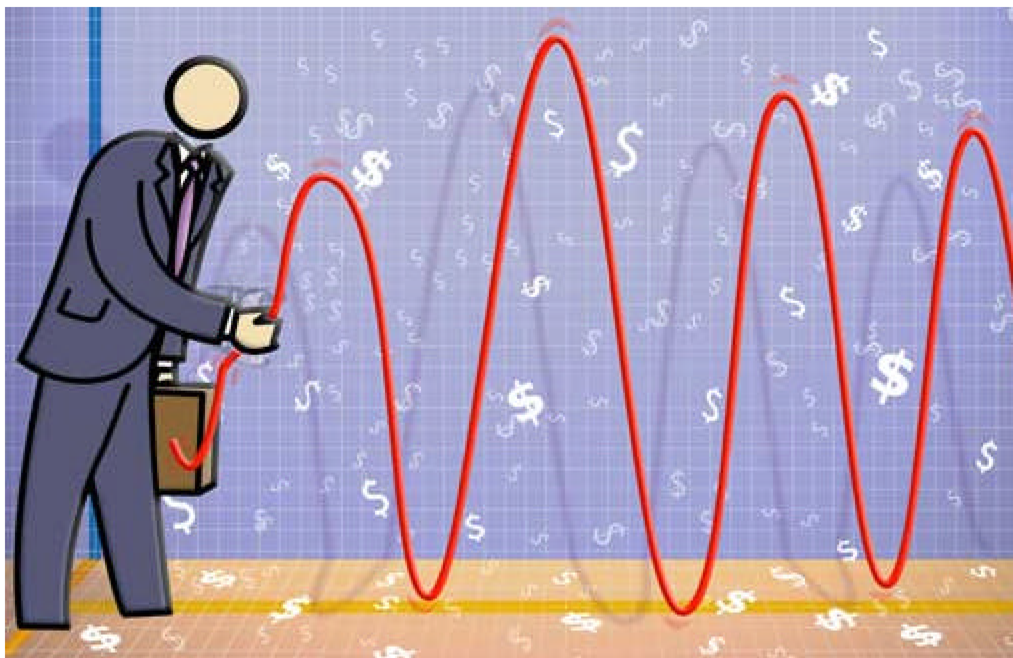


Sand Spring Advisors LLC

Changing Volatility Regimes



by,

Barclay T. Leib

September 22, 2007

Volatility is a funny thing. Sometimes I think of it as an oversized balloon stuffed into a four sided box with open sides on each side of the box, and an air pump slowly inflating the balloon's size. Imagine the balloon being pushed around by economic policy makers such that upon occasion the balloon sticks out of one side of the box as an indication of undue equity volatility; imagine the balloon popping out of another side of the box representing excessive volatility in fixed income markets; imagine transgressions by the balloon outside yet another side of the box representing commodity volatility; and the balloon making it outside the fourth side of the box representing currency volatility.

It is a Sand Spring hypothesis that in the naturally unstable global macro world that has evolved since the early 1980s, volatility is naturally popping out at least one side of the box almost all of the time, but seldom all four sides at the same time. Regulators regularly react to excessive volatility in one market by pushing against that volatility trend with policy movements; but no sooner have they calmed down one sector, but another sector revolts. The volatility --

driven by underlying structural economic imbalances left unsolved by simplistic quick fixes -- must express itself somewhere, so the balloon pops out another side of the box so to speak.

Think back to 1985. The U.S. trade deficit was deemed unsustainably large by then U.S. Treasury Secretary James Baker. But a good politician like Baker (trained at Princeton's Woodrow Wilson School -- my alma mater as well) could certainly fix that – just lower the U.S. dollar to make the U.S. more competitive selling goods abroad! But when the post-Plaza Accord U.S. dollar policy did not work across 1985-1987 to improve the U.S. trade balance situation, Baker came up with a new idea. He started to put heavy pressure on the Japanese to lower their interest rates and stimulate their economy so as to increase demand for American goods. This was a nice well-intended idea – but unfortunately something else happened instead (the volatility balloon popping out in an unforeseen way): courtesy of soon lowered interest rates, a property and equity bubble formed in Japan into 1987-1989 which eventually burst.

And since Japan at that time was the holder of some 25% of global savings -- much of which was suddenly tied up in distressed domestic Japanese assets – the global economic world has never quite been the same. There has been a constant struggle since the Japanese implosion to deny the existence of a problem -- to restructure and rejigger Japanese balance sheets to try to sweep the losses taken during its meltdown under the rug. My God, it is 2007, and interest rates in Japan are still sub-1% in an ongoing effort to recover from this period!

And because interest rates in Japan are 1%, guess where – on the margin -- global savings from Japan have headed? The low interest rates in Japan have driven savings into higher yielding countries like Australia, New Zealand, Europe, and the U.S. The money has poured into Greenwich CT-based hedge funds, and U.S. mutual funds, and U.S. Treasuries -- and in some cases, into investments like mortgage- and asset-backed bonds where Japanese (and other foreign investors with huge dollar reserves) likely have no real place being. A balloon of natural volatility has been shoved around within its box, but it keeps poking its head out – unwilling to simply go away.

Within this analogy, one or two of the four market sectors are almost always volatile, but the other one or two will often be quiet and temporarily contained and assuaged.

Sometimes we are in a commodity-focused world with the bulk of the volatility popping out in that sector. Sand Spring would argue that such has been the case for the past several years as gold, base metals, and crude oil have been moving all over the place. But during this period, fixed income and currency markets have been relatively dead. No matter how crazy gold and oil became, FX traders yawned, and currency option premiums melted.

Back in 1992 (and maybe in 1984 as well) it was exactly the opposite – commodity markets were dead, but FX and fixed income markets were all over the place.

Meanwhile, through most environments, U.S. equities have had an upward bias based on GDP and earnings growth, and foreign capital investment inflows, but occasionally, these markets have become the focus of extreme volatility -- particularly when investor sentiment becomes one-sided. Equity markets have had kind of a start-stop volatility process (technically called a "jump-diffusion process" to us old options geeks) where long periods of quiet trading are punctuated by occasional spasms of acute volatility that then quickly abate once again. 1999-2002 certainly comes to mind as an equity-centric world as people focused first on the advent of new internet technology, and then later on the corporate frauds of Enron, Worldcom, and Adelphia.

But alas, Greenspan pushed the equity volatility balloon back into its box yet again by lowering interest rates in the U.S. to 1% Libor levels by May/June 2003, and voila, we have come full circle – a new property investment bubble arrived not on Japanese shores but this time on U.S. shores.

This game of keeping interest rate levels artificially low while investment capital still dutifully migrates back to the U.S. cannot perpetuate itself forever. Some would argue that foreigners have no choice but to invest in the U.S. There is no other global capital market as large and liquid in which to recycle investments, and if the money did not come back here, the whole international monetary system would fall apart. Yet do the economic imbalances that began in the early 1980's eventually have to be paid for, or can time and easy money simply allow the world to grow its way back to more stable economic health?

In the subjective mind of one old trader (me), let's trace the overall cycle of relative sector volatilities in a rough table stretching back to 1982:

Subjective Memory of General Sector Volatility

	Equity Vol	Fixed Income	Currency	Commodity	: Additive Sectors High	
1982	High	High	High	High	4	
1983	Low	Low	High	Low	1	
1984	Low	High	High	Low	2	opposite of 2007
1985	Low	Low	High	Low	1	
1986	Low	Low	High	High	2	
1987	High	High	High	High	4	
1988	Low	Low	High	Low	1	
1989	Low	Low	High	Low	1	
1990	High	Low	High	High	3	
1991	High	Low	High	High	3	
1992	Low	High	High	Low	2	opposite of 2007
1993	Low	High	Low	High	2	
1994	High	High	High	Low	3	
1995	Low	Low	Low	Low	0	
1996	Low	Low	Low	Low	0	
1997	High	Low	Low	Low	1	
1998	High	High	High	Low	3	
1999	High	Low	Low	Low	1	
2000	High	Low	Low	Low	1	
2001	High	High	Low	Low	2	
2002	High	High	Low	Low	2	
2003	Low	High	Low	High	1	
2004	Low	Low	Low	High	1	
2005	Low	Low	Low	High	1	
2006	Low	Low	Low	High	1	
2007	High	Low	Low	High	2	
2008 --???	??	Higher??	Higher??	??		

Highlighted in yellow stripes are the years where three or four sectors have been particularly volatile concomitantly (1982, 1987, 1994, and 1998)– a relatively rare event over 23 years of history, and yet an event I believe is truly needed if one is to expect crash-like behavior in the markets as a whole. Even while 2002 was volatile in equities and fixed income, FX and currency markets were pretty benign during that period, so we weren't quite at risk of a real crash. Commodity markets have subsequently started to misbehave, but thankfully FX and Treasury markets have remained eerily stable, so 2007 doesn't look that serious either – at least not yet.

So fast forward to September 18th when Fed Chairman Ben Bernanke tried to come to the rescue of the equity and credit markets after their dour July-August period of apoplexy. As discussed above, excess liquidity in the U.S. and abroad drove the U.S. property bubble of 2003-2006, so let me get this straight, now we hope to solve this problem by creating more liquidity?

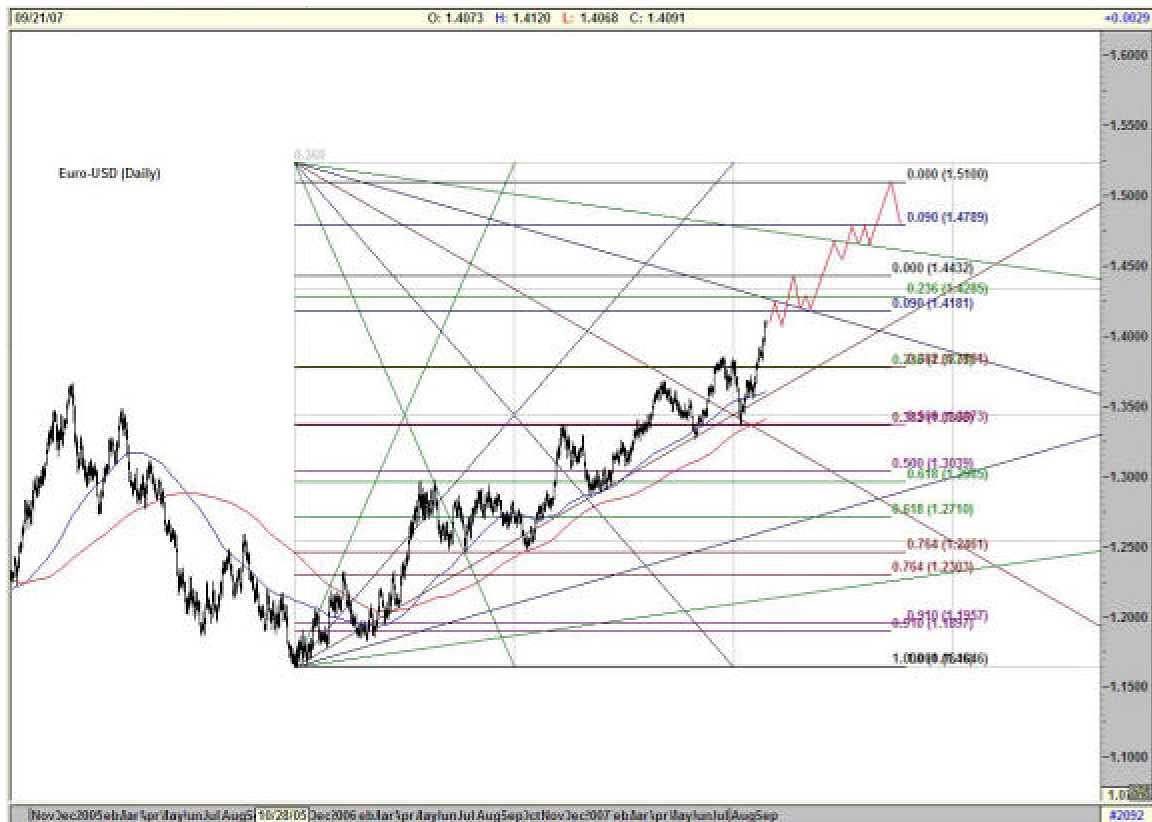
Maybe the rate cut will indeed help these sectors in the short-term, but for my money, I'd bet that the old "volatility balloon" just comes popping out another side of the box. If Bernanke is cutting rates into the teeth of still strong capacity utilization growth and commodity-push inflation, shouldn't the FX markets and the U.S. Treasury markets be over-ripe to revolt and become more volatile?

FX markets have also been so dormant for so long, that a week or two ago I heard that euro implied volatility levels were offered in the interbank market at 6.5% across the entire curve out to three-years. Mathematically this implies that the market expects the euro to move no more than about 58 pips a day on average (6.5% divided by the square root of the 250 trading days in the year multiplied by the spot rate). I am a buyer of volatility at such levels. Currency markets are just too naturally leptokurtic (fat-tailed) to have this volatility level be the right price for the next three years.

The way the currency and bond markets have reacted in recent days to Mr. Bernanke's rate cut also makes it feel as if something bigger is starting to brew in these quarters. This has led me to do more Fibonacci analysis of the dollar and bond market once again. Many subscribers have asked over time that we comment on the currency markets more, so here goes.

While the dollar is already dirt cheap on a purchasing-power-parity basis globally (particularly against Europe), and we do not like to play the game of buying over-priced currencies simply because of their momentum, Sand Spring is currently of the technical opinion that the Euro is headed over the intermediate term to at least 1.51; the British pound is headed up to 2.1340; and the Japanese yen on a weekly chart basis still has a clear eventual downside Fibonacci target near 97 yen (or around 1.03 in IMM futures terms – see second long-term yen chart below).

Along the way, natural short-term stopping points in the euro will be between 1.4180 and 1.4280; then another line of resistance comes in at 1.4432 followed by 1.4700-1.4800; but at some point, we should reach an eventual target just above 1.51.



09/21/07
O: 2.0089 H: 2.0203 L: 2.0086 C: 2.0199
+0.0109
British pound (daily)
missing high 0.000 (2.1342)
0.090 (2.0653)
0.236 (1.9538)
0.382 (1.8423)
0.500 (1.7521)
0.618 (1.6619)
0.764 (1.5504)
0.910 (1.4389)
1.000 (1.3700)
2.3000
2.2000
2.1000
2.0000
1.9000
1.8000
1.7000
1.6000
1.5000
1.4000
1.3000
1.2000
08/12/10
#3754

09/21/07
O: 115.3600 H: 116.3800 L: 113.9900 C: 115.3500
-0.0100
1.000 (146.8700)
0.910 (142.3846)
USD/JPY weekly
0.764 (135.1212)
0.618 (127.8529)
0.500 (121.9786)
0.382 (116.1042)
0.236 (108.8359)
0.090 (101.5725)
0.000 (97.0871)
target - longer term 96.10-97.10
missing low to decline
that started in 1998
150.0000
145.0000
140.0000
135.0000
130.0000
125.0000
120.0000
115.0000
110.0000
105.0000
100.0000
95.0000
90.0000
85.0000
1996
1997
1998
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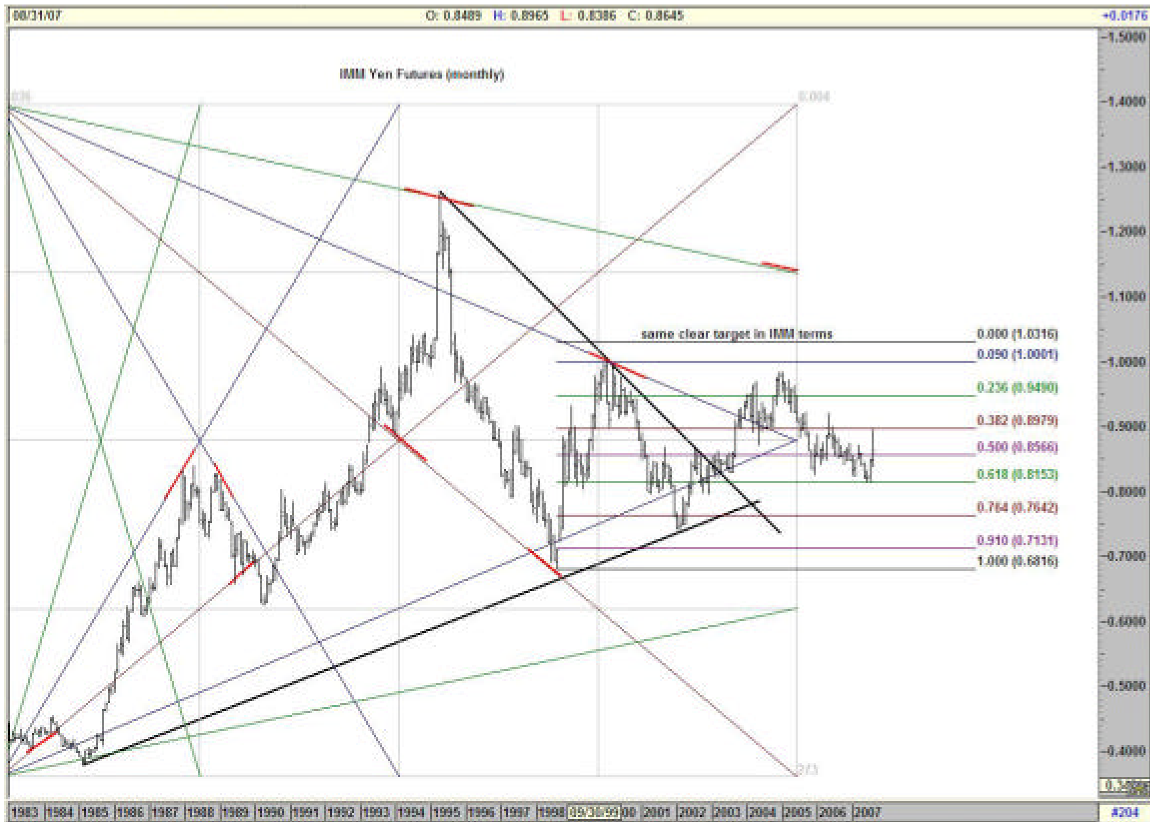
2001
2002
2003
2004
2005
06/09/06
2007
#638



The U.S. also crossed a sad milestone this past week as it fell below par against the Canadian dollar, and while we previously would not have expected this move, the new ongoing CAD chart pattern is now suggestive of some eventual further gains for the Canadian dollar to around .9300.

Of course if such dollar declines were to happen in an orderly fashion, the falling dollar would actually make U.S. stocks just that much cheaper to potential foreign buyers. America would effectively be on super-sale. Maybe Bernanke's gambit of letting rates fall and the dollar fall will succeed, and once more create the "illusion of prosperity" in the U.S. where equity markets advance, while the dollar decline quietly steals away any real U.S. equity gains for currency-exposed investors.

The key is to not spook the foreigners, and to hope that they are all patsies enough to continue to accept mediocre returns from their U.S. investments net of the ongoing dollar depreciation on those investments.

But telling the difference between when a weak dollar is good for equities and a weak dollar might be bad for equities likely hinges on yet another market: Treasury bonds. If T-Bonds start to lose their bid, then the game is no longer working, and it's time to watch out.

Back in 1987 there was a progression of different markets each getting more volatile and more stressed before they all eventually led up to the Crash of 1987. Bonds fell first in March 1987 and then kept falling steadily throughout the summer. Metals started to rally next in April 1987 and kept marching higher thereafter, and finally, the dollar started to fall in August 1987. Not until all three of these markets were in motion did a blithely bullish equity market finally capitulate.

<u>In 2007, it is possible that the only thing different is the order in which these markets are incrementally adding stress to the system</u>: commodities are in the lead, the dollar is starting to fall next, and bonds appear to be the final market not yet causing major problems.

But even then, to get a real crash, I also believe that two other ingredients are needed in the cocktail – something geophysical (a freak London hurricane, for example, in 1987) and something geo-political (Reagan was bombing Iranian offshore oil stations over the weekend of October 18th, 1987). If a crash is brewing, it may easily occur as some combination of a freak NYC snowstorm (leaving the city in gridlock, and some traders unable to access their offices), a geo-political event of some sort, a dollar decline, and a bond market revolt – all transpiring at the same time.

Our next minor PEI cycle date is November 13, 2007 – and I have no idea what it may hold.

What I do know is that Treasuries look sick at present, and now sport a longer-term Fibonacci rhythm to eventually reach a yield near 6.5%. This is an even higher target yield than the 5.80% target that we have suggested in the past -- which actually makes sense given recent market behavior and Mr. Bernanke's policy response.

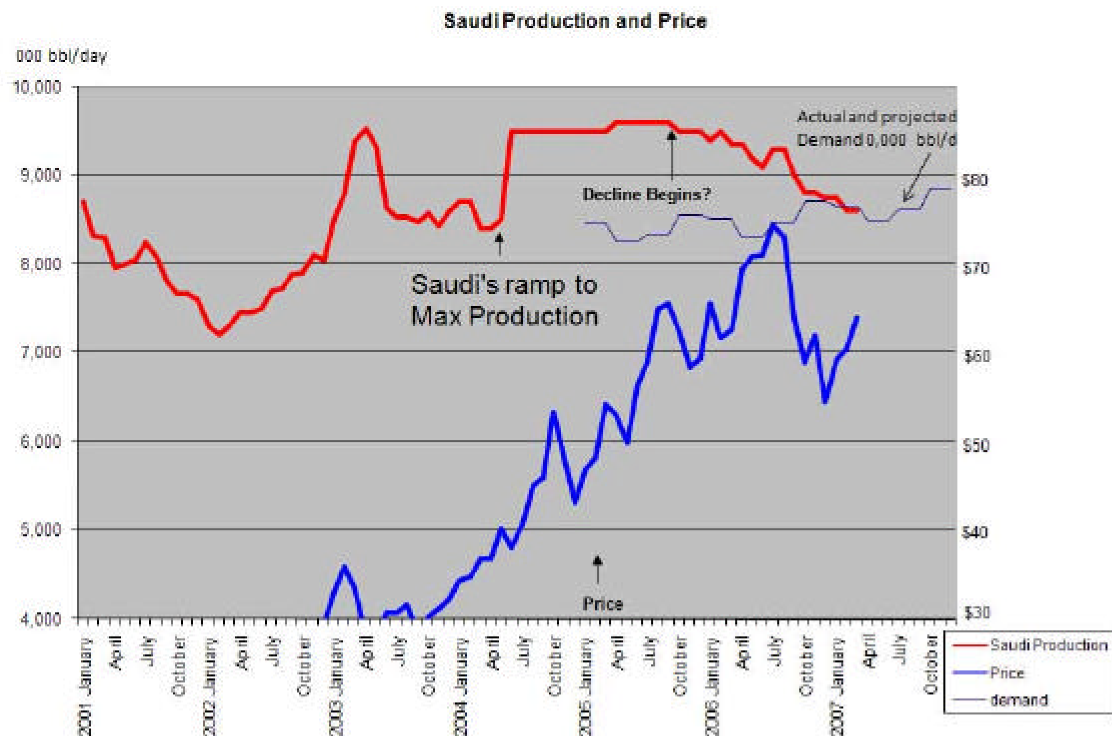
Worse yet, the JGB market in Japan appears poised to fall from grace as well, with an initial downside price target near 129.77, and then eventually a 122.79 longer-term target.

Meanwhile on the metals side, gold has a clear upside target forthcoming near $780.70.

And longer-term, here's what we see possible for crude oil…Mon dieux!

Such a view of Crude above suggests that fundamentally we should be in the "Hubbert's Peak" camp expecting global crude oil production capacity vis a vis demand to be in secular decline. We did indeed recently hear rumors from one of our energy hedge fund managers that the "watering out" of Saudi Arabia's huge Ghawar field has become ever more problematic. Ghawar produces approximately 6% of the world's daily crude production, and accounts for about 30% of Saudi reserves. But to get the oil out of the ground, massive quantities of sea water must be pumped into the ground. The so-called "water cut" is the percentage of water versus crude (or natural gas) that immediately is seen pumped back out of the wells. When oil analyst Matthew Simmons wrote his 2005 book, *Twilight in the Desert*, the water cut at Ghawar was around 30%. There are more recent reports that the Ghawar water cut may have risen to over 55%. I am obviously not a geologist, but from what I understand large reserves do remain at Ghawar, but they are very hard to get to as the remaining reserve is aligned more horizontally than it is vertically at depth. The easy pickings are mostly gone.

Now look at the chart below. It shows that Saudi production peaked all the way back in 2005. At $82 a barrel today, is there any more real capacity available to be turned on? Or is Saudi production now in secular decline because Ghawar is finally just becoming too old and used up?

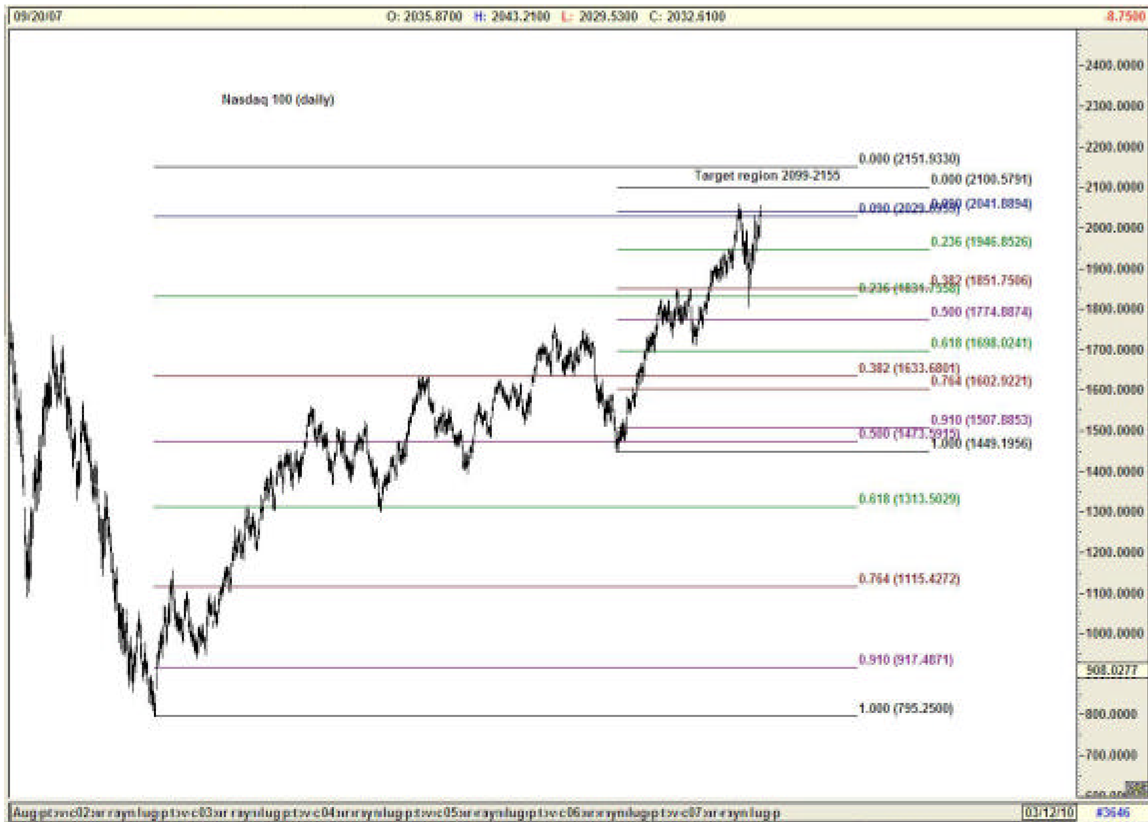


Source: www.princeton.edu/hubbert/current-events.html

Such questions are best left for others besides myself to answer. But I remain a secular energy bull with a continued strong interest in seismic and oil service companies. Many of these companies are located in Norway – where I am actually headed tomorrow to see one hedge fund manager involved in this space.

To finish my monthly ramblings, properly viewed, it is clear from the discussion above that equities should be looked at not only in U.S. dollar terms, but also in foreign currency terms.

Yes, as discussed previously, we currently expect new annual highs in the NASDAQ 100 up near 2090-2140 and some individual tech stocks to come, but such may be harder to accomplish in euro terms or in yen terms. The S&P in yen terms actually looks pathetically weak, and already perhaps forming a head & shoulders top formation.



09/21/07
O: 1993.5000 H: 2056.2700 L: 1975.2900 C: 2032.6100
+31.7900
Nasdaq 100 - weekly
1.000 (4810.3251)
0.910 (4413.6928)
0.764 (3771.4215)
0.618 (3128.7099)
0.500 (2609.2580)
After touch up here in 2090-2140 region, then hard down.
0.382 (2089.8062)
0.236 (1447.0946)
0.090 (804.8233)
possible longer term?? ugly if so.
0.000 (408.1910)
5500.0000
5000.0000
4500.0000
4000.0000
3500.0000
3000.0000
2500.0000
2000.0000
1500.0000
1000.0000
500.0000
0.0000
-500.0000
1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007
11/27/09
#1023

09/20/07
O: 1445.5 H: 1445.5 L: 1445.5 C: 1445.5
-16.2
0.236 (1780.2)
Nasdaq 100 denominated in euros --
one more new high expected here as well near 1526.
Then down.
0.000 (1525.9)
0.090 (1462.6)
0.236 (1360.2)
0.382 (1257.6)
0.618 (1091.9)
0.764 (989.3)
0.910 (886.9)
2000.0
1900.0
1800.0
1700.0
1600.0
1500.0
1400.0
1300.0
1200.0
1100.0
1000.0
900.0
800.0
700.0
600.0
05/16/06
#2153

All in all, this is a "stagflationary" world in the making. The use of the term "stagflation" simply hasn't come back into vogue yet. Indeed, most economists would consider the mere mention of "stagflation" in a 2007 context as somewhat radical. Call us trend setters.

The sad thing is that back in 1987-89 all of this could have been avoided if Baker – instead of jawboning the Japanese to lower their rates -- had decided instead to take another "tough love" type of economic path. If Baker had decided to genuinely improve the government deficit, and improve our trade deficit <u>not</u> by trying to export the solution abroad, but <u>instead</u> by trying to slow down the U.S. consumer consumption patterns at home, I am of the opinion that the world would be a more balanced and prosperous place today. More specifically, I am of the opinion that imposing a 10-20 cent added excise tax on gasoline in the late 1980s would have been the right thing to do. Ross Perot proposed this in one of his election campaigns, and I am proud to say that I voted for him. But such a platform was of course political unpalatable to mainstream America. It was not a path most politicians even had the kahunas to propose. Yes, the U.S. would have had a sharp recession in the short-term, but I believe that the U.S. would have been healthier for this recession in the longer-term.

Alas, this is all akin to spilled milk today.

Economic policies need to be set not just to balance domestic growth and inflation, but with a long-term eye to also maintain a reasonable economic balance sheet and a serviceable level of indebtedness. The U.S. has miserably failed in this latter regard. Bernanke is simply the latest iteration of Washington slipping down a slope of policy mistakes with unintended consequences and ever-increasing economic imbalances.

Instead of the volatility balloon being slowly deflated, it has grown in magnitude, and someday might just pop.

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