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A Commentary by Harley Bassman:

THE CONVEXITY MAVEN

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Value Concepts from the Credit Suisse Trading Desk
February 14, 2012

"Grabbing the Wrong Tail"

Courtesy of Hendro Hioe / Caters News

Not to sound too much like a broken record, but as we have stated in past Commentaries, if the only solution is Inflation, then we shall have inflation, the only question is whether it will take six months or six years. The most common retort from the naysayers is to point to Japan. After all, Japan has a decade long head start on the US at utilizing "Helicopter Economics" yet there has still not been a whiff of Inflation. Moreover, not only has Japan managed to maintain an interest rate structure lower than ours, but also their currency has actually strengthened vis-à-vis the USD. This is a rather stunning situation for those of us who believe that printing fiat currency with impunity can only end in tears.

But while *"pigs can fly, if shot out of a big enough canon"*, eventually, this porcine canon fodder must fall back to earth. And so it most certainly will be for Japan too; the question, as always, is how soon?

While sometimes lonely, we are not alone in our views. In fact, there is a growing cadre of Macro Investors who believe that Japan's unbalanced Fiscal and Monetary metrics must at some point normalize via either higher JGB Rates or a much weaker USD/JPY exchange rate. An ever expanding, one might even say "crowded", trade has been the purchase of deep out-of-the-money "tail-risk" options on the USD/JPY. Today's Commentary aims to detail that while the notion itself is terrific, the most frequent execution is sub-optimal (the wrong tail). By the time we reach our conclusion, we hope that those of you presently engaged in such trades will allow Credit Suisse to modify your holdings. For those on the sidelines who have yet to become involved, let us just say that your timing could not be better to "strap on" some exposure to this risk vector.

Grab Your Life Vests

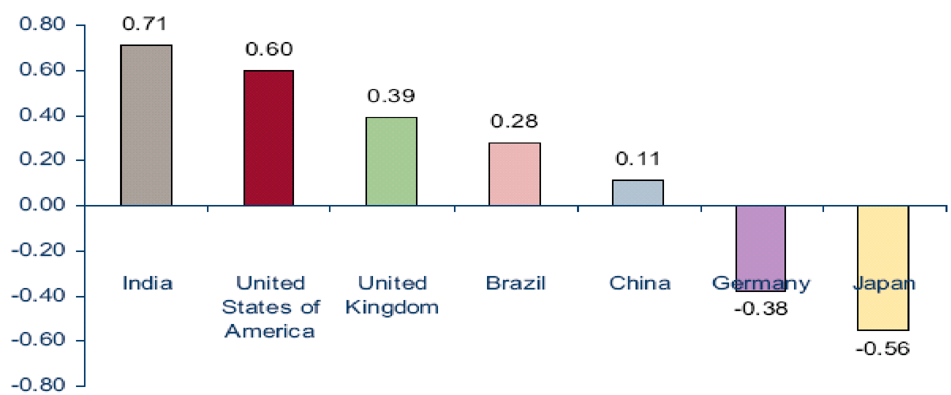
There is no need to recount our reasons why inflation is an eventuality in the US and that this will slowly debase the long-term purchasing power of the USD. The twist here is to explain why we have not yet seen the USD decline in value versus our trading partners. <u>The answer simply is that while the USD is certainly on the Titanic, it just so happens that the JPY and EUR reside in berths on a lower deck.</u>

Specifically with respect to the JPY, their Demographic, Fiscal, and Monetary situation is vastly more unstable than what underpins the USD.

At its core, Japan is a shrinking country. As shown below, of the significant

Exhibit 1: Projected Population Growth

Average Growth Rate per annum - 2010-2050

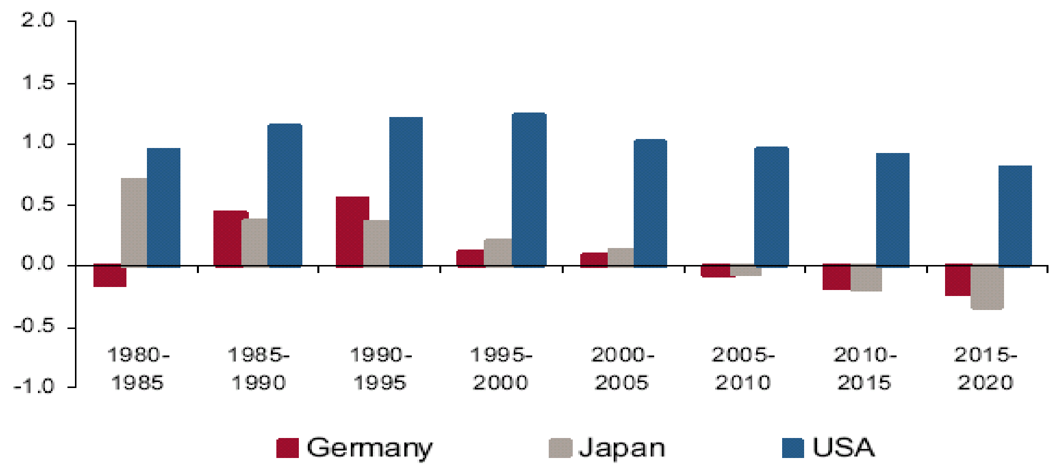


Source: Credit Suisse, UN

economic contributing countries, both Japan and Germany are projected to actually have declining populations. Not only is this not a new phenomenon, it is in fact accelerating.

Exhibit 2: Population Growth Rate

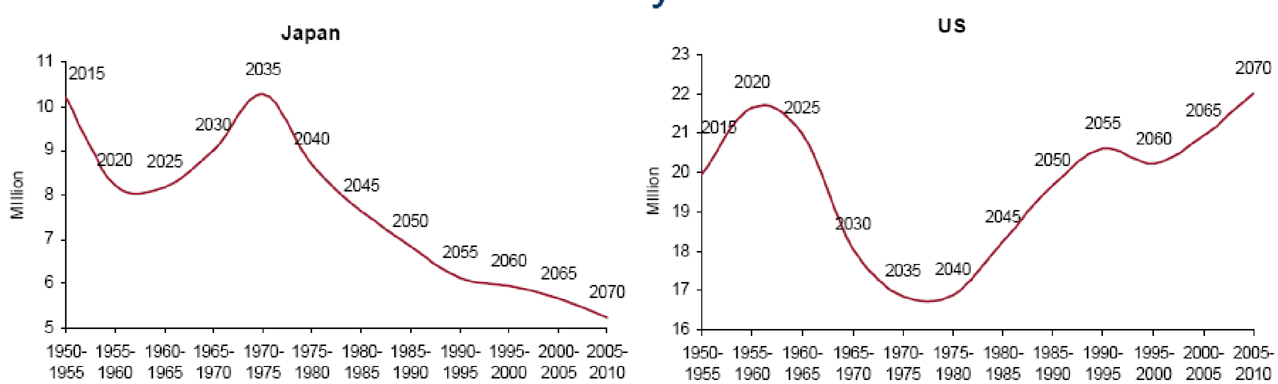
Growth rate per annum (in percent)



Source: Credit Suisse, UN

The reason for this is rather straight forward. As detailed in *"The Pig in the Python"* (January 12, 2012), the US demographic has another bulge in the population pipeline know as the "Echo Boomers". These kids of the "Baby Boomers" (born 1946 to 1964) will someday lead to rising Equity and Home prices as they reach their prime earning years in the next decade. To the contrary, as shown below, Japan has no such demographic. For whatever reason, Japan has had a non-sustaining birthrate (below 2.1 children per woman) for quite some time. As such, their aging population not only becomes a larger cohort of the total population, but also there is a shrinking working-age class to financially support them.

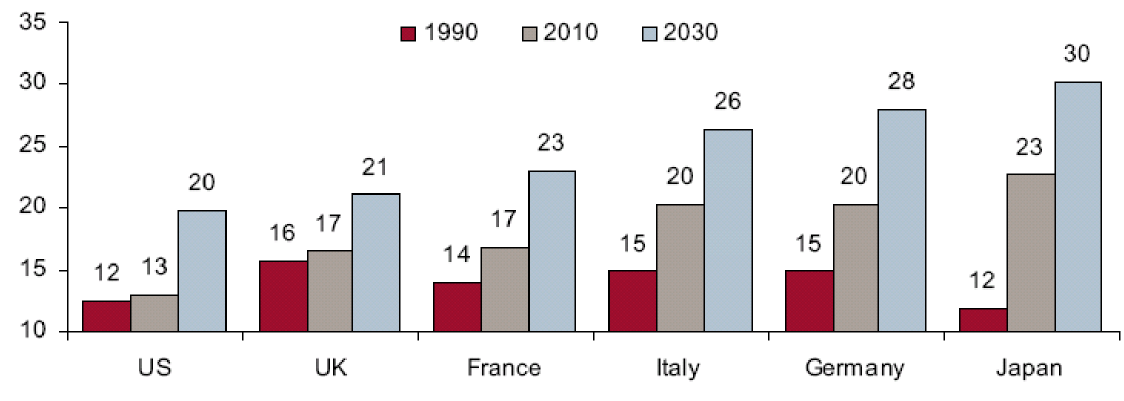
Live Births* and the Year They Turn 65



Source: UN, Credit Suisse Demographic Research https://research-and-analytics.csfb.com/R2Action.do

The next two charts detail the scope of this problem. As late as 1990, Japan's "senior citizens" (age 65+) as a percentage of the total population was similar to that of the US and was actually lower than mainline Europe. However, nary two decades later Japan has the oldest population as defined by this measure.

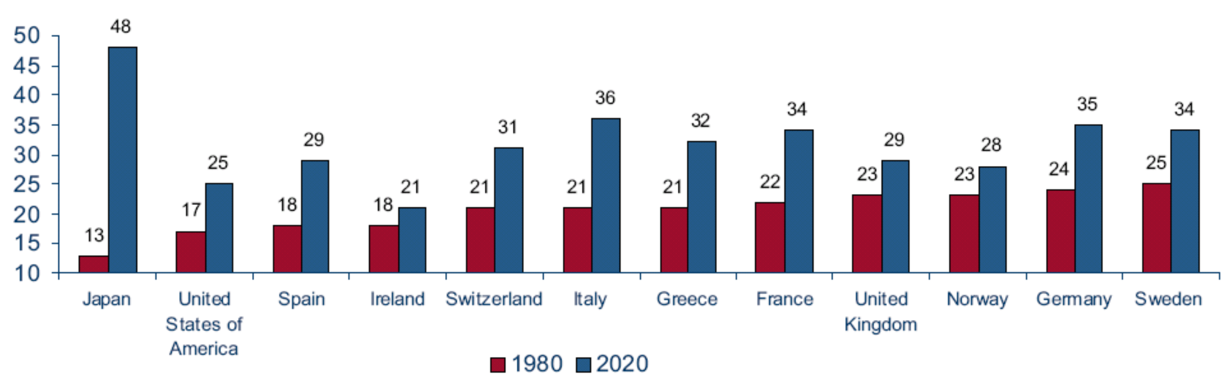
65+ population as a % of Total population



Source: UN, Credit Suisse

This by itself is not necessarily bad. A larger senior class could primarily be due to a healthier population with greater longevity. And while Japan actually does have the longest life expectancy at birth of the G-6 countries, the unfortunate reality is this aging demographic is mainly the result of a declining "working age" (15 to 64) cohort. As shown below, in only eight years Japan will barely have two people of working age per senior citizen. With fewer working age people to support programs for the elderly, a greater proportion of their financial productivity will be directed to social programs and less will be available for debt service and other Government activities. Since the notion of a Social Security "Lock Box" is merely a political slogan, the ratio of workers to seniors is one of the most important statistics available for long-term public policy analysis.

(Ratio of 65+ to 100 persons of working Age 15-64)



Source: Credit Suisse, UN

It is this demographic divergence that enables us to state that not only will the US not follow Japan down the economic rabbit hole, but also supports our core believe that Japan's Rate and Currency profile is unsustainable.

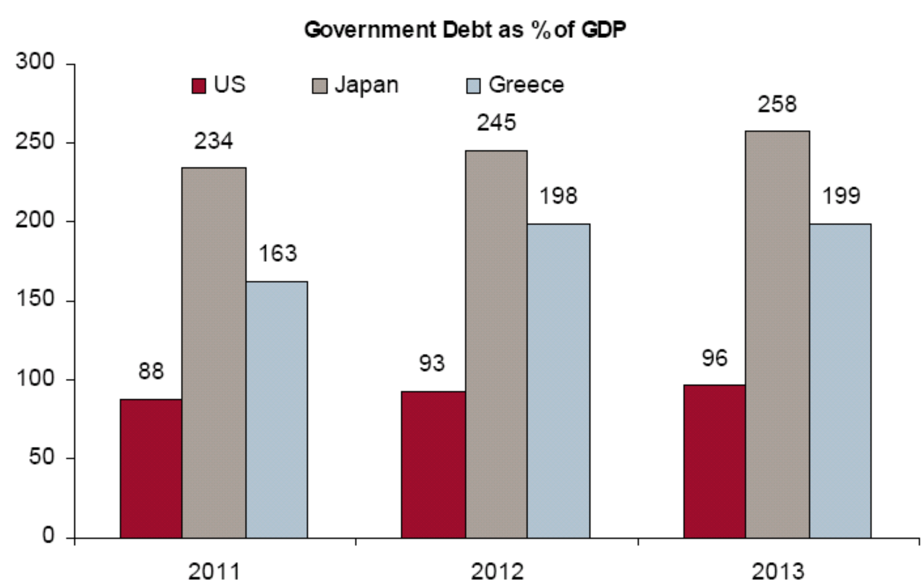
While a bit dated, the table below normalizes the relative Gross Financial Liabilities of the US, Japan, and their major European trading partners. It makes one wonder why the financial community is terrified of Greece, concerned about Italy, but somnambulant about Japan.

Exhibit 6: General Government Gross Financial Liabilities

	Percent of nominal GDP			In Billions of USD	Per Capita (USD 000's)
	2000	2005	2009	2009	2009
United Kingdom	45.1	46.1	71.0	1561.13	25.36
Germany	60.4	71.1	77.4	2502.81	30.46
Italy	121	119.9	123.6	2582.17	43.13
France	65.6	75.7	84.5	2227.34	35.73
Norway	34.2	49.1	59.9	221.03	45.93
Greece	114.9	114.5	114.9	388.57	34.81
Spain	66.5	50.6	59.3	853.14	19.00
Ireland	40.2	32.7	65.8	149.16	33.04
Sweden	64.7	60.7	52.7	209.57	22.66
Switzerland	52.5	56.4	44.4	214.72	28.37
United States	54.4	61.3	83.9	11967.28	38.03
Japan	135.4	175.3	189.3	9554.87	75.14

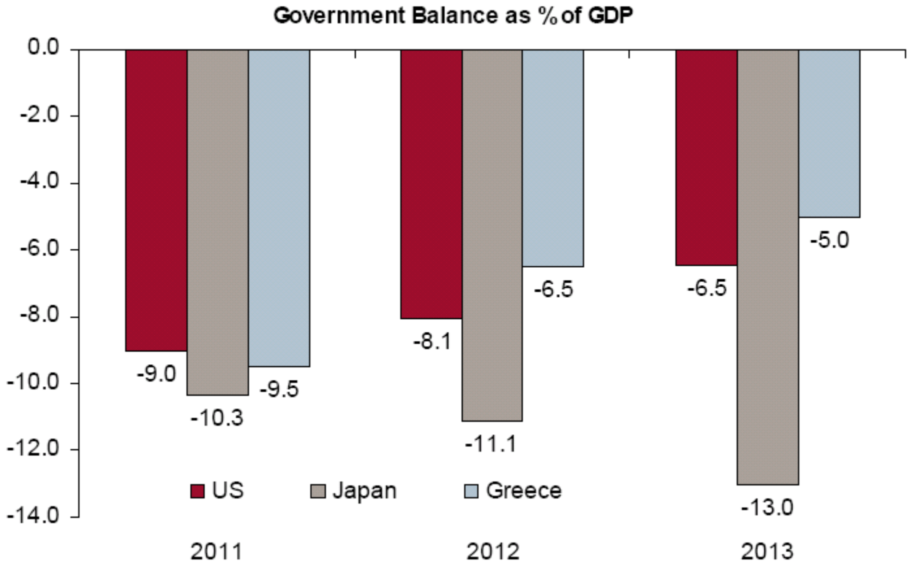
Source: Credit Suisse, IMF, OECD

More troubling, projections indicate that the situation in Japan will only worsen while that of both the US and Greece will soon stabilize.



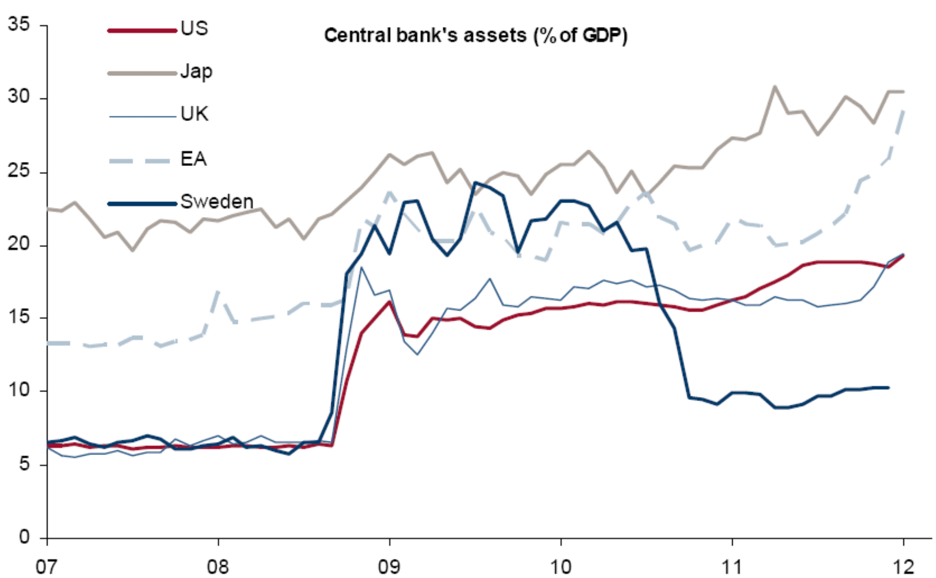
Source: Credit Suisse

Most disturbing, the financial resources available to support this massive debt is projected to decline in Japan as their Budget Deficit continues to expand as a percentage of their GDP.



Source: Credit Suisse

To complete our overview of Japan's deteriorating financial position, we would summarize Ben Bernanke's November 21, 2002 speech about deflation by noting that Japan's situation is not proof that Governments cannot create inflation, but rather that they just "did not try hard enough". Unlike the BOJ and MOF who seemingly have let Japan's economy spin its wheels in the mud, the Bernanke FED has dynamited the swamp to create Monetary Velocity and resuscitate the US economy. While we may be early, we affirm our belief that printing money via Debt Monetization must result in inflation. Shown below, Japan is a leader.



Source: Credit Suisse

Optimizing the Risk Vector

We suspect that the past few pages have been more of a summary of what you already know rather than a revelation. Furthermore, the proposition that Japan is in a lesser financial position relative to Greece is a cute story, but totally preposterous. CDS on Japanese debt will certainly expire worthless while CDS on Greek debt is "in the money" by every measure except the fine print of the contract. That said, Japan has severe issues that will at some point require a significant risk vector re-alignment.

To restate our view: *While it is possible that Japan can continue down the current path a bit longer, this too will pass. Printing money via debt monetization cannot be sustained indefinitely*.

Unfortunately for many investors, this economic reality is moving at a glacial pace and many overzealous traders have been carried off the field for being too early on the most well advertised trade in the Liquid Rates markets.

The main reason the –green line- JPY has strengthened and JGB rates have remained low is that Japan, unlike other countries, has self-funded their deficit. Be it risk aversion or monetary patriotism, it seems likely that as the generation that rebuilt post-war Japan retires, the deficit chickens must come home to roost.

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For those who have bought into the notion that the Japanese Yen must ultimately devalue against the US Dollar, the most popular trade has been to purchase one to two year expiry options struck relatively deep out-of-the-money. The key selling point is the low initial (and limited) cost of the option. However, the low dollar price of this type of investment masks the fact that there is a superior method gain exposure to this risk vector.

The table below details the recent mid-market price, and the associated input values, for a 100.00 strike USD/JPY call option with expiries from one-year to ten-years.

	Expiry	Fwd Fx	Implied Vol	Option Px	Delta	1yr Theta
Spot Fx	>>>>>:	**78.41**				
	1yr	77.92	14.0%	$0.24	4.2%	
	2yr	77.08	14.0%	$0.98	10.2%	-$0.74
	3yr	75.87	14.3%	$1.87	14.3%	-$0.89
	4yr	74.29	14.5%	$2.54	16.2%	-$0.68
	5yr	72.44	14.9%	$3.27	17.8%	-$0.73
	6yr	70.57	15.3%	$3.83	18.6%	-$0.56
	7yr	68.68	15.6%	$4.31	19.2%	-$0.48
	8yr	67.18	15.8%	$4.77	19.8%	-$0.46
	9yr	65.81	16.0%	$5.17	20.2%	-$0.40
	10yr	64.52	16.2%	$5.52	20.6%	-$0.35

mid-market model px

Source: Credit Suisse

One of the more common manners to gain exposure to a declining JPY is to purchase a two-year expiry option only somewhat above our mid-market level of 98 cents (fourth column, second row). While this does have the merit of only funding a “tail risk” option with a cost of somewhat near one point, it fails to address many of the critical path dependency issues. <u>As such, we submit that these traders are grabbing the wrong tail</u>.

While it is certainly the case that some of the lesser developed economies in the world can turn south rather quickly, the reality is that the major G-7 nations will not sink as fast as the Titanic. As such, it is highly likely that a buyer of a two-year expiry option will be “right”; unfortunately, he will not have purchased enough time to profit. Suppose that the JPY weakens against the USD by 26% over the next two years. While the buyer will certainly feel vindicated, he will not profit since a close at 99.00 would leave him out-of-the-money. Moreover, if this were to occur and the investor was still convinced that the Yen was on a one way train to 150, he would be perplexed as to what he should do next. The purchase of another two-year option with the same 100 strike would be quite expensive since it would now be at-the-money. As an alternative, he could again minimize his cost by paying for the similarly distant out-of-the-money strike of nearly 128, but then he would not profit until it breached that level. Both paths would be quite frustrating considering that this investor had the "right call" on the market.

We strongly favor the purchase of a ten-year expiry option on the USD/JPY exchange rate, either to open a new position, or to replace an existing two-year option position.

The ten-year is advantageous over a similar strike two-year for many reasons:

1) The ten-year option is cheapened significantly by taking advantage of the Rate-driven forward price drop of nearly 14 Yen;
2) The first year's time decay on the two-year option is 74cents vs. 35cents for the ten-year expiry option;
3) The 100 strike is locked in at inception for ten years;
4) The ten-year option has a much higher initial delta so profits will accrue more quickly in the early stages of currency depreciation;
5) The total cost of five consecutive two-year options is not much different than the cost of a single ten-year option.
6) **Most important, you will have enough time to be "right". Both the NASDAQ and Housing bubbles were obvious, it was the delayed timing that prevented most investors from profiting**.

Ultimately, there are only a few scenarios where the two-year option is a clear winner whereas there are many paths where the ten-year option is superior. <u>In the final analysis, at a total cost of about six points (60bps per year), you can own a huge payout tail that can anchor a diverse "risk on" portfolio</u>.

This is one of our "*2012 Holiday Stocking Stuffers"* and is one of our three best Macro trades. As we stated at the outset, *"Pigs can fly, if shot out of a big enough canon"*. Start toasting that bread, because I smell a BLT on the horizon.

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February 14, 2012

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