

The Narrow Road to the Deep North: Fixed Income Skew and Signatures of Japanification

What ails Japan, the United States, and many other countries is financial deleveraging. Much talk about “Japanification” over the past year or so because the Federal Reserve response to deleveraging has been to compress BOJ policies into a shorter overlapping timeframe... giving the scenario a look and feel of the Japanese experience. Aside from this policy compression, there’s nothing new in the policy brew. The monetary policy compression and fiscal insanity has arguably made the next step—a tax increase—even more imminent than when Japan instituted their consumption tax.

Central banks can salve financial system wounds, but they must heal on their own. The problems of the financial sector reflect adjustments going on at the household level. This implies that these problems will be resolved organically by debt reduction, capital losses, and rescaling of capacity.

Heal they will. Most will be much poorer to show for it, but economic calamities happen according to economic time, and that is often s-l-o-w measured against clock time. It may take generations from deleveraging to work fully through, but the change will likely be so gradual that people will observe it clearly only in hindsight.

Of course this is not always the case. 1989 shows two paths of untergang: Japan or the former Soviet Union. In economic time, we are too close to the initial conditions to know which will dominate. But in time we reach a bottom and then resume the climb ever higher.

Dark indicators / a cold winter wind that spreads / clouds on autumn sky.

This is Japanification in a haiku.

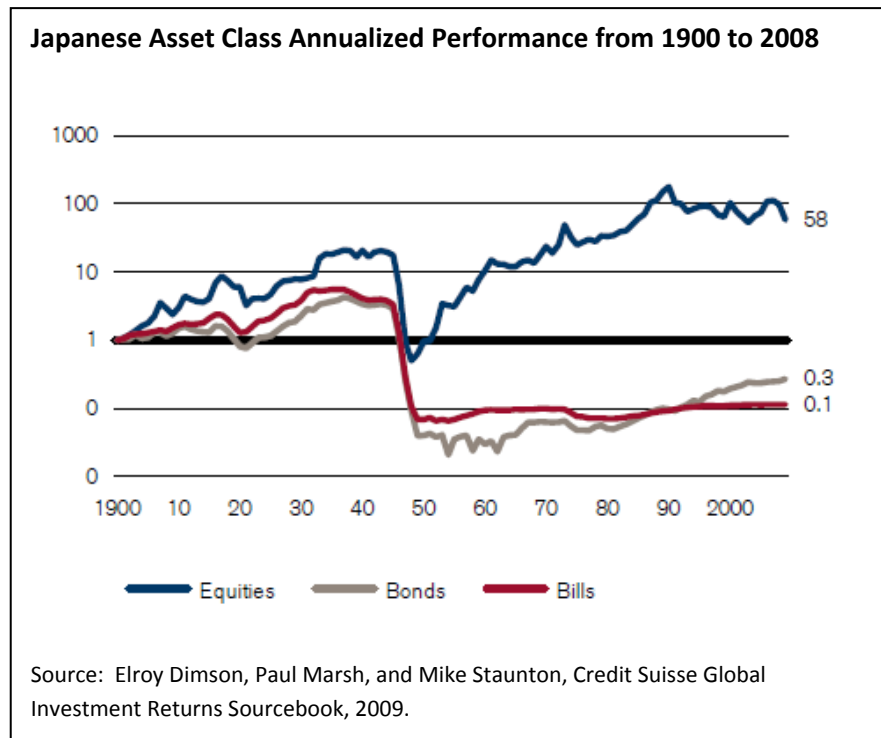
Deleveraging is a Financial Meltdown

The basic issue is how financial crunches work themselves through to resolution against a backdrop of demographic change. The rapier point is the decline in bank ROE relative to the terrific ROE of the last couple of decades due to the following factors:

1. Net long treasury positions, Steep yield curve
 - ⇒ Good treasury profit contribution
2. Strong home price appreciation
 - ⇒ High borrowing demand
3. Sustained high employment
 - ⇒ Capacity to borrow
4. Secondary market liquidity for loans
 - ⇒ Ability to Lend
5. Strong deposit growth
 - ⇒ Low funding costs
6. Fee income
 - ⇒ High profits for bank branches

Deleveraging happens when enough of these factors are reversed. This leads to credit losses, which force banks into heavy write-downs and heavy losses. Banks increasingly can't unwind their book, which causes a lack of liquidity and interbank lending freezes up. This creates the well-known self-feeding cycle seen in those dark clouds all over the world.

A Closer Look at Japanese Economic Time



Since the beginning of the 20th century, fixed income never had a particularly good home in Japan. Bond and bill performance was completely dismal right after world war two up to the equity bubble burst in 1989. They stepped up from miserable to pathetic in the nineties and noughties.

Equities have been stuck in a stuck in a negatively skewed holding pattern since. This backdrop makes the Japanese policy in govies even more intriguing.

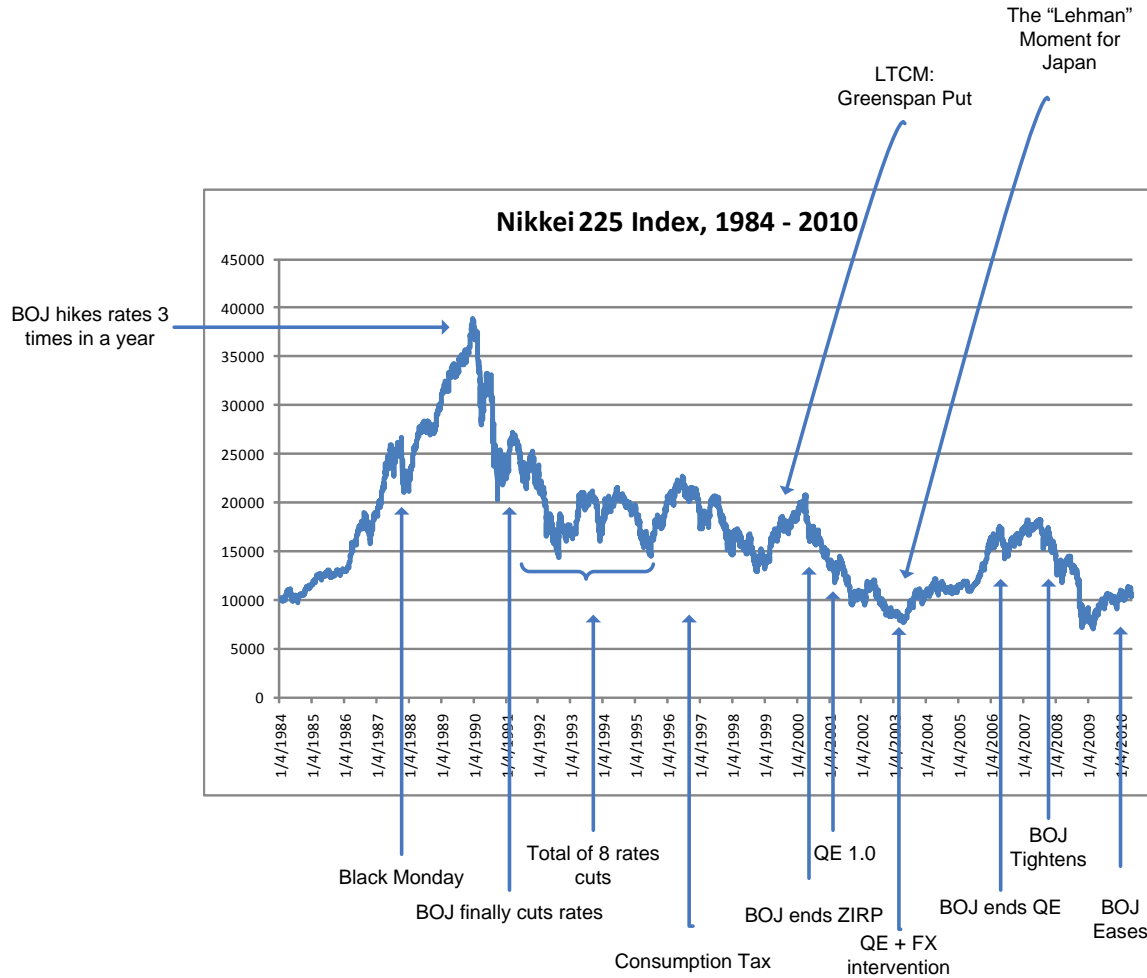
Goal-less Surreal Activities: Some Remarks on Policy

When bank ROE is crushed the whole equity market suffers. This is because banks act in many ways as coordinators of economic activity given how they allocate credit.

In a world dominated by Confucian technocrats, the perfectly Daoist policy of action of letting it be through inaction is unacceptable. So at the outset, Japanese policymakers failed to recognize that much of economic theory is just the self-interested justification of the status quo. They then translated that codification into practical non-sense: provide liquidity into a solvency problem, a commitment to continuing the liquidity morphine drip whenever needed, all via purchasing of long-term government bonds.

So here we are. Monetary policy in the “developed” world is reduced to bald political tactics that have pretty much discarded any trappings of coherent theory. The whole point is to sustain banks given horrendous headwinds. This reduces to three things: **shaping interest rate expectations, altering the composition of the central bank’s balance sheets, and expanding the central bank’s balance sheets.**

The BIS and IMF have some good papers on the Japanese macroeconomic experience. Of more interest is what can be inferred from directly observed data.



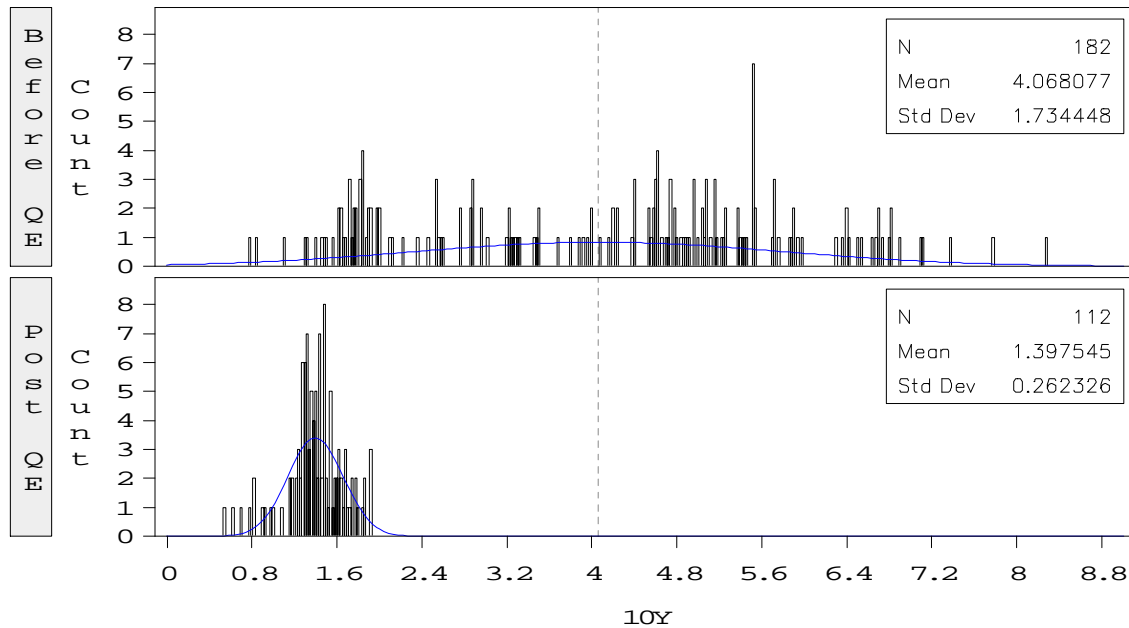
The Signature of Quantitative Easing: Negative Skewness

Short-term interest rates in Japan remain a study in minimalism. They forced a search for higher returns by taking various risks in other markets spawning the well-known yen carry trade. Another approach was to increase duration risk by investing their funds in long-term government bonds. With the decline in long-term interest rates, however, people expect(ed) large potential capital losses in the event of a reversal of interest rates movements, and this in turn caused negative skew and kurtosis to increase. Kurtosis = successfully targeted yields. Kolmogorov-Smirnov rejected normality big-time.

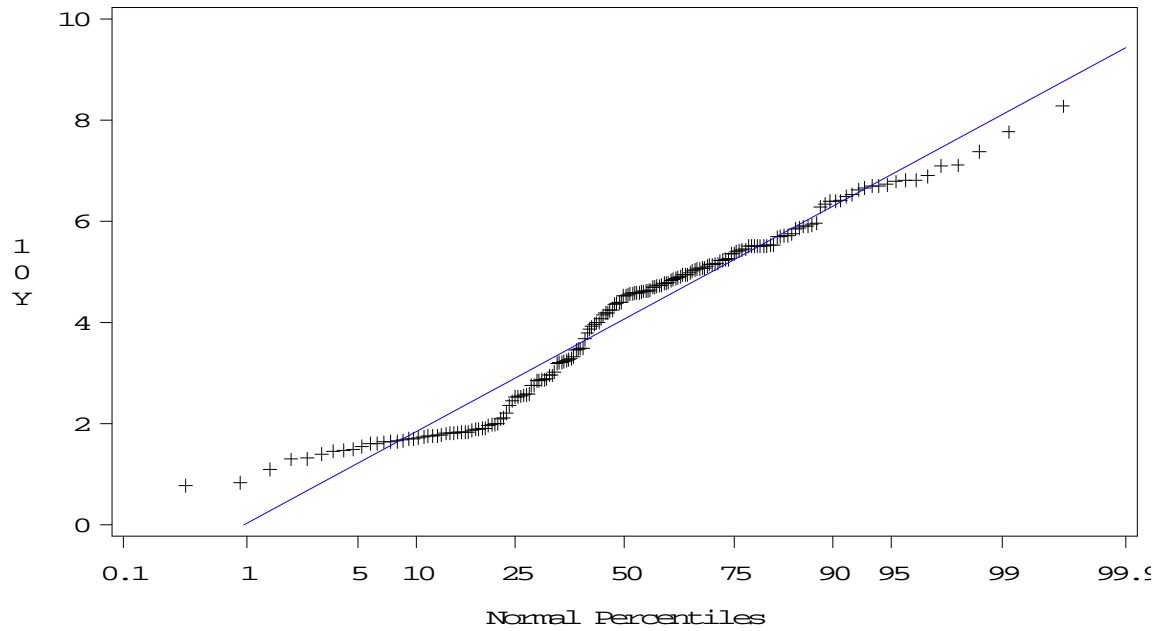
10Y JGBs	Pre QE (Jan 1986-Feb 2003)	Post QE (March 2003 -)
Mean	4.068	1.397
Std Deviation	1.734	0.262
Skew	-0.038	-0.713
Kurtosis	-1.010	1.451

The blue line below is an assumed normal distributed fitted to the mean and variance of daily yields before and after Quantitative Easing began in 2003. I customized the histogram buckets so you can get a better feeling for the spread.

Comparison of JGB10s pre and post QE

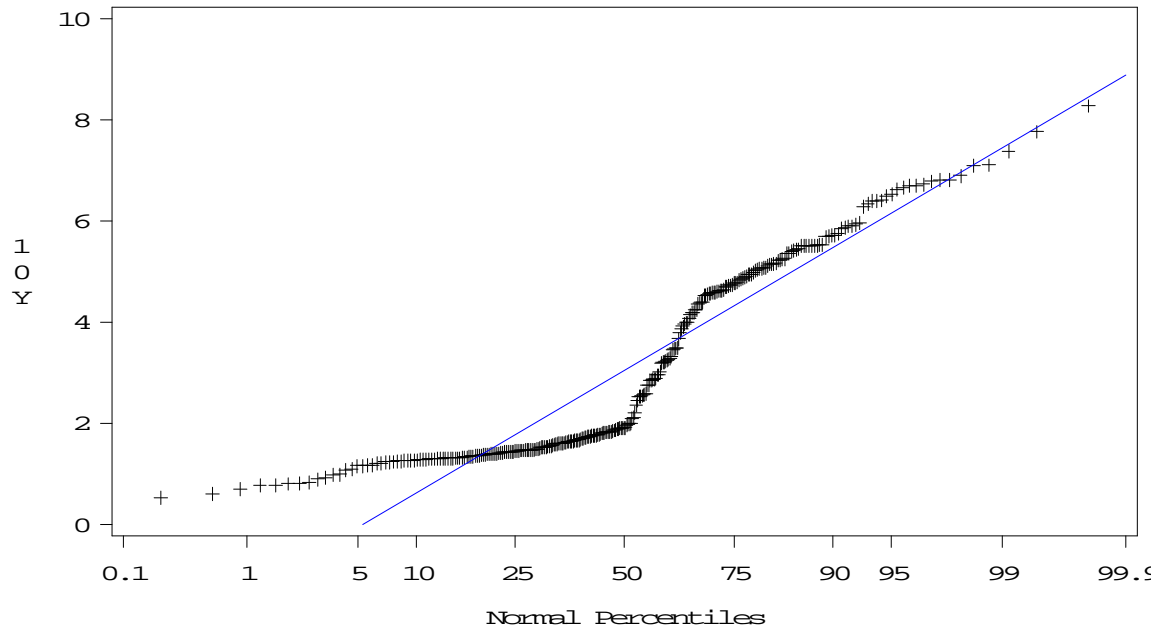


Probability Plots, JGB10s Pre – QE



Probability plots post-QE: Greater skew, but the tails aren't fat.

Probability Plots, JGB10s Post QE

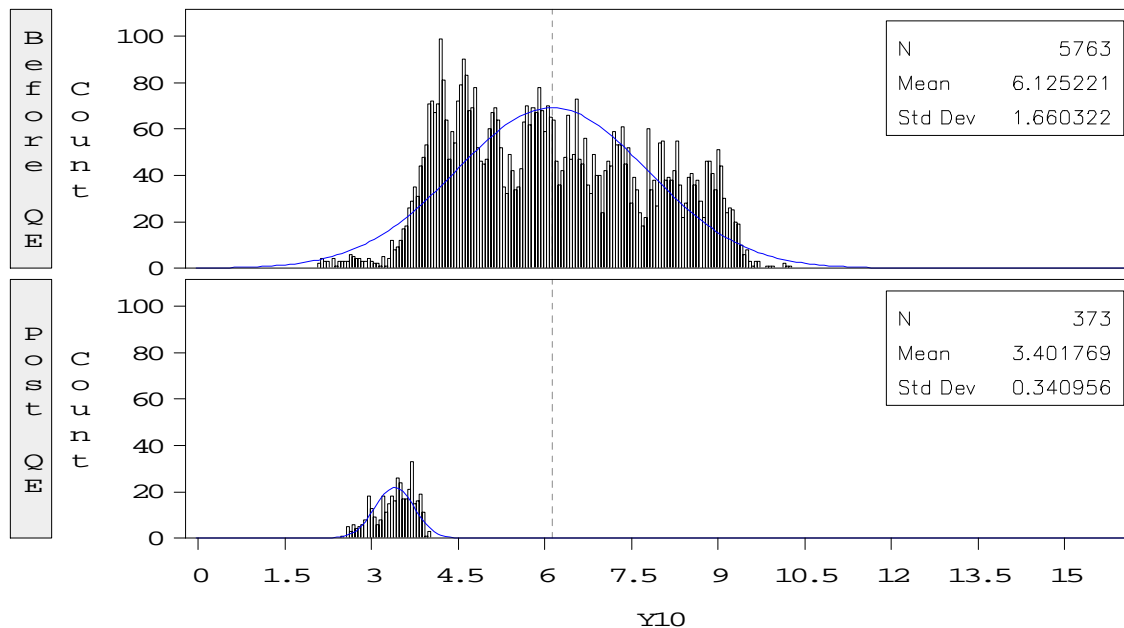


So do we see any indications of the same in USTs?

It may be too early to tell anything because of the sub-sampling, but here's the stuff. There is a change in the skew from positive to negative, but little change in kurtosis. That negative skew indicates that a rise in interest rates means the Fed-sponsored party in treasuries will be over.

10T	Pre QE (Jan 1986-Mar 2009)	Post QE (March 2009 -)
Mean	6.1252	3.4017
Std Deviation	1.6603	0.3409
Skew	0.2131	-0.5156
Kurtosis	-0.9592	-0.6046
Kolmogorov-Smirnov Normality Test	Reject at p-value: <0.010	Reject at p-value: <0.010

10Y bond returns, Pre – and post – QE



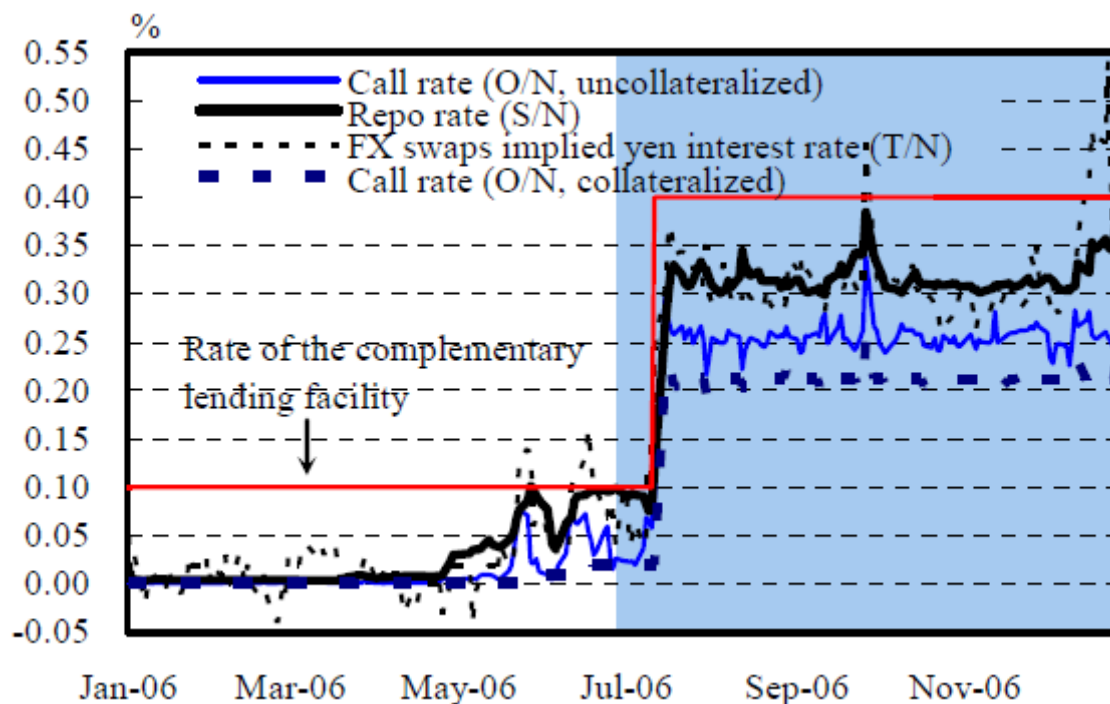
So When Will the Party be Over? Spikes in LIBOR-OIS May Mean the Fed Pulls Banks off the Teat

Liquidity provision BOJ-style was often back-doored early on in the ZIRP cycle. For example, commercial paper operations were carried out in a repo manner and thus are not outright purchases by the BOJ. The BOJ provided Funds-providing operations in bank bills and CPs are essentially the BOJ lending to financial institutions with government securities, CPs, and other eligible securities as collateral. In contrast, in the operations in ABCP, ABS, and government securities that began in 2003, the BOJ bought these assets outright. This had big effects on money markets.

The OIS call rate declined to at most 0.01%, while in the QEP period, the rate further declined to 0.001%. In both periods, differences in interest rates for individual financial institutions have also come down to minimal levels, at least at the short end of the money market.

July 14, 2006. BOJ changed the guideline for its money market operations and the uncollateralized overnight call rate target when from zero to 25 basis points. The loan rate on their version of the discount window went from 10 basis points to 40 basis points. This may not seem like much, but it signaled normalization in Japan.

Even before the policy interest rate rises, spot/next day (S/N) repo rates and implied rates for yen funding tomorrow/next day (T/N) transactions through foreign exchange (FX) swaps temporarily exceeded the complementary lending facility loan rate. Repo rates rose in May and June 2006, increasing the upward pressure on rates in other markets, like the O/N call market. See picture.



Source: Bank of Japan, Financial Markets Department

So... if the Japanese experience provides any guide, it seems that repo rates and LIBOR will telegraph an impending rate rise, and OIS will move later. So spikes in LIBOR-OIS may signal to the Fed it is OK to pull banks off the teat. I suppose it could also mean something more sinister too.

Addendum. Another way to escape the ZIRP trap is to take more credit risk. I don't think this happened so much in Japan as much as it is happening here. There is not much chance of mitigating skew via diversification in the HY space, so the appetite for treasuries as a hedge will continue. But Treasuries exhibit negative skew, presumably because a rate hike will mean the treasury party is over. Less hedge, more clusterfluke. So who actually thinks that the Fed is raising rates anytime soon?