-JAPAN-

AND THE IMPENDING SOVEREIGN DEBT CRISIS

LONG: EWJ , SHORT:MTU

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"A man generally has two reasons for doing things. One that sounds good, and the other is the real one" – JP Morgan

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- Introduction -

This report seeks to convince the reader of the upcoming sovereign debt crisis in Japan, and how one might be able to profit off said crisis. The long-short position is really more of a short with a hedge on near term market advances.

I recommend taking a long position in EWJ which is a highly liquid ETF that tracks the MSCI Japan Index. Due to a recent inflationary push by Shinzo Abe, the Japanese stock market has begun to experience gains unrealized for some time due to the long term deflationary environment (average deflation of .7% over the last ten years). The long position serves as a hedge to the short term rise in broad Japanese equity values which will deteriorate the value of the short position.

I recommend a short position be taken on Mitsubishi Financial Group UFJ (MTU). MTU has one of the largest exposures to JGBs (Japanese debt) and will be expected to take significant losses on those investments. Despite the large JGB exposure which is the crux of the recommendation, their financial position is not strong. Furthermore, the environment for a financial institution in a deteriorating sovereign bond market isn't good. <u>Treasuries make up 22% of MTU's assets on the balance sheet. If they were to write down 25% of their JGB exposure, due to a sovereign default, it would wipe out all shareholder equity in the company which accounts for about 5% of assets.[Assets = 218 Trillion Yen, Liabilities =207 Trillion Yen, Shareholder Equity = 11 Trillion Yen.</u>

There is no circumstance by which one can understand the trade unless they understand the default dynamics and catalysts. As such, please do not view the discussion of Japanese debt as an optional section. In fact, I would recommend, if you read just one thing, it be that section. The conclusion of the long-short play will be very obvious.

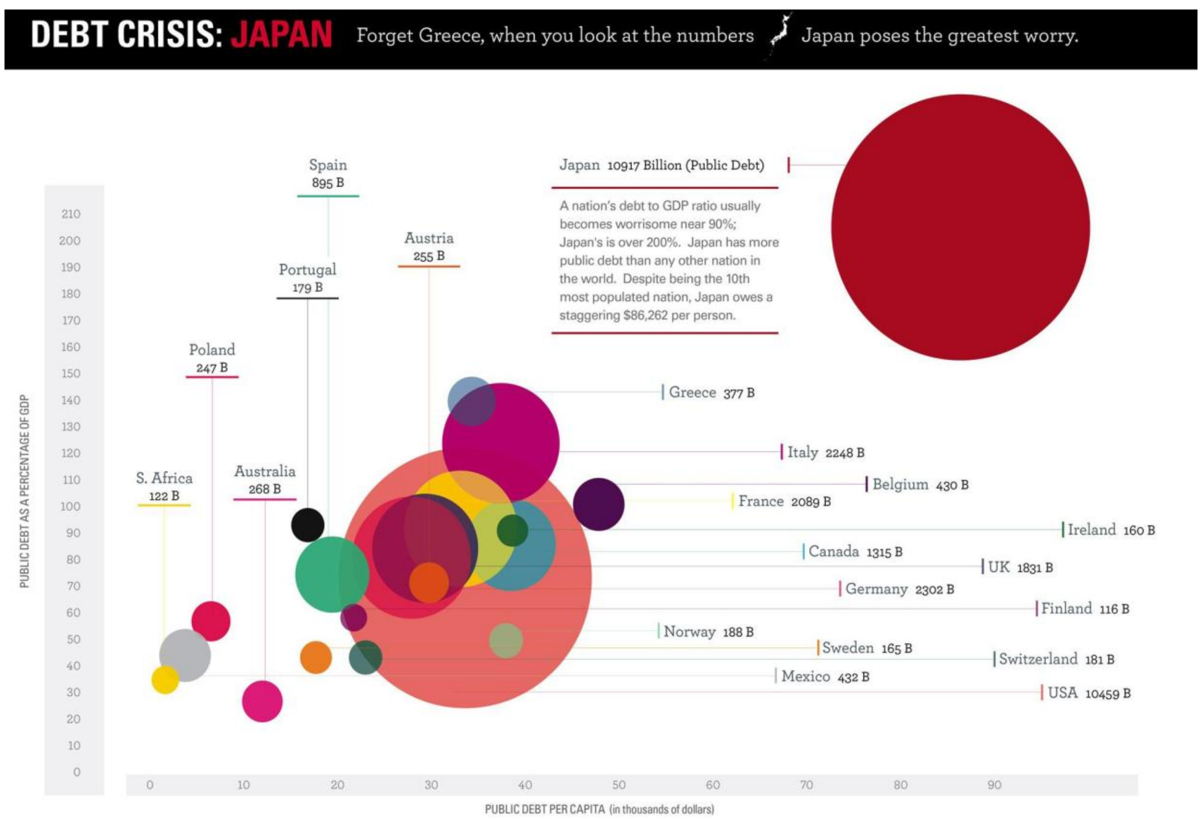
--- The Trade ---

1:1 long/short => EWJ/MTU . Once credit default spreads widen, drop the long position and hold the short naked. The market will surely overreact to the down side when the debt crisis presents itself. Take profits incrementally, starting when MTU has dropped 25%.

Investment Horizon: 2-3 years (depending on global macro conditions)

- A Discussion on Japanese Sovereign Debt -

The chronology of events in financial history have been thankfully well documented and per our analysis, offer a great deal of insight into the future of the world and the events that should transpire. We are in the largest period of debt accumulation. The historical result either involves the debasing and restructuring of the currency and sovereign balance sheet or war.[7] Neither of these options are good ones for the collective progression of the world markets and worse yet for the particular countries that must debase or war. In 2011 Japan's debt to GDP ratio rose to 220%, the highest in the world, and with the discount rate at .3% there is little rate cutting that can be done. This paper seeks to argue for the impending Japanese sovereign default. First, let us take the 30,000 foot view of the global debt to GDP situation.

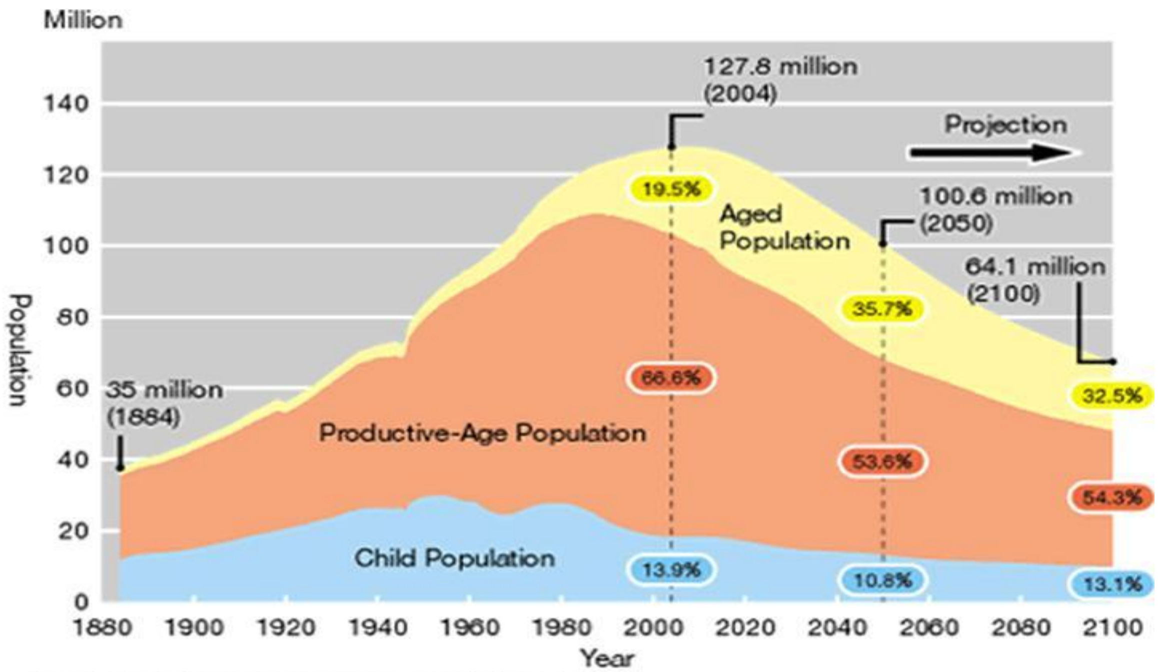


[2]

The Y axis of the above graph describes debt/GDP and the x axis offers debt per capita. You can see that in both instances Japan varies wildly from the rest of the world. The most recent data published June 2012 puts Japan at a staggering 235% debt/GDP [11] and the average citizen being owed 85,000 dollars from the government. There is no chance, that the Japanese will be able to pay this debt. They owe over one quadrillion yen. The question isn't can they pay back, the question is when will they default and what are the results of the default on the Japanese people and the world economy.

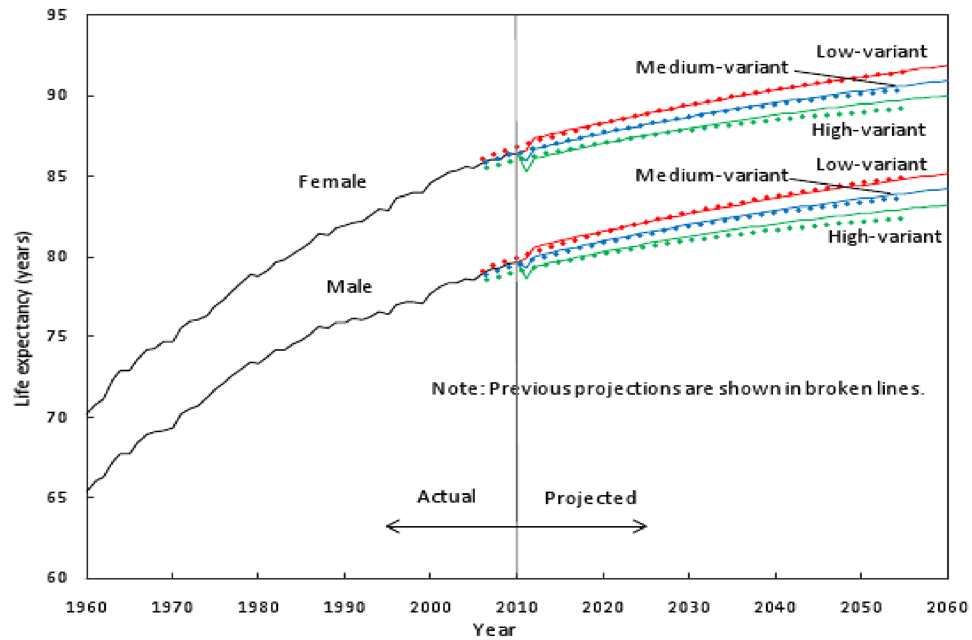
-Population Trends-

Without getting into the details of the population trend analysis performed on behalf of the National Institute of Population, I hope to make it quite clear that Japan's major problem is their population demographics. Given poor fertility rates of the Asian communities [10] and a difference in cultural perspective from other nations, the social pay it forward programs are horribly positioned. The idea of social security isn't radically different from a Ponzi scheme. The reason that Ponzi schemes fall apart is more participants leave the system then enter into it. This is the case for the Japanese population which essentially caped out in 2006 at around 130 million people. The National Institute of Population wrote a paper on the long term outlook for Japan's population and found that in the next fifty years the aged population should rise from 20 to 35% while the total population decreases around 20% suggesting the productive producing population will decline by about 13%. [7] When you have a productive population reduction, an increase in the aged population, and a decrease in the child population you have a very serious concern.



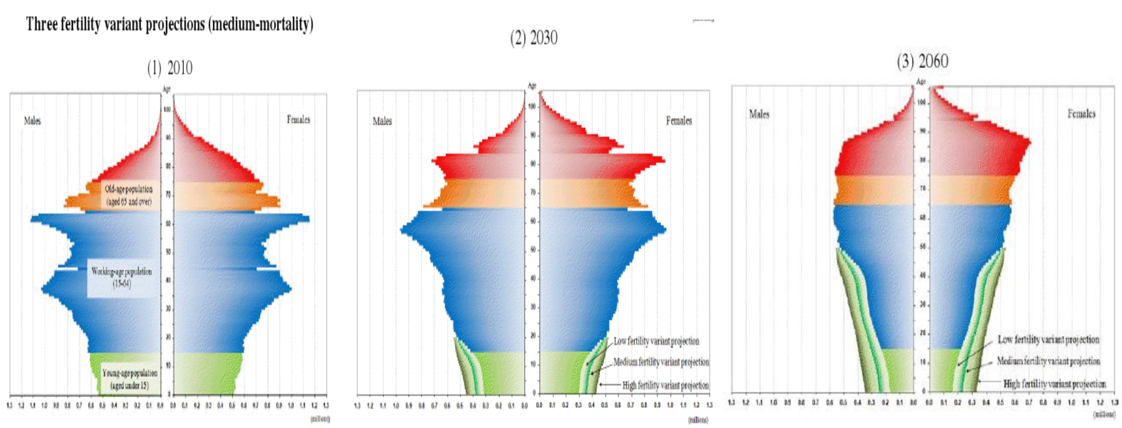
Source: National Institute of Population

Despite the population trend, we must also consider two additional population concerns. The first is Japan doesn't just have an aging population but a population that enjoys longevity. The average citizen , depending on gender, should live between 80 and 85 in the immediate future. The trend should continue to bring male and female life spans between 80 and 90 over the next 50 years. So not only is there an increasing number of non productive producing citizens, but they are living longer. For the first time in 2012 sales of adult diapers exceeded those of child diapers [9] The graph below demonstrates estimates for life expectancy based on low medium and high fertility rates.



The other concern to be had is that the Japanese are incredibly xenophobic. Of the 125 million people less than 3 million are non Japanese citizens. This sort of unfavorable immigration policy propagates the homogonous nature of the Japanese culture and, similarly, their thought processes toward matters such as significant investment in national debt instruments.

The graph series below shows the population distribution of age. Blue represents productive producing workers. Orange are those phasing out of the work force. Red are those that are retiring and the green or striped are children and projected children given growth rate estimates. Males on the left and females on the right. The graph below came from t he 2012 IMF population study on Japan [12]

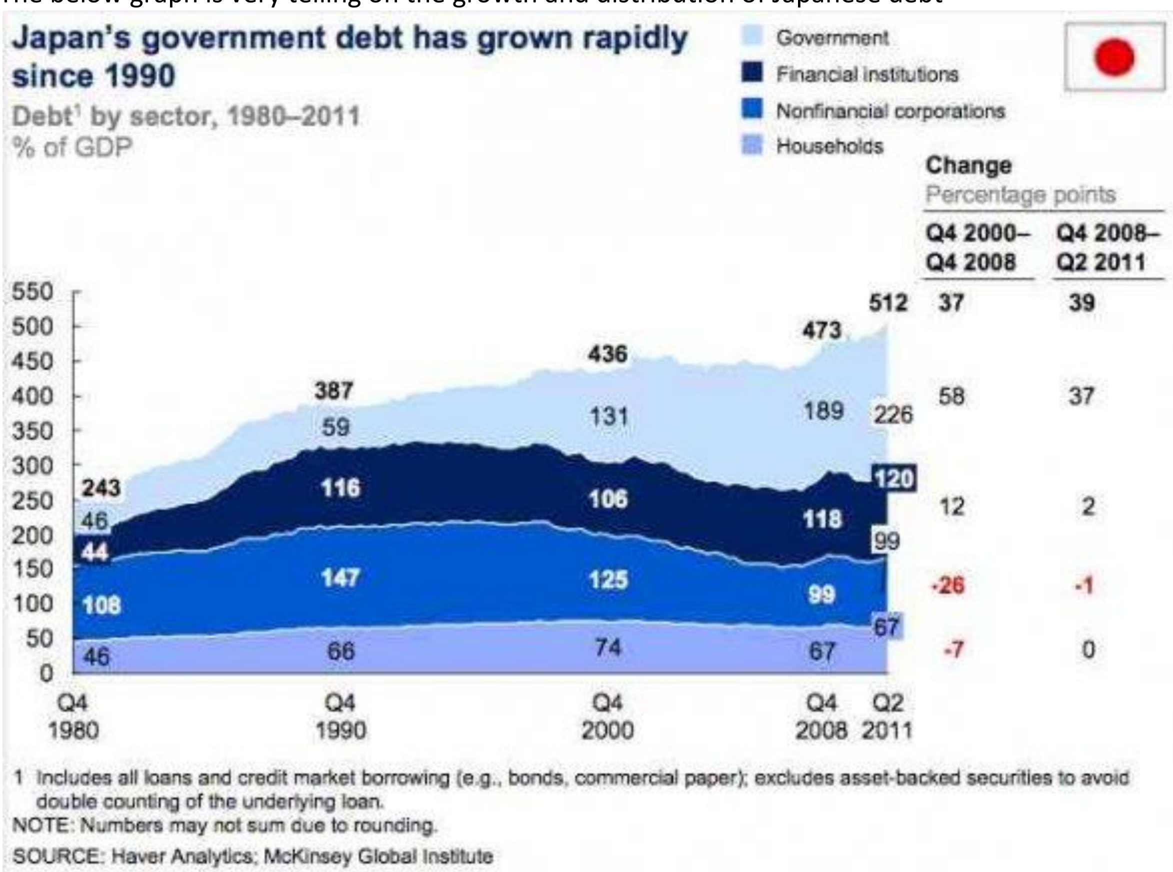


Notice how the center of the above graphs are tightening. These demonstrate the decrease in projected productive producing work force and subsequent reflection of a larger elderly population. Overall, the resounding conclusion one should make is that the entire pie is getting smaller. Despite where the shrinkage is coming from or where it will be most reflected in 10, 20,

30 years, we can at least acknowledge there is a very serious population decline being projected.
To conclude; the Japanese are incredibly xenophobic with only 3 million of 125 million citizens being immigrants. They have an aging population. They have low reproduction rates. Their elderly are living longer, and there is very little doubt that the reduced base of the population curve can fulfill the social promises of the Japanese government. If the population demographics hold what do you foresee happening on the pension side of things? The government pensions or private pensions that are highly levered toward Japanese government debt will be paying out more than they already bring in. It is happening at this minute, where you have to pay out more to those that are dis-saving as opposed to saving.

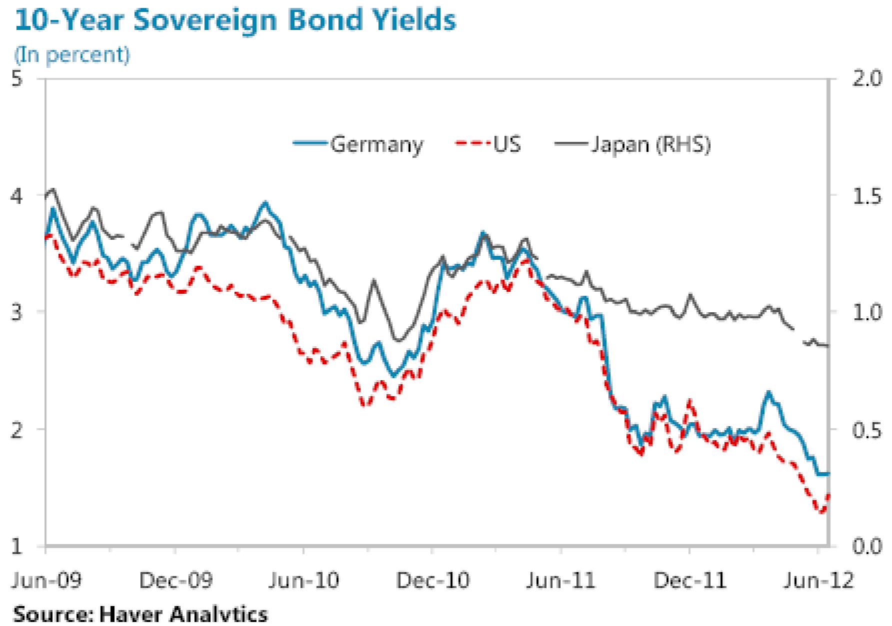
-Debt Trends-

The below graph is very telling on the growth and distribution of Japanese debt



As you can see total national debt has doubled in the last 30 years where government debt has increased five-fold. The Japanese government spends 10.5 trillion yen on interest. They only bring in 42 trillion yen in central government taxation. They spent 24.3% of their central government revenues on servicing their national debt in 2012. [4] Note, their debt is essentially free at about 100 bps with zero inflation. If they simply moved to 200bps they would be spending half of tax revenue financing the interest payments of their debt (not including paying the face value back at maturity). Another way to think of it is given a 2% target inflation rate of

Abe, an investor in Japanese debt will experience a real return of approximately -1%. Would you buy that bond? It wasn't but five years ago that Japanese debt costs around.1-2% for their ten year money.



Around 93% of Japanese debt is owned by the Japanese people or the Japanese government.[3] So if you were wondering who buys this debt, the answer is quite clear. However there are some worrisome trends in debt purchases. Retail ownership of Japanese debt was only about 5.5% just a few years ago. As of the first half of 2012 it is down to about 3.3%.[3] This is a massive drop off in retail ownership and a clear indication of the smarter monies fear over the sovereign situation of Japan. In Japan they are issuing about 44 trillion of JGBs each year.[12] Their special asset purchase program will buy a bit shy of 30 trillion in 2013 so they are buying their own debt. This isn't self sustainment but simply an expansion of central bank balance sheet. Higher growth is essentially japans only way out of this and neither myself nor the IMF nor EVEN the BOJ projects this to occur (please see the cited IMF and BOJ papers as that conclusion is implicit).

The system is quite obviously susceptible to shocks that could bring interest rates up and expedite the implosion of the debt. The challenge is to identify the likely drivers of this. While there are countless known and unknown occurrences that could trigger the crisis there are a few that can be identified.

Savings of the household and corporate sector are largely funneled through or mediated by the financial sector. As the financial sector has significant ownership of JGBs any severe shock to the banking system could prove problematic. Shocks could include a global crisis that effects Japan's banks such as a worsening scenario in Europe. Declines in household savings rates on an increase in corporate expenditures could pull money from the banking system causing them to decrease their JGB ownership. There has been large support of the JGB market due to the gradual increase in deposits and decline In loans made over the last 20 years [13]. Yet another way they banks could affect the JGB market would be by buying shorter term securities as opposed to longer term securities from the government (there are dozens o f reasons for this to happen).

On a not to different note, fund supply to the JGB market could diminish. Corporate financial surpluses rose sharply since the financial crisis of 08-09 and are a significant source of the JGB market as well as the Japanese economy. [13]. A few reasons for this would be an expansion of private sector investments. From the pension side, as payouts will have to increase given the aging population dynamics, you will see fund outflows from government securities. However, most of the evidence suggests to me hat a decline of financial surpluses from the corporate/households sections will be the driving force of JGB interest rates because they will very significantly reduce banks purchases of government debt.

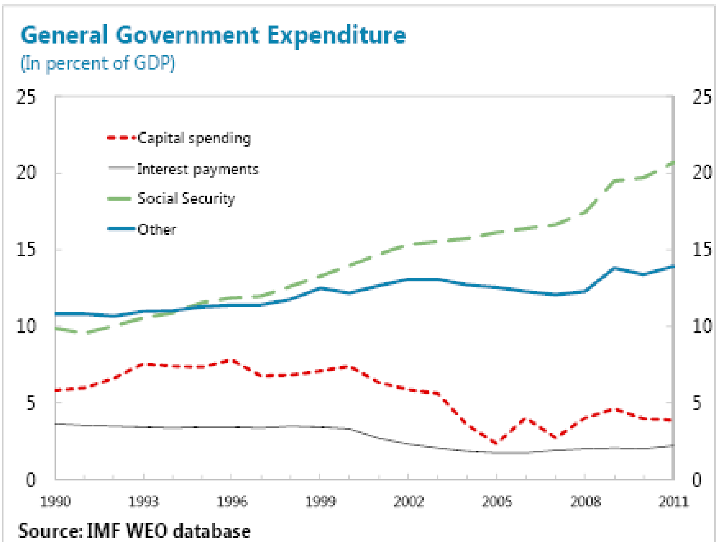
An orderly deleveraging of European banks has provided an advantage for Japan as “safe haven” , however escalation in European situation could cause severe problems for both Japanese growth and the stability of the Japanese banking sector. Japan does and has suffered from spillover risk in the US and EU banking sector. With Japanese banks having relatively low profitability and holding significant amount of JGBs concerns should be raised about the financial stability of their banking system which could either tip or be tipped by a sovereign debt crisis. Continued slowdown in china could severely hurt exports of Japan. Japan is China’s largest import supplier with 179.7 billion in Japanese exports being supplied to china [13] given the Senkaku island dispute between China and Japan that has been escalating with China testing Japanese control over the territories by entering their waters, there has been reason to fear such high trade will continue to exist as there was already a hit to Q4 2012 for Japanese exports. If China and Japan can

The other reasons tend to be a series of if than statements about conflicts with China, Europe, America, current account balances, power generation, rating downgrades, foreign investment capital flight, change in CDS spreads, private sector expansion into overseas investments, ect. Not to say these aren’t practical and very real possibilities, but they are more an exploration of the active economists imagination than fact driven possibilities relevant to the moment. Odds are the kicker will be a series of things and it may not be any more complicated than people waking up one day and saying to themselves “Do I want to earn 1% in a world where the cost of equity is at least inflation, by investing in a country whose sovereign dynamics are possibly the worst in the developed world?”.

To conclude, it’s the high national ownership that has instilled stability in the JGB market. There are hundreds of scenarios in the world that could trigger an interest on behalf of investors (particularly banks) to shed their government holdings or reduce the maturities of the holdings. The JGB market will be unable to handle the shock to interest rate increases as the market demands a higher premium competitive with other countries offering the same risk reward dynamics.

-Politics-

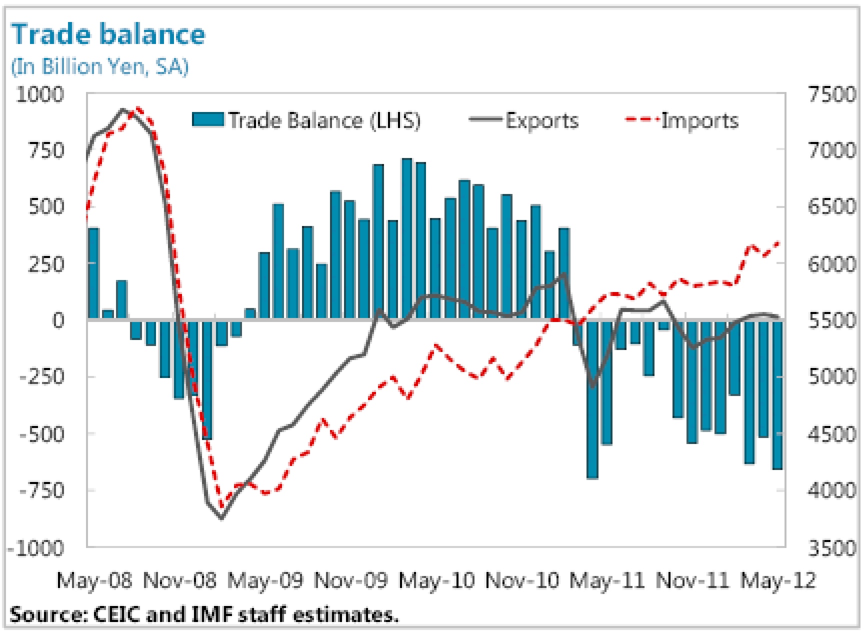
Shinzo Abe who just took the helm of Japan in December has announced a target inflation rate of 2% as opposed to the previous goal of 1% to no inflation or the reality of deflation. The inflation rate results in a negative real return on investments in Japanese debt. The reduction in public debt has been made a priority by officials for twenty years yet the trend isn't fazed by their efforts. Its made difficult by the low growth the Japanese have experienced, a poor stock market, deflation, and an aging population. Simply raising the consumption tax as is set to happen in mid 2014 to 8% and late 2015 to 10% isn't in of itself a solution to their problem.



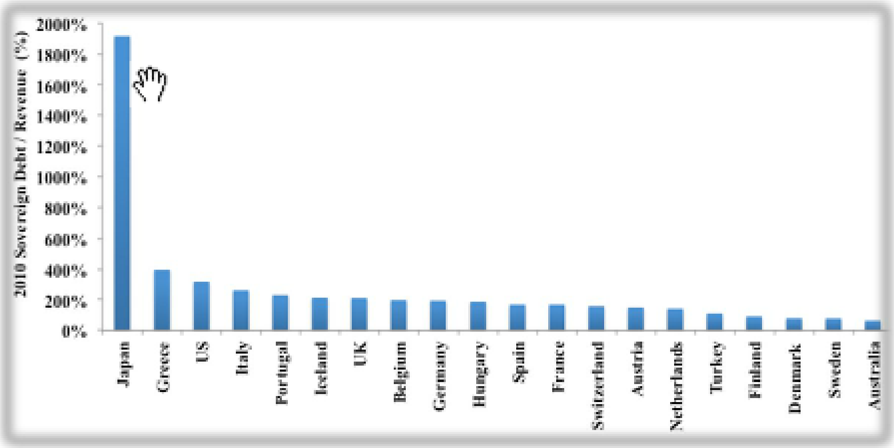
The Japanese have been ineffective and slow in installing policies to curb the negative trends within their country. If any number of catalysts set off the debt bomb and markets lose confidence in their respective countries, it is very difficult for countries to regain that confidence. The speed by which the Japanese move will be the final meter in the string that unravels. As Ben Bernanke responded very swiftly with monetary policy, and the ECB (while slower) came in to pump liquidity very quickly, its unlikely that the Japanese will respond as fast and significant damage will be done in the interim.

Furthermore there is a dangerous precedent being set in Japan regarding the autonomy of the central bank. Firstly, we should point out that Japan has had 11 finance ministers since 2006. That's almost two a year. It is unlikely anyone can accomplish anything in such short time periods. The government seems to be stripping the authority of the central banks and attempting to, themselves, be the drivers of monetary policy (as seen through aggressive inflation goals). When the central bank no longer has independence from the executive branches of a country it puts the monetary tool box in the hands of politicians whom are rarely equipped with the educational and historical faculties to handle such a task. The Japanese need be wary that once market confidence is lost, it is very easy to regain it.

One of the most common retorts to the debt crisis thesis is that if I am right how come we haven't experienced this in market prices? After explaining the demographics of Japan they tend to be convinced of the inevitability but less on the time line. Japan has now finally reached the point of tipping where there are more people exiting then entering the system. This isn't just because of population, its because of a growing awareness of the fiscal issues of their own country such that they are becoming significantly more concerned about their personal retirement and wealth. We see productive producing citizens choosing private insurance over public insurance and private savings programs over public savings programs. In a country with a decreasing productive producing population, you cannot simultaneously have them decreasing their inputs to the voluntary government programs, of which are funded by JGB debt issuances. Additionally there has been a crutch in the bond buying of Japanese debt as people have flocked out of Europe and chosen to sit their money elsewhere for reasons centric to risk aversion. It should not be long before people choose positive real returns over "safety" and thus it shouldn't be long before Japan finds buyers of their debt to be a rare breed and as market prices dictate, they must offer a higher interest rate. At simply 4%, a value they were at 7 years ago, they will spend 100% of tax revenues on financing interest.



Current account surplus – their balance of trade and their full current account bring in more money into their economy that didn't exist in the past which turns into corporate profitability which turns into wages and corporate deposits which end up buying government bonds. So the theory is that as long as they run a positive current account they can self fund. But what about the amplitude of the numbers? If you run a current account surplus of less than 1% and a debt account of greater than 10% (of GDP) you are not self funding.



[11]

Japan has 24 times debt to central government revenues. If they ever move toward an inflationary environment, they will have serious problems. They have over 1 quadrillion yen of debt on their balance sheet. There is absolutely no chance the Japanese can repay their debts. If you look at the trend in their current account it seems that they will be running a negative current account by the end of 2013 (The IMF thinks they will have a negative current account by the end of 2014 [12]) which means they will have to import capital and/or have to take on significant easing measures which leads to higher inflation which is problematic for a country. The BOJ has already announced they will begin a large scale printing program which should expedite the downfall of the sovereign stability of Japan. “it (BOJ) would pursue aggressive monetary easing in a continuous manner by conducting its virtually zero interest rate policy as well as steadily increasing the amount outstanding” [17]

There is a significant realization of this in Japan as Nobuyuki Hirano, chief executive of Bank of Tokyo-Mitsubishi, has identified the problem and acknowledges his bank owns 40 trillion yen of government bonds but they cannot shed those without causing a panic. Instead of BTMU cutting its JGB exposure they will “keep the duration as short as possible” [15]. Thus, banks have shored up on significant Japanese debt and are now realizing the possible (and by my argument probable) ramifications of it. Japan Post Bank is the largest holder of JGBs in the world and they themselves have announced their intention to delever their government holdings by as much as a target 30%. [16]. These are not positive forces to hold interest rates low.

-Conclusion-

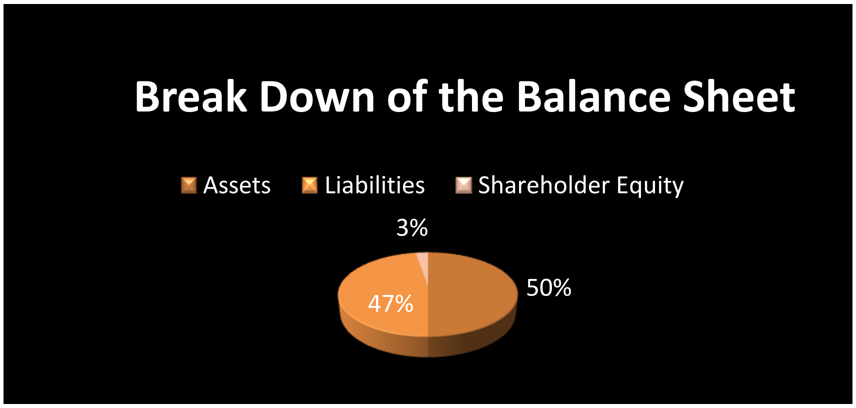
There isn't much hope for the Japanese. They simply will never be able to finance their debt. The question isn't if they will default, the question is when and in what format and from what ultimate catalyst. I apologize that I'm not in a better position to opine on the timeline as I haven't a sufficient understanding of the CDS market and am handicapped by that very important indicator. I'm not sure how the tipping point will be manifested but I am sure it will occur and my bet is within the next 2 to 3 years.

-Sources-

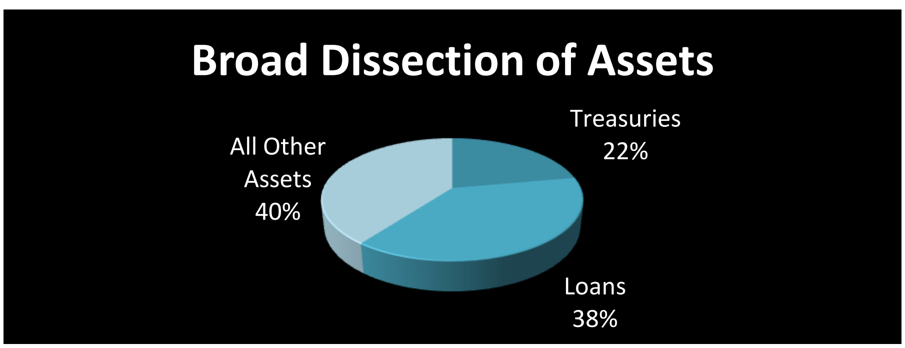
[2] – graph from Glassman wealth services
[3] - http://www.imf.org/external/pubs/ft/scr/2012/cr12208.pdf
[4]- http://www.stat.go.jp/english/data/handbook/c04cont.htm
[5] - http://www.boj.or.jp/en/statistics/boj/fm/juqx/juqx1212.htm/
[6] - http://www.boj.or.jp/en/mopo/mpmsche_minu/minu_2012/g121120.pdf
[7] – this time is different by Reingold and Reinheart
[8] – population projections for Japan (jan 2012): 2011 to 2060 by the national institute of population and social security research
[9]- http://www.bloomberg.com/news/2012-05-09/elderly-at-record-spurs-japan-stores-chase-1-4-trillion.html
[10]- http://www.eastwestcenter.org/news-center/east-west-wire/declining-birth-rates-raising-concerns-in-asia
[11] Haymen Capital HBS paper
[12] BOJ's FY 2012 budget
[13] - https://www.uschina.org/statistics/tradetable.html
[14] - http://www.imf.org/external/pubs/ft/wp/2011/wp11292.pdf
[15] - http://www.ft.com/cms/s/0/f0410412-3c6f-11e2-86a4-00144feabdc0.html
[16] - http://www.bloomberg.com/news/2010-03-31/japan-post-bank-cuts-budget-to-buy-government-bonds-by-about-30-this-year.html
[17]- http://www.boj.or.jp/en/announcements/release_2012/k121220a.pdf

-Short Mitsubishi UFJ Financial Group-

MTU trades on the NYSE but is a Japanese company and as such they do not file annual SEC reports. This makes understanding their financial position more challenging and less reliable. Never the less, with the predicted economic headwinds, even the most simple examination of the firm can convince one of their susceptibility to sovereign headwinds.



There is almost no equity in the firm. With 11 Trillion Yen in Equity, 218 Trillion in assets, and another 207 trillion in liabilities, the long term sustainability of the firm (especially under times of stress) should be questionable. That being said, Mitsubishi UFJ Financial Group, which for our purposes represents Bank of Tokyo Mitsubishi is not likely to go away. However, they may have to shed their valuable assets like their near 25% stake in Morgan Stanley or Union Bank, which is a wholly owned and profitable subsidiary.

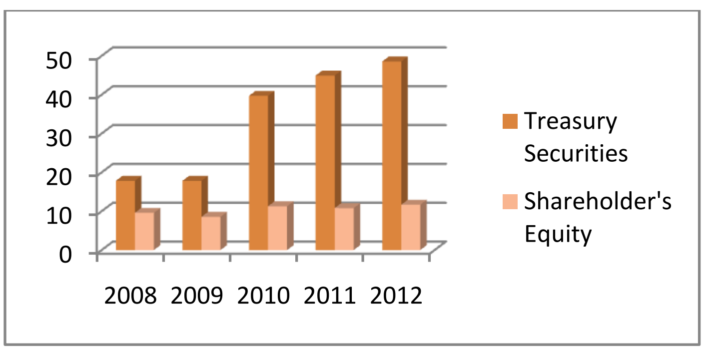


With 22% of total assets being in Government bonds, a 25% write down in Sovereign debt will wipe out all shareholder equity.

Below you can find an abbreviated version of their balance sheet for the year 2012.

Abbreviated Balance Sheet (in Trillions,Yen)			
Assets		**Liabilities**	
Cash	9.04	Total Deposits	137.77
Investments - Total	102.71	Total Debt	40.85
Treasury Securities	48.56	Short Term Debt	22.47
Trading Account Securities	16.77	Long Term Debt	8.7
Other Securities/Inv	63.89	Other Liabilities	28.38
		Total liabilities	207
Net Loans	83.72	**Shareholder's Equity**	
Commercial	19.54	Retained Earnings	5.6
Foreign	20.67	Paid in Capital	2
Other	43.51	Common Carry Value	2
PP&E	1.34	Other	2.08
Other	22.05	Total Shareholders Equity Including Accumulated Minority Interests	11.68
Total Assets	218.86		

More frightening, in my opinion, is viewing the long term trend in equity vs the long term trend in sovereign debt accumulation.



From 2008 to 2012, MTU increased consumption of treasury securities by an annual average of 22% compared to 4% growth in owner's equity. The dichotomy between these two observations should concern the reader in the event that a partial write down on the assets must take place.

MTU earned around 1.3 Trillion Yen in operating income and 1.45 Trillion yen in their pretax income. MTU's operating income is essentially flat over the span 2008-2012. Net income has observed improvements over the year and sits at around 981.33 Billion Yen. The USD/JPY was 93.5 most recently. Assuming this value, and the 14.4 billion shares outstanding, net income for MTU is approximately 72 cents a share. Thus MTU trades at around 9.5-10.5x trailing EPS (taking into account the trading value at the time the financial statements were published. While the multiple is modest, you are paying for equity growth of 4%. I believe the multiple isn't a problem and shouldn't change dramatically over the course of the next year (that is to say a change that is not a result of it's correlation with the broader market, as we will eliminate this risk with the long position on EWJ).

MTU has reported significant earnings growth in the last quarter. This is due to a strengthening economy on the back of the inflation push.MTU trades at an industry average multiple and at industry average EBITDA margins.

One last point of consideration Is maintaining Basel Compliance. It is Japanese law that MTU's subsidiary BTMU must be Basel compliant. If BTMU were to suffer large write downs, it would surely effect their operational risk profile creating fat tails and causing more money to be reserved for losses. They would certainly loose their Basel Compliance in the event that the write downs occur as the level of their Tier 1 assets wouldn't suffice Basel standards. (honestly, I'm surprised they do now).

Analysts are bullish, in general, with an average price target of 6.16 which is a 7% upside. In the short term, we may see MTU rise due to favorable, but temporary, macro conditions in Japan. However, once the sovereignty of Japan starts to feel the compromising forces of a free market, due to a lack of debt buying in by Japanese firms, its unclear how long (if even momentarily) Japan can hold on without restructuring their debt, which will be detrimental for firms like MTU.

-Long iShares MSCI Japan Index Fund-

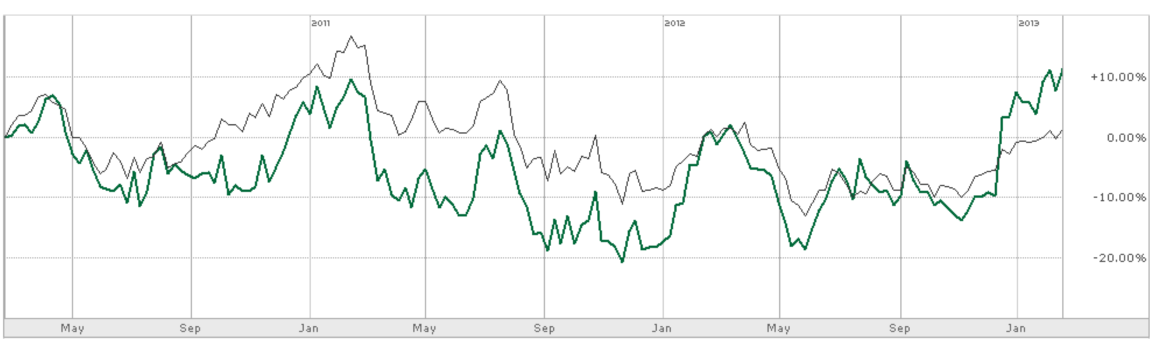
The iShares MSCI Japan Index Fund (EWJ) is an actively traded, liquid, ETF that attempts to follow the Japanese stock market. Given Shinzo Abe's strong monetary policy and currency valuation tactics as of late, there should be a strong push higher on the Nikkei and likewise, on EWJ. Inflationary pressures are expected to bolster the stock market, and with large amounts of cash that can realize earnings, the Japanese may go from a period of .7% deflation to 2% inflation decreasing the spread between expected and required rates of return which should bolster asset prices. The expense ratio is low at .53

The purpose for this long position is to cover any of the short term losses that might be experienced as a result of MTU moving higher due to a positive Japanese equity market. This part of the trade isn't designed to make money, but simply to protect the overall trade, until the sovereign default crisis.

Aside from monetary policy driving the stock, it currently has a rising 50 and 200 day moving average as well as a bullish MACD trend. The relative strength is neutral and the ETF overall has bullish technicals. Furthermore, Japanese pension and insurance funds are considerably less invested in equities compared to investments in government bonds. A rotation into equities, if Abe can encourage the markets to be bullish, may encourage institutional investors to step in.

The recent correlation between the USD/Yen was about .87. This suggests there is a large currency sensitivity and exactly the type of sensitivity we want to tie ourselves to. All in all, this should provide a sufficient hedge against short term losses in the primary trade which is short MTU.

The below graph shows EWJ and MTU over the last three years. As you can see the, for the most part, trade in lockstep with one another. At no point was their divergence over 10% points. The recent run-up is warned as its assumed financial assets will do better when the news is positive and worse when the news is negative.



Risks and Conclusion

The risks are as complex or as simple as one chooses to make them. At the end of the day, If the Japanese Government, and ad-hoc government controlled Central Bank, can somehow excite growth while maintaining low rates over the life span of the investment, then the investment will not work. In a low volatility environment this investment should return practically nothing. The most downside comes from a boom in the Japanese financial market that outpaces the broad market, likewise, the most upside comes from a debt market (which is highly correlated to the financial markets and currency markets) that is crashing.

I recommend the investment be put forth as follows. 1:1 long/short => EWJ/MTU . Once credit default spreads widen, drop the long position and hold the short naked (or implement an option strategy of your choice). The market will surely overreact to the down side when the debt crisis presents itself. Take profits incrementally, starting when MTU has dropped 25%. The investment horizon is approximately three years, shorter if there are any global slow downs, especially in the Asia Pacific region.