Japan's Fiscal Time Bomb

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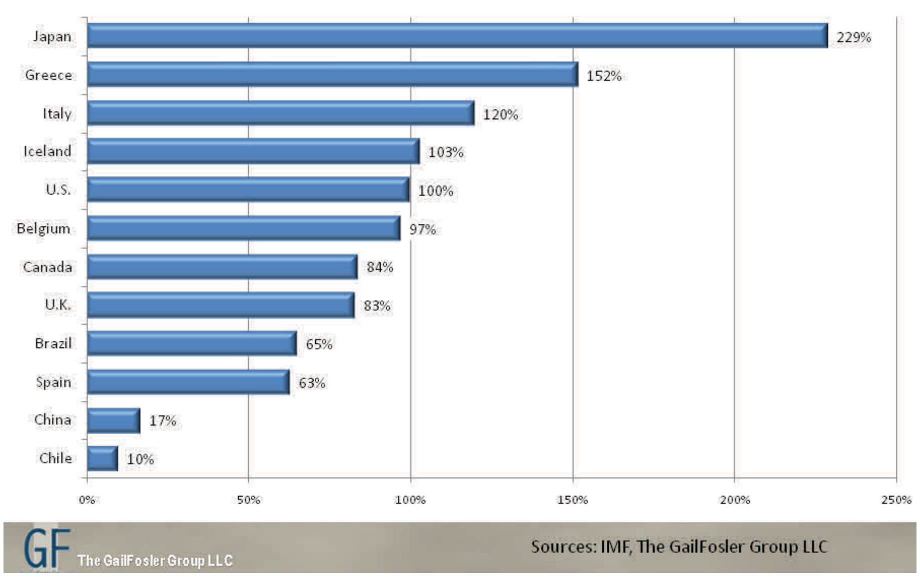
At a time when most market participants are understandably focused on the debt levels of Europe and the United States, Japan's fiscal situation is decidedly worse. With a debt-to-GDP ratio that now exceeds 200%, the world's third largest economy may be fast approaching a painful period of adjustment. In this paper, we examine some of the causes of Japan's debt problem, the reasons why it has been allowed to persist for so long, and why the day of reckoning may be closer than many appreciate.

The Rise and Fall of "Japan, Inc."

In the late 1980s, Japan was on top of the world. Its "miracle economy" had grown by an average of 10% in the 1960s, 5% in the 1970s and 4% in the 1980s[1], putting its Western rivals to shame. Companies such as Honda, Canon, and Sony were flooding the globe with Japanese-made cars, cameras, and television sets. Japanese companies bought prized overseas assets like New York's Rockefeller Center and California's Pebble Beach golf course.

U.S. and Japan are Among World's Biggest Debtors
Total Government Debt to GDP



To be sure, a good deal of Japan's success was directly related to revolutionizing the manufacturing process through embracing concepts such as "lean manufacturing" and "total quality management." But there was also a growing view that Japan's unique form of state-directed capitalism was superior to the "free market" approach adopted by the United States. Under the "Japan, Inc." model, close relationships among businesses, bankers, and government officials strongly influenced economic outcomes. By strategically allocating capital through a tightly controlled banking system, Japan seemed capable of driving foreign competitors out of sector after sector.

The Japanese model for capital allocation worked extremely well as the country was playing "catch up" to industrialization of the Western world. State-controlled capitalism was extremely effective at deploying resources to hit developmental targets that had already been set by the United States and others. Once the Japanese economy reached equal footing with the Western world, however, the "Japan, Inc." model proved decidedly less effective at identifying new productive uses of capital. Once viewed as the pinnacle of efficiency, the Japanese economic model began to look anything but, as relationships drove investment as much, or more, than economic merit.

By the late 1980's, trouble was brewing. With the economy beginning to slow, officials deregulated the financial markets and lowered interest rates, which proved to be a dangerous combination. With money easy to borrow, companies invested heavily in property and stocks, sending prices soaring. The Nikkei Index more

[1] Source: Bloomberg

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than tripled from 1985 to 1989[1]. A square foot of land in Tokyo's Ginza shopping district was going for $139,000. It was estimated that the property around the Imperial Palace was worth more than the entire state of California.

When the bubble finally burst in 1990, it was disastrous. The Nikkei dropped by two-thirds over the next two years. Commercial land values in the big cities fell by roughly 80 per cent over the next decade. Today, the Nikkei stands at just 25% of its 1989 peak. As stock and land values fell, companies that had borrowed to buy them found that they could not repay their banks. By 1997, the banking sector was in crisis, requiring a massive bailout by the government. Meanwhile, the economy languished. Between 1990 and 2011, real GDP growth averaged just 1.1% per year[1]. The unemployment level has more than doubled, from 2% in 1990 to over 4.5% today[1].

Rather than confront the mountain of bad debts left behind by the bursting of the bubble, the Japanese government attempted to prop up the economy by cutting taxes, slashing interest rates and increasing spending. And they borrowed money to finance it all. But ultra-loose monetary policy proved ineffective due to a lack of willing and creditworthy borrowers, and starts and stops of insufficient fiscal stimulus led to a build up in government debt without solving the underlying problems. The Asian Financial Crisis in 1997-1998 and the Global Financial Crisis of 2008-2009 also helped to derail fragile Japanese recoveries before they could gain enough steam.

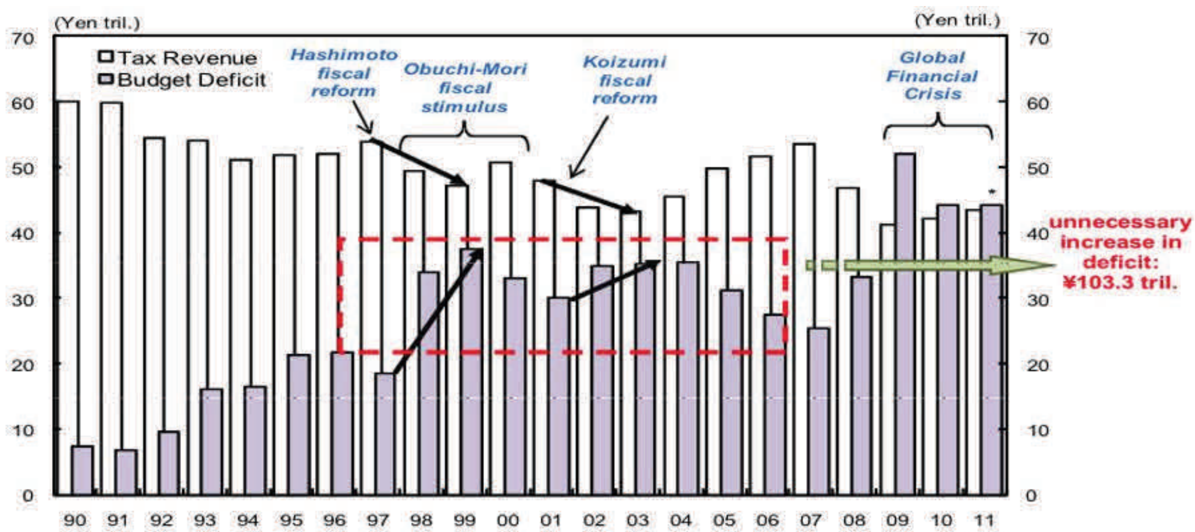
As a result, Japan's "lost decade" has now become two decades and counting. The country remains in a persistent fight against deflation. Increasing government debts coupled with anemic economic growth have left Japan with the highest debt-to-GDP ratio in the world. But this is hardly a new development.

How Has This Lasted So Long?

While Japan's debt levels are clearly alarming, they have been extremely high for quite some time. The global capital markets are increasingly concerned with debt-to-GDP ratios of 120% in Italy and 100% in the United States, levels Japan breached long ago. Indeed, many investors have lost their shirts over the years betting on an imminent collapse in Japanese government bonds that has not materialized. Thus, before discussing the potential for a sovereign debt crisis in Japan, it is important to understand why one hasn't happened already.

[1] Source: Bloomberg

Premature Fiscal Reforms in 1997 and 2001 Weakened Economy, Reduced Tax Revenue and *Increased* Deficit



Source: Ministry of Finance, Japan
*: estimated by MOF

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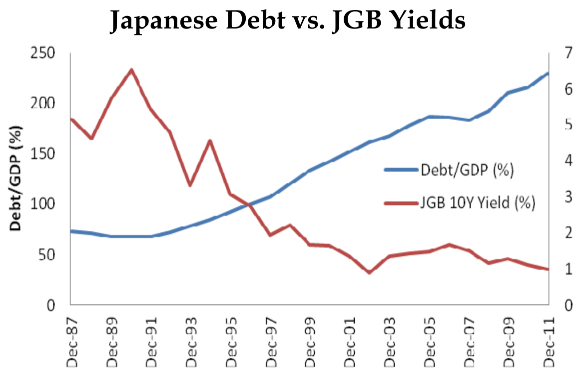


Captive Audience

How is it that a government with the highest debt-to-GDP ratio in the world can issue bonds at the lowest interest rates in the world? The answer lies with the purchasers of these bonds, namely Japanese institutions and individuals. Roughly 93% of Japanese government bonds are held within Japan[1], which stands in stark contrast to most other developed nations. By way of comparison, approximately one-third of U.S. government debt is held by foreigners. The Japanese cultural propensity to save (due in part to the scars left from the bursting of the bubble) has resulted in an inelastic domestic demand for government bonds and a "captive audience" for the Japanese government to roll over debt at lower and lower interest rates.

This constant internal demand for Japanese government bonds is perhaps the biggest reason why Japan has been able to continually finance their runaway deficit spending, and is one of the main explanations often cited for why Japan has been able to maintain a much higher level of debt than other countries.

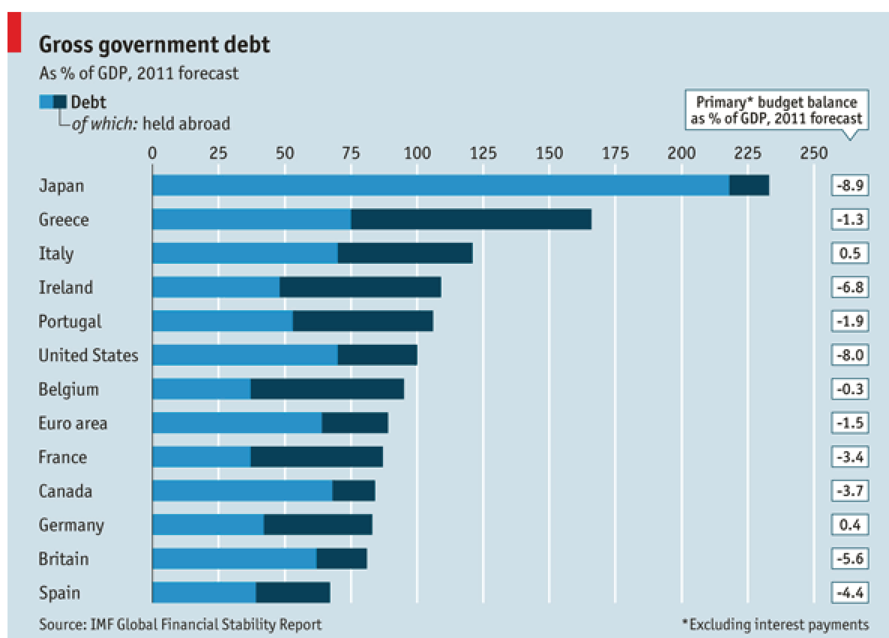
Trade Surplus

For the better part of the past three decades, Japan has run a continual trade surplus with the rest of the world. Despite their economic woes, Japan has continued to produce many goods that the rest of the world wants. This has resulted in a consistent net inflow of capital from the rest of the world, which has then been converted to yen and often invested in local government bonds. This has created another source of consistent demand for Japanese government debt that is relatively insensitive to price.

Low Risk

Despite their current debt levels, the risk of bankruptcy in Japan is effectively zero. As the sole issuer of their own fiat currency, there is simply no way that the Japanese government can "run out" of yen, because they can always print more. This stands in sharp contrast to the Eurozone countries such as Greece and Ireland who gave up the ability to print their own currency when they joined the euro, and thus have a very real risk of default. As a result, buyers of Japanese government bonds have no need to price in a default premium that is necessary with some other countries.

Of course, the ability to print one's own currency is not without risk. If a country prints too much currency the result is inflation, a risk premium that is also typically demanded by



[1] Source: *The Wall Street Journal*, "Foreign Ownership of Japanese Debt Climbs", March 25, 2012

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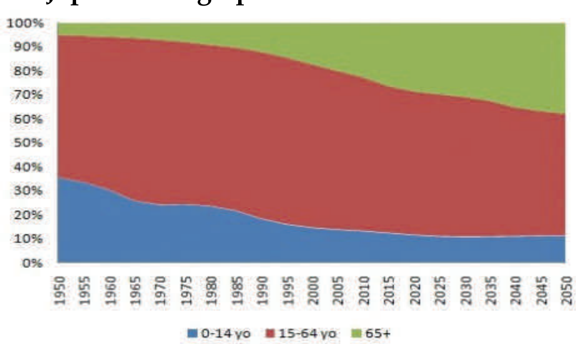
bond investors. But inflation is seemingly a minimal risk for a country that has been constantly battling deflation for the past two decades. In fact, given their frequent periods of deflation, Japan is one of the only countries where the real bond yield has often been higher than the nominal bond yield.

Winds of Change

Unfortunately for Japan, two of the main pillars supporting their massive debt levels have recently begun to crumble. Japan's demographic problems have been well-documented, but frequently from the standpoint that their aging population will be less productive and result in slower future growth, and create an increasingly large burden on the government-funded social safety net. While this is true, it ignores the other significant consequence of Japan's aging population, which is its impact on the savings rate.

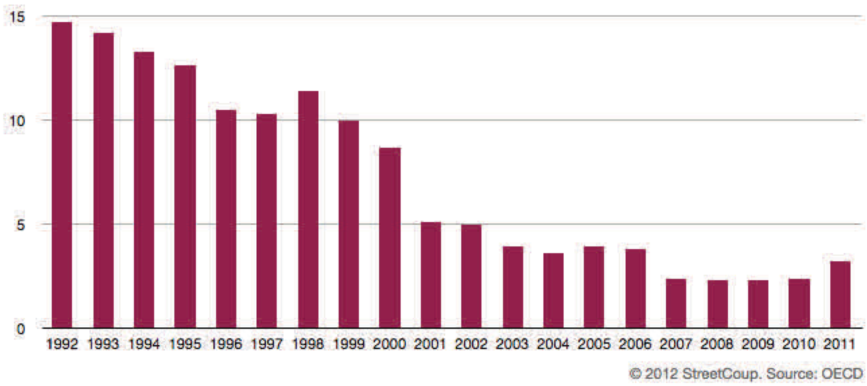
Japan Demographic Structure 1950-2050



With extremely low birth rates and strict immigration policies, demographic trends are getting worse, not better. As of 2010, approximately one in four Japanese were above 65 years of age[1]. After years of diligently saving for retirement, much of the population is now there. The national savings rate has plummeted from the mid-teens in the 1990's to nearly zero today, as more Japanese shift from net saving during their working years to net spending during their retirement years. This shift is slowly removing one of the key sources of demand for Japanese government debt.

As a quick side note, the combination of unfavorable demographics and extremely low interest rates has put Japanese pension funds in a very difficult situation. On one side is an investment environment of near-zero yields, declining real estate values, and a domestic stock market that is still down roughly 75% from its 1989 peak. On the other side is a ballooning retirement-age population who enjoys the longest life expectancy of any country in the world.

Japanese Household Savings Rate as % of Disposable Income



The other notable change in recent months involves Japan's trade balance. As seen below, Japan is now running a trade deficit for the first time in three decades. Macroeconomic issues in both Europe and China have subdued the demand for Japanese exports, while the import side of the equation has been greatly affected by the tragedy in Fukushima. To reassess safety measures, Japan recently decided to shut down all 54 of the country's nuclear plants. Before the Fukushima disaster, Japan relied on nuclear power for roughly 30% of its electricity production. This led to a spike in oil and natural gas imports, and helped push Japan into a trade deficit for the first time in decades. While hopefully just a temporary measure, the government's mishandling of the Fukushima disaster has created a good deal of public distrust of any of safety pronouncements, which may cause the nuclear shutdown to last longer than anticipated.

[1] Source: *CNN.com*, Japan's Population Faces Dramatic Decline, January 30, 2012

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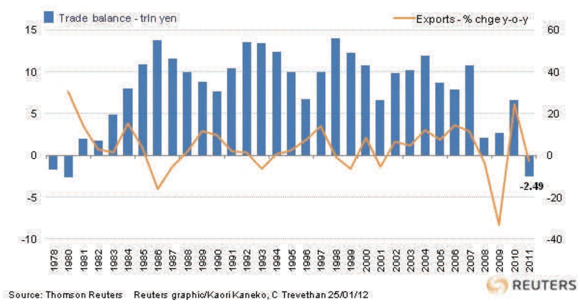
Japan's First Annual Trade Deficit Since 1980



Potential Implications

Some of Japan's unique attributes described above have allowed them to avoid addressing their fiscal issues for longer than many thought possible. The severity of their growing debt problem was masked by the offset of ever-declining interest rates, allowing their debt financing costs to remain relatively constant. But if Japan has truly reached the tipping point, what are the potential implications of rising rates?

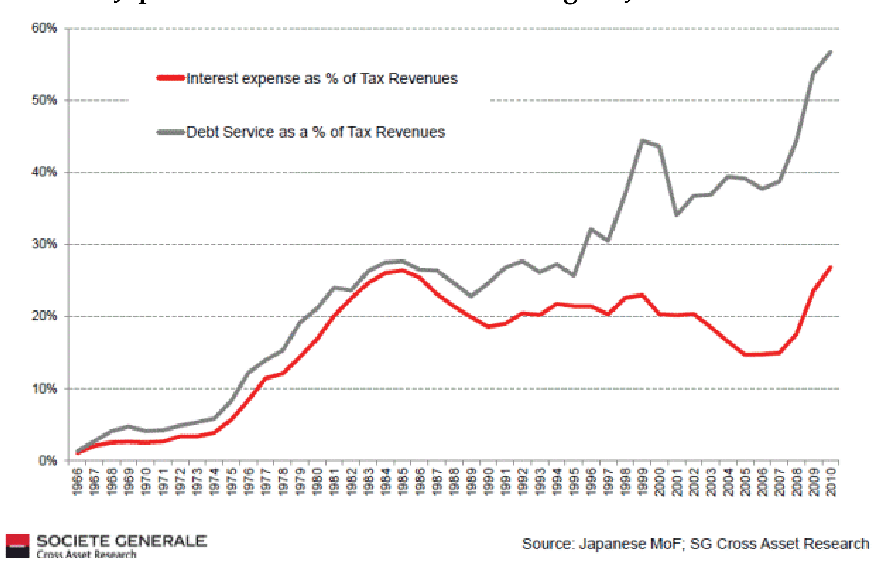
With 10 year JGB yields at roughly one percent, interest expense alone is expected to exceed 22.3 trillion yen in fiscal year 2012 (roughly one quarter of the general account budget). If the bond yield rises to just two percent, the interest expense would surpass the total expected tax revenue of 42.3 trillion yen[1]! This is an indication of just how great the danger has become for Japan. Japan has the highest level of government debt in the world, but also the lowest interest rates. The latter is necessary to maintain the former. What looks sustainable at one percent, looks catastrophic at two percent.

Where Will the Money Come From?

If Japan has exhausted its internal demand for government debt (exacerbated by falling savings rates and the new trade deficit), then the country will be forced to compete in the global bond markets for the capital shortfall. Foreign investors will likely not be willing to finance the government's debt at the prevailing interest rates, which remain lower than anywhere else in the world. In fact, given the current debt-to-GDP level of roughly 230%, global investors may well require a discount (i.e., a higher interest rate) to buy JGBs as opposed to U.S. or German debt. This shift in investor base will undoubtedly put some upward pressure on Japanese interest rates.

If Japan has exhausted their internal financing capacity and foreigners are unwilling to finance their debt at rates that are palatable, the only solution would seem to be for the Bank of Japan to print new currency. The Bank of Japan has engaged in "quantitative easing" and other unconventional forms of monetary stimulus since 2001. Most recently, on February 14th of this year, the central bank announced a sizable 10 trillion yen ($129 billion) expansion in its asset-purchase program, taking the overall program to 65 trillion yen. Perhaps more importantly, the Bank of Japan for the first time set what amounts to an inflation target, after nearly 20 years of deflationary pressure. The Bank revised its definition of "price stability" to say that it would carry on with its easy mon-

Japan's Government Can't Afford Higher JGB Yields



[1] Source: *Caixin Online*, The Yen's Looming Day of Reckoning, March 23, 2012

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ey policy to achieve a "goal" of 1% annual increases in the consumer price index for the time being, and 2% or lower in the medium-to-long-term.

Capital Markets Impact

Given the persistence of deflationary pressures in the Japanese economy, the initial inflation caused by money printing may be welcomed by the capital markets. Furthermore, any substantial money printing will also likely exert downward pressure on the currency, which should act as a boost to Japanese exporters. Thus, the initial effect of an aggressive shift in the Bank of Japan's policies may well be positive for the Japanese economy and the Japanese stock market.

But any positive effects may prove short-lived. Intentionally generating inflation when the vast majority of debt is held internally at rock bottom interest rates would constitute a form of "financial repression." Inflating away the value of the population's fixed rate assets would essentially amount to a tax on the country's citizens, and a massive wealth transfer from the private to the public sector. Furthermore, while a falling yen would help exporters, it would also drive up the cost of Japan's energy imports which have increased in size and importance following the Fukushima disaster.

While the "internal financing" of Japan's debt has allowed them to sustain fiscal imbalances far longer than many anticipated, this same dynamic is what will make the necessary adjustments all the more painful for the Japanese people. Given that there are very few foreign holders of Japanese debt, the full burden of readjustment will necessarily be borne by Japan itself.

This is not to suggest that the rest of the world would be immune from the effects of a potential bursting of the Japanese debt bubble. Far from it. Despite three decades of little to no growth, Japan remains the third largest economy in the world. A debt crisis in Japan has the potential to be as disruptive to the global economy as the current situation in Europe. A collapse in the value of the yen due to Bank of Japan printing would likely have a particularly negative impact on Japan's Asian counterparts, namely South Korea and China. Both countries have highly leveraged banking systems that are very susceptible to an economic slowdown caused by a sudden drop in competitiveness with Japan.

On the positive side, one other unique aspect of Japan may help to mitigate the fallout of these painful adjustments, and that is the Japanese culture. The Japanese people's cohesiveness and willingness to sacrifice for the greater good should not be underestimated. The Japanese may very well make a collective decision to deal with this debt burden in a manner that seems incomprehensible to the rest of the world. While certainly not as quantifiable as many other topics discussed in this paper, this is an important point to consider.

Conclusion

The historical conditions that have allowed Japan to sustain higher levels of debt than any other major country in the world have begun to disappear. As a result, they will soon be forced to face the reality that they have avoided for so long.

Painful adjustments appear inevitable, but as is often the case, the timing is uncertain. While Japan will be forced to lean more heavily on foreigners to finance their debt going forward, likely at higher interest rates, this will be a very gradual shift over a number of years. Thus, the near-term risk to global markets appears muted, but it is also clear that time is running out.

Japan will have very difficult decisions to make in the coming months and years. They can either proactively adjust their current policies in an attempt to minimize the impact of future problems (something they do not have a strong track record of doing), or they can wait for the market to make the adjustment for them. The latter will likely delay the day of reckoning, but will also make it more painful when it eventually arrives.