

Open Market - Asia

Monthly Macro Advisor

August , 2012



Japan Economic Outlook

Our Japanese Economic Outlook is the third of six country reports in Open Market – Asia, a review of regional macroeconomic themes.

Japan's economy is showing strong signs of a slowdown:

- Reconstruction following last year's earthquake is quickly tapering off
- Regional activity, led by China, is slowing faster than market consensus
- We expect the BoJ to take bolder easing measures in coming months

The yen is inappropriately strong relative to key fundamentals:

- Poor fiscal position and eroding competitiveness not reflected in value of the yen
- We are critical of Japan's ability to maintain its safe haven status based on poor trend in balance of payments

The debt reckoning in Japan is quickly approaching:

- Lower domestic demand for government debt as national savings approach 0%
- The marginal price for debt to be determined by international investors who will demand larger risk premiums
- Rising yields and interest rate payments will be the catalysts for an acute debt crisis

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Iron Harbor Open Market

Open Market – Asia

In our previous Open Market monthly analyses, our economic outlook included the three major global regions (the Americas, Europe, and Asia) and constituent countries, in one single document. We decided to change the format of our monthly and produce three separate documents each focusing on a single region. We believe this will allow for greater depth of analysis and increased clarity. The second change we made is to circulate each regional or country report as it is written. This will allow for more timely analysis.

In Open Market–Asia, we will focus initially on six economies: China, Japan, Korea, India, Australia, and New Zealand. Our outlook for each of these major economies encompasses analysis of key opportunities and risks in both equities and sovereign debt markets and interest rate derivative products. Additionally, we take a deep look at the health of the banking systems and the domestic political process. Our compact but full-breadth analysis will provide investors with key insights into the macroeconomic elements that will impact global investment trends over time.

Gravelle Pierre, CFA
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Japan Economic Outlook: Trouble on the Horizon

OUTLOOK

It is widely acknowledged that Japan faces significant social and economic issues of the sort which can lead to a debilitating financial crisis. Worsening demographic and fiscal trends are both well established as evidence in the case that pessimists make, and have made consistently for at least the past decade, of an impending collapse in both the government debt market and the value of the yen. The optimists point to the same body of evidence and weakly conclude that Japan still has another five years, if necessary reforms are not made, before any potential crisis becomes acute.

Based on our analysis, we are firmly in the pessimists' camp—Japan does not have another five years before things worsen considerably. Fundamental macroeconomic factors are now converging in a manner heretofore unseen and threaten Japan's ability to self-fund:

1. Stagnant investment income and lower export demand are leading to structurally weaker current account balances
2. Demand for government debt is shrinking among the private sector
3. Tax revenues have steadily declined since 2003 while total expenditures have grown
4. Social security spending is rising at an alarming rate as the first wave of baby boomers retire
5. Non-social security and non-interest spending in Japan is already very low and leaves little room for significant discretionary budget cuts`
6. Corporate competitiveness is deteriorating and key industries are under pressure from strong foreign competitors

These trends, however, are only symptoms of a rapidly aging, insular culture with the lowest birth rate among industrialized economies and no meaningful immigration inflow. A revolving-door political system incapable, until now, of demonstrating leadership in making the necessary structural reforms has further compounded Japan's woes. If the US debt situation is a fiscal cliff, Japan's is a fiscal black hole. And yet, there is *no* compensation in Japanese

Japan Economic Outlook: Trouble on the Horizon

government debt prices for these inherent risks at present.

Japan's internal funding mechanism is critically impaired. This means that the government will no longer have the luxury of a captive domestic market for inexpensive funding and will necessarily have to look to external sources for capital. As a result, government yields will rise and will more accurately reflect:

- the implicit financial risks of Japanese government debt¹;
- the absolute need for higher inflation to stoke the economy and reconcile the amount of existing debt to a more manageable level

Rising yields and rising interest payments on government debt will be the catalyst for an acute crisis of confidence that undermines the value of JGBs and sparks the mother of all US dollar rallies.²

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MONETARY POLICY

Earlier this year, the BOJ communicated what appeared to be a significant shift in their institutional framework. The Bank identified an intermediate inflation goal of 1% and stated that it would be more aggressive in achieving this goal than it had been in the past. This surprised the market because the

¹ As is the case with other sovereign nations with the ability to issue unlimited amounts of their national currency, Japan theoretically need not ever formally default on its debt obligations. Monetary authorities could, however, inflate away some portion of the value of existing debt by pursuing an expansionary policy. We believe that the inflation risk to JGBs is a greater risk than that of outright default.

² Other safe-haven assets will likely benefit as well. Given the US debt market's size and liquidity, we expect US asset markets to be the primary beneficiary.

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BOJ had repeatedly commented, for years, that monetary policy was ineffective in reversing the deflationary cycle and, as a result, had pursued aggressive quantitative easing only in fits and starts. A paper written in 2003 by former Fed governor Frederic Mishkin noted the BOJ's lack of "credibility with regard to their willingness to continually pursue expansionary policy...to get the economy rolling again."¹ By April, the renewed determination to fight deflation had fizzled despite frequent and adamant characterizations of their existing programs as "powerful monetary easing". The BOJ had once again retreated to a more laissez-faire policy profile.²

There have been two important developments over the past several weeks, however, which might provoke the Bank to redouble its efforts. First, the government recently passed a controversial plan to double the consumption tax by 2015. This plan marks the first significant effort that lawmakers have made to address the deteriorating budget situation and it will be a move welcomed by the BOJ. Second, the global data trend has gradually worsened, and has even accelerated in some cases. Minutes from the 14-15 June BOJ policy meeting, in fact, reveal a more clear-eyed outlook than that which prevailed at previous meetings when growth in emerging economies (and China) was characterized as "no longer on a decelerating trend."

We firmly expect that as the BOJ adopts a more realistic outlook for China and Asia-regional activity, the Bank will become less averse to taking further aggressive policy action at upcoming meetings. Minutes from the 11-12 July Monetary Policy Meeting (MPM) will be published on 14 August and may provide some insight on the timing of additional action.

¹Frederic Mishkin, "Deflation and Monetary Policy in Japan," (2003). Accessed July 30, 2012. <http://www0.gsb.columbia.edu/faculty/fmishkin/PDFpapers/03ueda.pdf>.

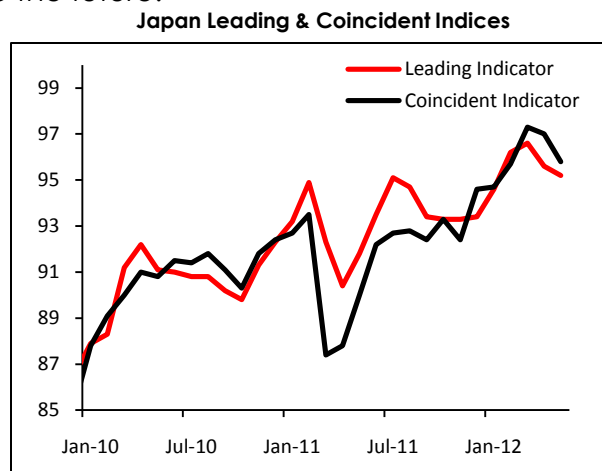
² BOJ reluctance to assume a more consistent activist monetary policy may have originated from the Bank's experience following the Plaza Accord in 1985. The Plaza Accord was designed to guide the value of the US dollar lower against the US's major trading partners in the wake of a long period of high US interest rates designed to end high inflation. To counter the negative trade impact of a stronger yen, Japanese monetary authorities actively pursued an accommodative monetary policy to maintain domestic business activity given the expected trade decline. Yet the trade effects in Japan were not as significant as thought given strong barriers to Japan

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ECONOMIC DATA

The trend in domestic economic data in Japan is anemic. What looks like a modestly positive uptick, largely reflects reconstruction-related demand and stimulus measures to encourage auto consumption. In other words, recent Japanese economic activity is unsustainable, and it would be erroneous to project the recent trend too far into the future.

Leading indicators is one data set that had frequently been cited by observers as proof of a sustained pick-up in activity. The index of leading economic indicators published by Japan's Economic and Social Research Institute (ESRI) had indeed drifted higher though the first quarter, but has since quickly softened. Producers' inventory



Source: Economic and Social Research Institute

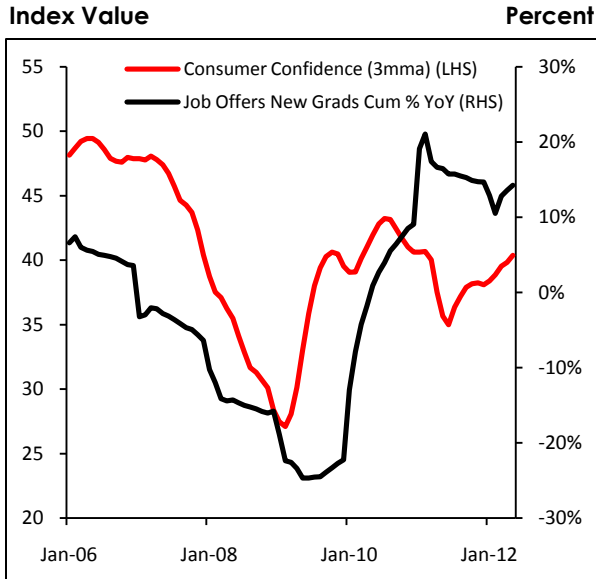
ratio has been the one consistent drag on the index for the past several months and may signal lighter production numbers over upcoming quarters. Areas of relatively consistent upward momentum have been new job offers and consumer confidence.

Some of the improvement in the consumer-related leading indicators of the ESRI index has been reflected in a broader range of household confidence indicators. Consumer confidence numbers, in particular, have shown some improvement as the outlook for income growth and employment has trended higher.

market access. After the Louvre Accord in 1987, which sought to halt the decline of the dollar brought on in the Plaza Accord, the BOJ extended its low rate policy in response to the October stock market crash. This low-rate policy brought about an asset-price bubble in Japan, and in turn contributed to the subsequent Lost Decade as assets depreciated back to fair value.

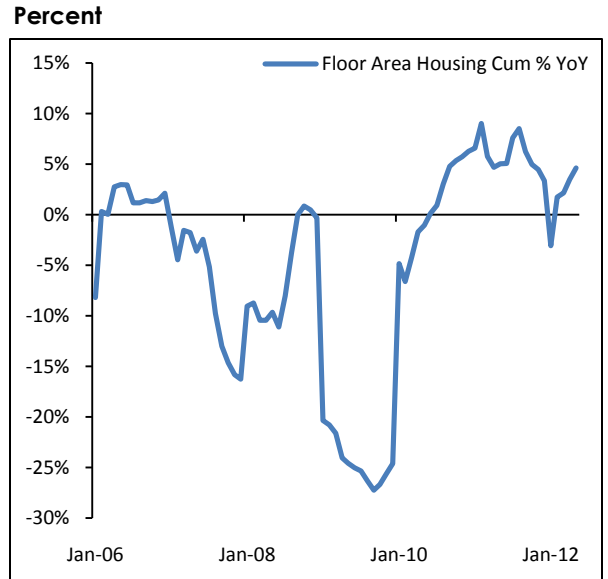
Figure 1. Leading Indicators – Good and Bad (Mostly Bad)

Consumer confidence trending higher supported by recent uptick in job offers



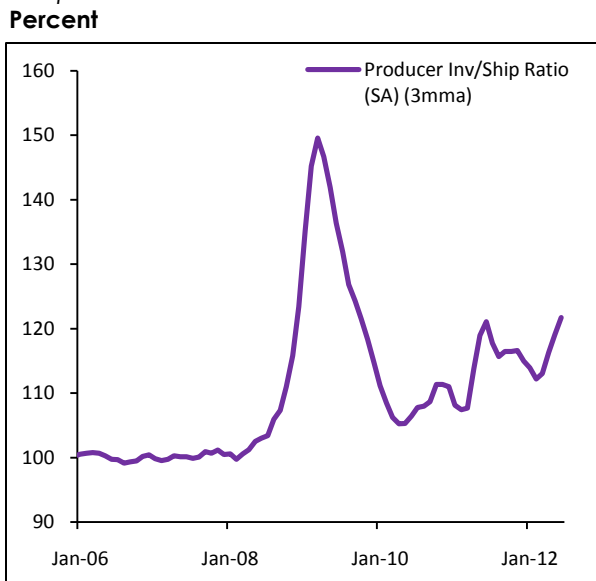
Source: Economic and Social Research Institute

Housing better through most of 1H12, but other indicators suggest slowing into Q3.



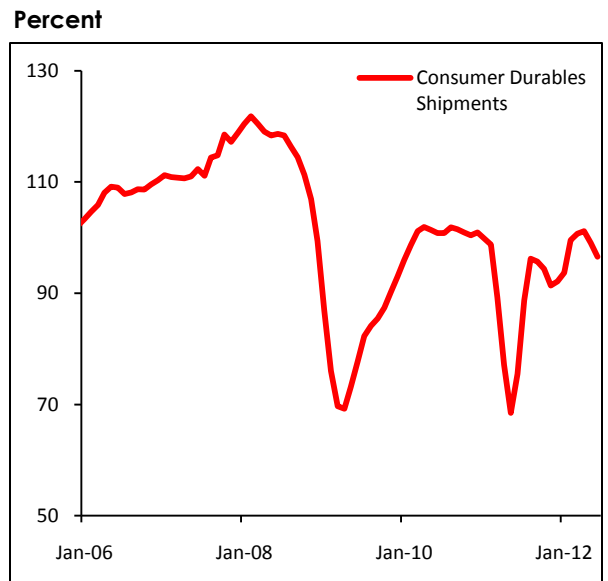
Source: Economic and Social Research Institute

Inventory build into weaker activity is problematic.



Source: Economic and Social Research Institute

Consumer durables shipments forecast lower confidence.



Source: Economic and Social Research Institute

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While the trend on the consumer side at least appears somewhat stronger, the data trend in the business sector is clearly soft. The PMI survey published by Markit Economics indicates a weaker outlook in both services and manufacturing. Composite data for July shows the **sharpest fall in business activity since September 2011** at the same time that industrial shipments and machine tool orders have been stagnant.¹

Overall, what some observers point to as a modest improvement in the household data trend in Japan, is a result of a short-term, pull-forward of activity related to reconstruction spending and incentives to buy autos. Reconstruction spending and auto incentives, however, do not last forever. In fact, these measures are further borrowing mechanisms that do not create sustainable growth; productivity and competitiveness do.

The problem for Japan over the next several years (and certainly decades) is very clearly illustrated in the graphs in Figure 3. Investors should always remember that contributions to economic growth come from increases in

Reconstruction spending and auto incentives...do not create sustainable growth; productivity and competitiveness do.

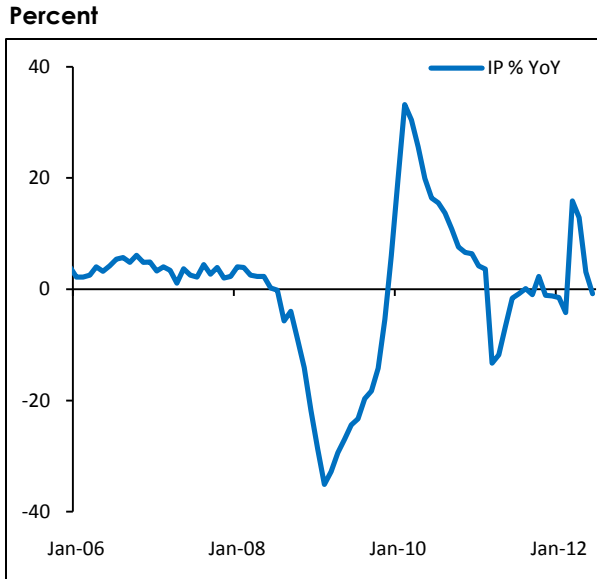
both labor productivity and the labor force. Unfortunately for Japan, these fundamentals look terrible:

1. Japan's labor productivity has moved significantly lower for the past 20 years
2. Japan's labor force has steadily shrunk and the pace of contraction will quicken in coming years
3. Hours worked per worker has steadily declined
4. Total factor productivity is trending lower

¹ In July, service sector activity contracted at the sharpest rate in ten months while manufacturing output fell at the fastest rate in fifteen months. "Markit Japan Services PMI," *Markit Economics*, accessed July 30, 2012, <http://www.markiteconomics.com/MarkitFiles/Pages/ViewPressRelease.aspx?ID=9919>.

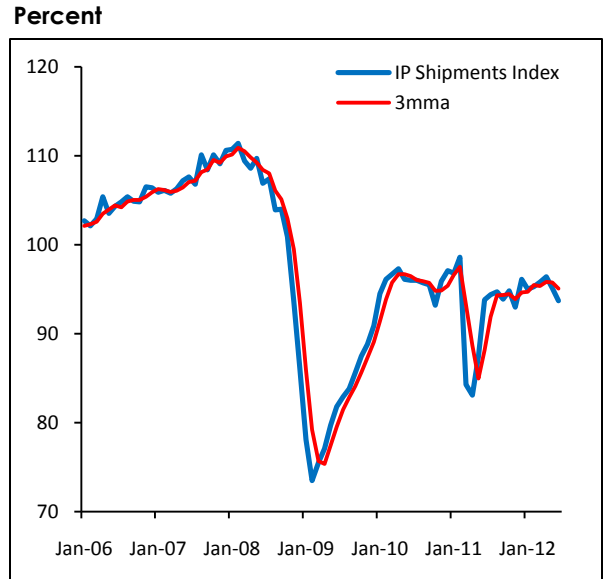
Figure 2. Broader Economic Activity Weak

Industrial production is again negative.



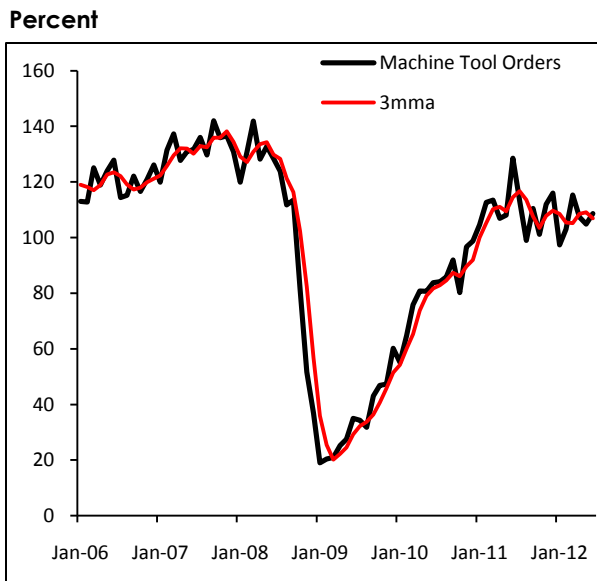
Source: Ministry of Finance

Weaker shipments is a large contributor to lower headline number...



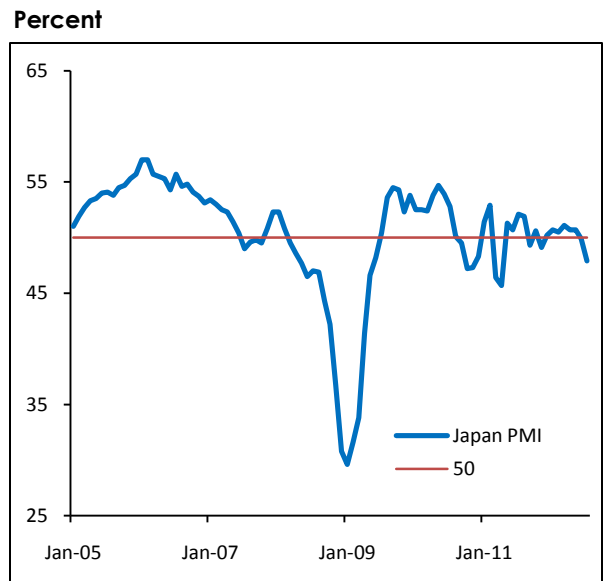
Source: Ministry of Finance

...while tool orders losing momentum.



Source: Ministry of Finance

PMI data suggests 2H2012 will get worse.

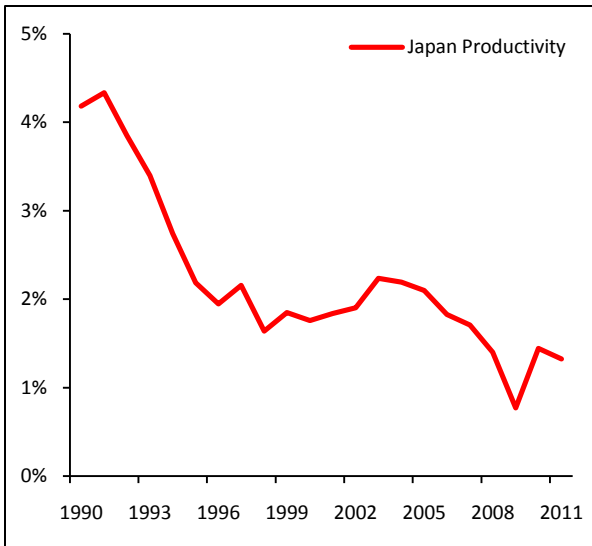


Source: Ministry of Finance

Figure 3. Economic Fundamentals are Poor

Japanese productivity growth has continued to weaken and may be normalizing at low levels.

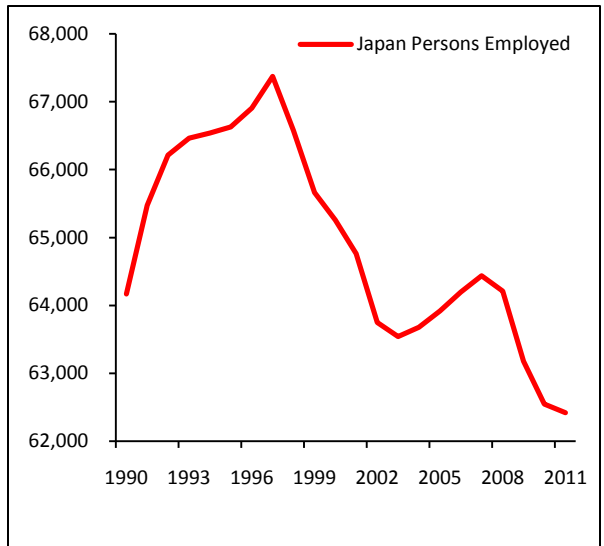
Percent



Source: Conference Board

The combination of a smaller, less productive labor force....

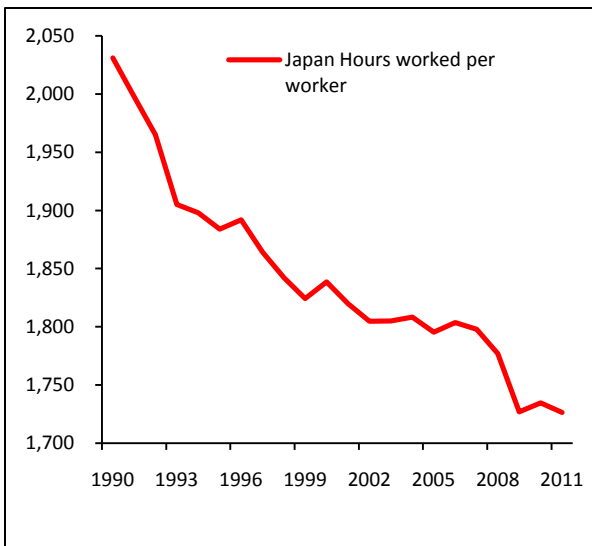
Thousands



Source: Conference Board

...which is working fewer hours, limits labor's contribution to output.

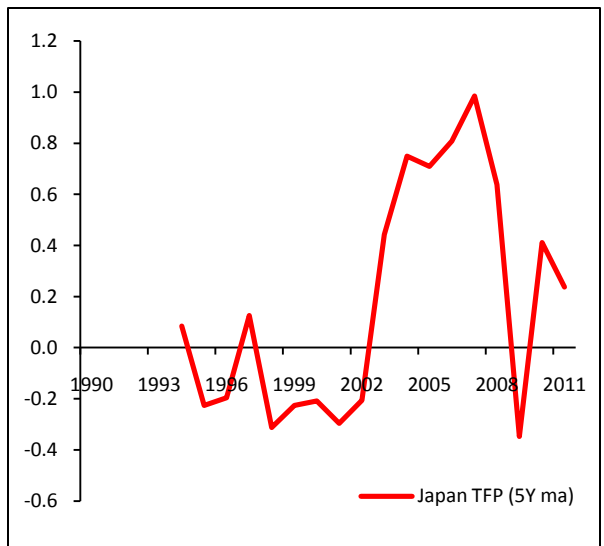
Annual Hours



Source: Conference Board

Low and moderating total factor productivity growth, alongside lower capital and labor inputs, is the nail in the coffin.

Percent



Source: Conference Board

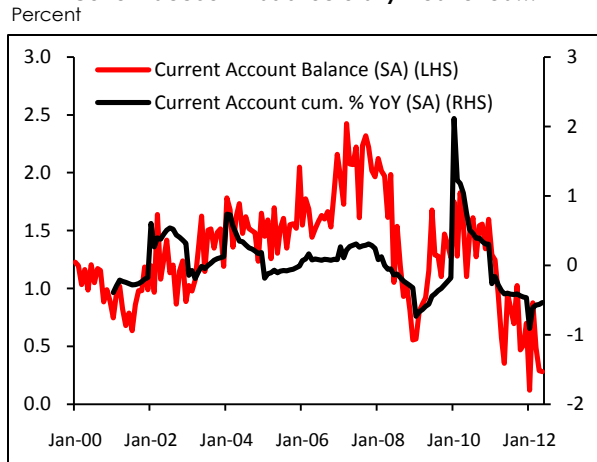
Japan Economic Outlook: Trouble on the Horizon

Until Japan can figure out a way to reverse the trends in these key drivers of economic performance, activity is very certainly going lower, notwithstanding monthly data fluctuations.¹

BALANCE OF PAYMENTS

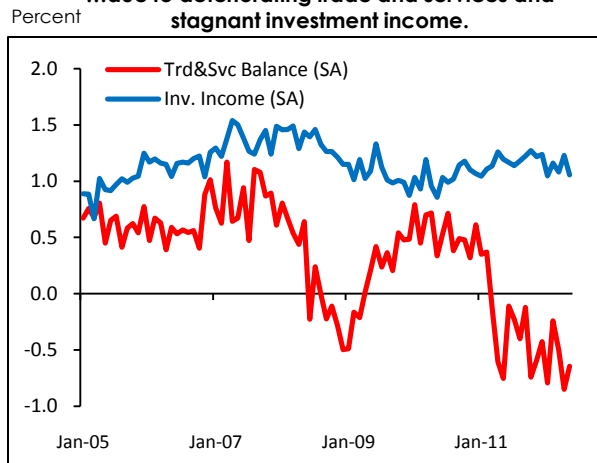
Japan's current account data has received greater attention over the past year as some investors have become critical of Japan's ability to maintain its safe haven status as a stable external creditor. Notably, the performance of several components of the current account is now worse than it was during the global financial crisis (GFC). Current account data is important to monitor because it measures the amount of capital Japan is importing or exporting. Previously, Japan has been a consistent net exporter of capital—domestic savings in Japan exceeded investment opportunities and capital was sourced abroad.²

Current account has structurally weakened...



Source: Ministry of Finance

...due to deteriorating trade and services and stagnant investment income.



Source: Ministry of Finance

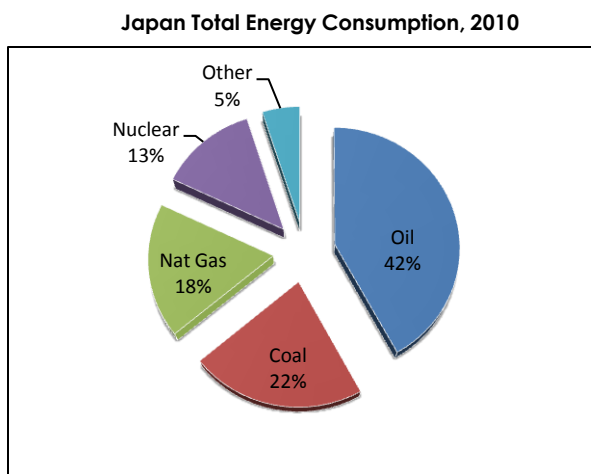
¹ A recent speech by BOJ Board Member Koji Ishida clearly articulates the necessity of gains in both productivity and size of the labor force. See Koji Ishida, "Recent Economic and Financial Developments in Japan," (2012). Accessed on July 30, 2012. http://www.boj.or.jp/en/announcements/press/koen_2012/data/ko120723a.pdf.

² It might be argued that in a rapidly shrinking economy like Japan's, there will be fewer domestic investment opportunities and, if national savings remained unchanged, there could still exist a net excess of capital to be sourced abroad. Unfortunately, all signs point to a continued decrease in national savings in Japan. Considering factors such as inflation, retirement flow, and reconstruction completion, we expect the Japanese savings rate to go negative within the next 12 months.

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In January of this year, Japan ran its first current account deficit since comparable records began in 1985. Although this was a non-seasonally adjusted figure, it received a lot of attention because it was the first manifestation of vulnerability in the export-driven, self-funding model that has previously insulated Japan from the necessity of external funding (and significantly higher interest rates).

There are two components of the current account: trade balance and investment income. Japan's trade balance has deteriorated due, in part, to an historically strong yen, collapsing demand in Japan's largest export markets, and the shutdown of nuclear plants which required greater energy



Source: US Energy Information Administration

imports. Prices of oil and liquefied natural gas (LNG) have moderated a bit since the beginning of the year concurrent with the government's decision to restart two reactors. Consequently, the ongoing drag of energy imports on the current account may diminish.^{1,2} Still, we expect that faltering demand in Europe and China and the

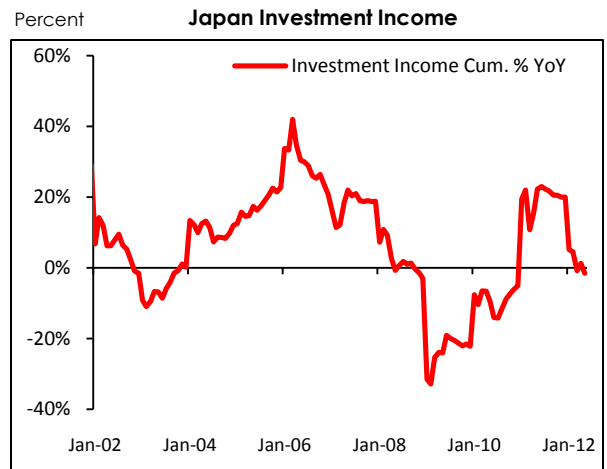
presently elevated yen valuation will have a lasting and notably negative impact over the next several quarters.

¹ Japan is the world's largest importer of LNG, the second largest importer of coal, and the third largest oil consumer. Its energy imports account for nearly 25% of all imports. While coal continues to account for a significant share of energy consumption, natural gas was the preferred fuel-of-choice for the shortfall in Japanese nuclear capacity. Furthermore, destruction of coal-fired electrical capacity was widespread in the area affected by the 2011 earthquake, allowing for gas to compete with coal on a cost basis. "Country Analysis Brief: Japan," (2012). Accessed on July 30, 2012. <http://www.eia.gov/countries/cab.cfm?fips=JA>.

² According to the EIA, Japan has "few domestic energy resources and is only 16% energy self-sufficient." Considering a baseline assumption of a stable yen policy and strong efficiency gains, any growth in income per capita implies increasing dependence on imported fuel in the medium term or longer. Imported inflation would be the result. Should the yen substantially depreciate, as we anticipate, the price of energy imports would rapidly escalate and contribute to an even deeper negative adjustment to Japan's balance of payments.

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At the same time, the other half of the current account—investment income—also shows signs of sustained weakness. One would expect that in an economic environment dominated by low real interest rates, interest payments on Japanese assets held internationally would flatten. Japan will, as a result, increasingly become a net *importer* of capital and yen rates will necessarily converge towards yields offered by other developed economies. In many respects, Italian debt fundamentals look much better than Japan's and Italian ten-year yields are at 6.0% compared to Japan's 0.8%.



We expect that Japan's sovereign showdown will begin to accelerate as the market gradually comes to realize that higher sovereign yields are unavoidable and will have dire consequences for what is already a fragile fiscal profile.

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FISCAL POLICY

The Japanese government recently passed a contentious plan to double the consumption tax to 10% by 2015. Most of the market has focused on the inadequacy of the tax increase in staunching Japan's deteriorating fiscal situation. A closer look, however, illustrates that while it certainly does not provide the whole cure, the consumption tax increase is an impressive start.

Below is a snapshot of FY 2012 government revenue and expenditures provided by the Ministry of Finance.

Tax Revenue	42T
Interest Payments	-10T
Spending Capacity	32T
Social Security	-26T
Education/Defense	-21T
Local Transfers	-17T
Public Works	-4.6T
Net Balance	-36.6T

Source: Ministry of Finance

Based on 2011 Japan GDP (468T JPY), the 36.6T yen shortfall represents approximately 8% of GDP. According to the Cabinet Office, the consumption tax increase is expected to boost revenue by 13.5T JPY (37% of 2012's projected shortfall). To be sure, the tax increase will have much less impact if spending (particularly social security spending) cannot be reined in over the next several years. Further, the tax increase falls well short of delivering the sustained 10% of GDP improvement in the structural balance that the IMF suggests as necessary.¹

Thus, while the consumption tax represents meaningful progress, it is only a first-step towards budget consolidation.

¹ Michael Keen, et al., "Raising the Consumption Tax in Japan: Why, When, How?," (2011). Accessed on July 30, 2012. <http://www.imf.org/external/pubs/ft/sdn/2011/sdn1113.pdf>.

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Despite this encouraging and odds-defying first-step towards fiscal consolidation, the budget situation in Japan is still pretty awful. The graphs in Figure 4 illustrate Japan's stark reality. While we more fully discuss the fiscal trend below, the most pressing budgetary issue facing Japan, after interest payments on existing government debt, is how to contain growing social security spending. Social security spending has increased 60% over the past 15 years and will only accelerate unless meaningful reforms can be made. Part of the increase in social security payments is due to the calculation method for benefits: deflation *increases* the real pension benefit level, while keeping the real pension contribution schedule constant.¹ As a result, the fastest-growing segment of Japan's population directly benefits from a deflationary environment and the increasing cost of social security is passed on to the shrinking pool of future labor force participants. Japan has effectively become a gerontocracy:

- By 2030, Japanese aged 65 and older will outnumber children 15 and younger by 4:1 ²
- By 2050, 40% of the population will be 65 and older

POLITICS

We would be remiss if we did not comment on the state of Japanese politics, particularly recent developments which occurred in the wake of the consumption tax hike debate. Most recently, Ichiro Ozawa, a top lawmaker in Premier Yoshihiko Noda's ruling DPJ, defected from the party (with 50 other lawmakers) over the consumption tax hike. At this point, the move is unlikely to sink the government as the DPJ still retains a majority in the lower house. In fact, some political observers believe Ozawa's defection may make

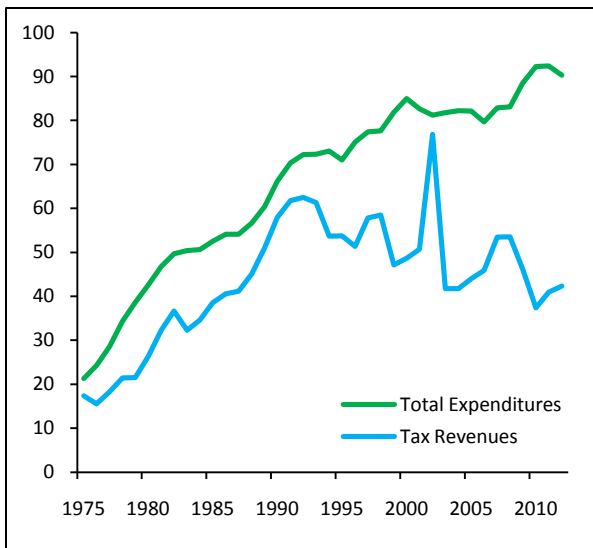
¹ Mitsuo Hosen, "Japan public pension: The great vulnerability to deflation," *East Asia Forum*, December 27, 2010, accessed July 30, 2012, <http://www.eastasiaforum.org/2010/12/27>.

² Chico Harlan, "As Japan strains to care for elderly, sacrifices begin," *Washington Post*, April 28, 2012, accessed July 30, 2012, http://www.washingtonpost.com/world/asia_pacific/as-japan-strains-to-care-for-elderly-sacrifices-begin/2012/04/28/gIQAu10cnT_print.html.

Figure 4. Japan Fiscal Decay

Total expenditures far exceed tax revenues which have been declining since 2003...

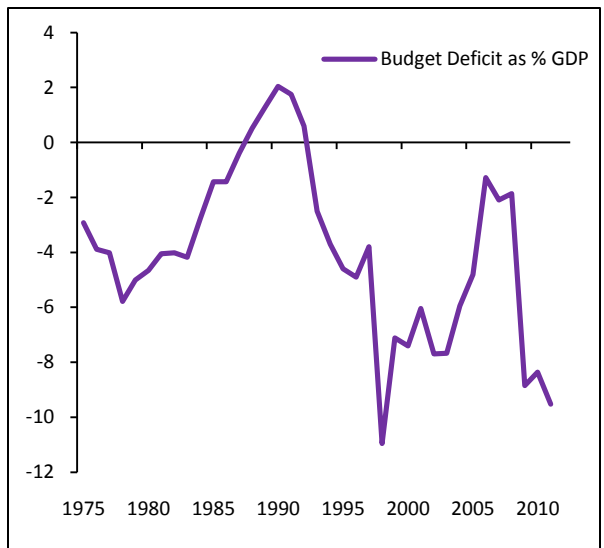
Trillion yen



Source: Ministry of Finance

...and have contributed to a dire fiscal situation.

Percent

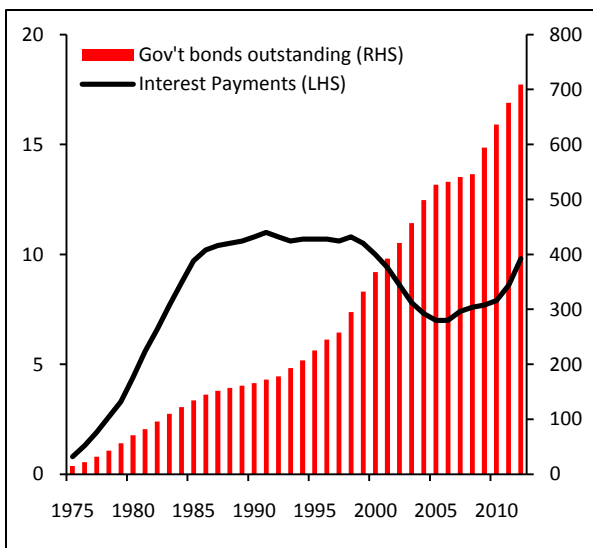


Source: Ministry of Finance

If JGB rates begin to move higher, higher interest payments will lead to massive inflation and yen depreciation.

Trillion yen

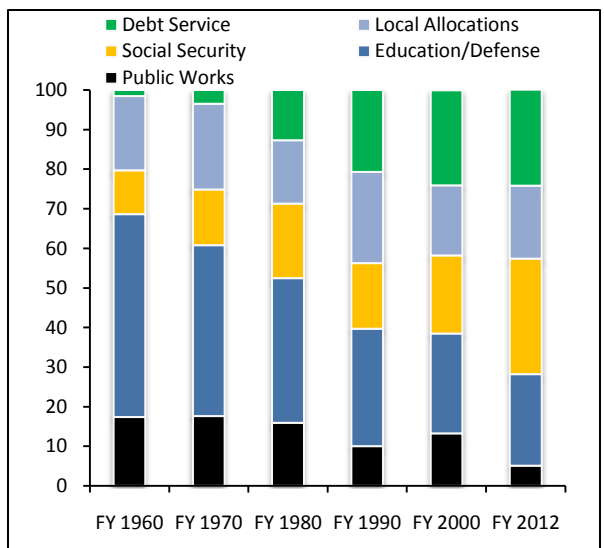
Trillion yen



Source: Ministry of Finance

With the lowest discretionary spending in the OECD, there is little room for easy budget cuts.

Percent



Source: Ministry of Finance

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compromise between the ruling DPJ and the opposing LDP more likely going forward. The ability of PM Noda to more effectively interact with the opposition and the willingness of Japanese voters to rally behind a bold leader (who recently approved the controversial restart of two nuclear generators) will be particularly important as the necessity of social security reform becomes more pressing.¹

Japan has been incapable of producing an effective leader—the country has elected six prime ministers in six years. This “revolving door” of leadership has contributed to political paralysis and has further slowed meaningful structural reform.

From another perspective, Noda's recent success is indicative of greater awareness among the voting population of the country's increasingly tenuous fiscal position—an astute watcher of Japanese politics cannot help but notice a critical shift in the last six months. Previously, Japan has been incapable of producing an effective leader—the country has elected six prime ministers in six years. This “revolving door” of leadership has previously contributed to political paralysis and has further slowed meaningful structural reform.

Noda's success with the consumption tax, however, marks a departure from politics as usual in Japan and represents an important shift in recognition of the severity and imminence of the country's structural issues. It appears as though the government is pushing the discussion of necessary fiscal reforms in a calibrated game opposite the BOJ, which is in turn bowing to pressure from corporations and young workers for a weaker yen and meaningfully

¹ Social security reform and the consumption tax increase originally were part of the same legislative bill. Social security reform was dropped at the last minute for political expediency.

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positive inflation targets. The tenor of language from key politicians and the central bank show that the older, anti-inflation constituency is losing its grip as the realities of the market kick in.

The evolving political dialogue in Japan requires close attention. We believe that as structural reforms are necessarily made, the *pathway* of the adjustment in the value of the yen and the government debt market may also change, but the *direction* is surely lower in both cases.

WHAT TO WATCH & CURRENT MARKET POSITIONING

Nearly all of the major global economies have serious challenges which will obstruct their return to a path of sustainable economic growth in the near future. While financial markets are presently focused on the structural crisis of the European monetary union, the issues facing Japan are even more intractable. Japan is facing an impending fiscal and demographic time-bomb—and though market expectations are that Japan has another five years before the fiscal situation becomes acute, the evolving data trend indicates significant risk of a much shorter horizon. The downward trajectory of a broad range of macroeconomic fundamentals is alarming. The market,

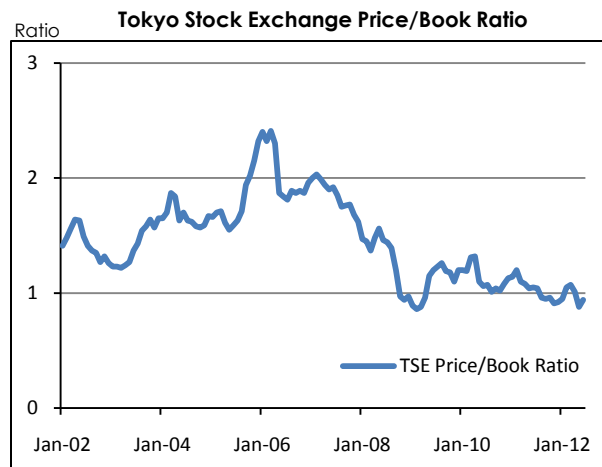
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however, continues to be complacent about the financial risks to the economy. Either market participants can handle only one crisis at a time or they have become somewhat inured to frequently issued JGB disaster warnings of the past fifteen years.

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Another explanation may be that international investors have simply lost interest in Japan. In a regional landscape dominated by fast-growing China, India, and South Korea, Japan may be perceived as less of a destination for growth and increasingly as a “safe haven” where capital temporarily goes to ‘sit’. Regardless of the reason, we believe that Japan will soon again be on investors’ dashboards as a problem asset. We are closely monitoring the evolving political dialogue in Japan as well as corporate earnings. We are also keeping a close watch on JGB asset flows and believe that global risk-off sentiment related to Europe has so far masked the risk of significantly higher JGB yields. If substantial fiscal reform is not soon made, we are certain that both the yen and JGBs will get hit—and very hard.

Given Japan's underperformance relative to Asia's fast growing economies, it is easy to understand why international investors may have lost interest in Japan. Asset prices in Japan have moved steadily lower since 1990 with equities down 78% and land prices down 77%. The trend lower in the Tokyo Stock Exchange price-to-book ratio (PBR) is similarly disturbing. Since 2006, the PBR has moved from 2.4 to 0.9 and indicates that the market value of the equity of Japan's largest companies is *below the net book value of assets*.¹



Source: Bloomberg

¹ While our outlook for the yen and JGB's is bearish, Japanese equities, at price-to-book levels very close to 1, offer value especially wherein one is hedged on the yen. First, moves downward in the yen would be a significant boost to Japanese corporate competitiveness. With significant barriers to entry for new competitors in the general corporate landscape and off-shoring of production by Japanese companies long enough underway, we expect returns on equity will converge on international norms even in a stable yen environment. If the yen weakens to equilibrate Japanese competitiveness more reliably, there is even greater likelihood of a convergence in ROA between Japanese and companies worldwide. With US equities trading at P/B multiples modestly above 2x, even in the very weak equity environment of late, and developing markets normally trading at multiples higher than that, there is sufficient safety in Japanese equities at this level and further conviction that a much weaker yen is necessary for continued growth of the private sector.

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Despite this rather poor economic record, however, Japan still plays a vital role not only as Asia's second largest economy, but its wealthiest. Japan remains the third largest export destination for China, Hong Kong and South Korea and the second largest export destination for Australia. Japan also remains a strategic ally and important ballast to the rising military capabilities of China and North Korea.¹ In sum, Japan has a substantial economic and geopolitical role in Asia and investors should pay close attention to how it manages the rather serious economic and social obstacles that now threaten to permanently impair its economy.

The ability to self-fund to date is the predominant reason Japan has not yet experienced a debt crisis similar to Europe.

Even the most casual observer is likely familiar with the socioeconomic challenges Japan presently faces. In addition to the ascendancy of other extremely competitive regional economies throughout Asia, Japan's rapidly aging population, unsustainable fiscal path, and decreasingly competitive corporate sector are widely recognized as obstacles to vigorous growth *in the future*. Yet these obstacles are converging in a real and meaningful way *at present* and Japan's internal funding mechanism is breaking down.

The ability to self-fund to date is the predominant reason Japan has not yet experienced a debt crisis similar to Europe. When the self-funding mechanism is sufficiently impaired, interest rates will move dramatically higher and the yen will depreciate substantially. The issue is perhaps best understood through the lens of the three sectors of the economy: households and corporations (collectively, the private sector) and government (public sector).

¹ "The Dragon's New Teeth," *The Economist*, April 7, 2012, accessed July 30, 2012, <http://www.economist.com/node/21552193>.

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Private Sector

Despite frequent ratings downgrades, the Japanese government debt market remains remarkably intact. At first glance, this is surprising given the amount of outstanding government debt relative to GDP. Most market observers are familiar with Japan's 223% gross debt-to-GDP ratio—the highest among industrialized economies. At the same time, most observers also understand that 93% of the country's debt is held by Japanese households and corporations which have effectively “isolated Japanese government finance from the rest of the world...”¹ What the market has not yet adequately priced-in is the trend in private savings which has collapsed over the past two decades and will force Japan to rely more heavily on external financing going forward.

Households

Household savings, as a percent of disposable income, have declined to 3.2% in 2011 from 14.7% in 1992, according to the OECD. Much of the decrease in savings is explained by a rapidly aging population which necessarily must “dissave” in retirement. When combined with an increasingly vulnerable corporate sector, we believe the unavoidable consequence of this dissaving will be a negative national savings rate within the next 12 months.^{2,3}

Corporates

The household sector is pretty easy to understand—lower savings as households grow older lessen their capacity to buy bonds. Everyone understands that. Understanding the dynamics within the corporate sector is not as direct, but it is also pretty simple. The productive capacity of Japan's

¹ A. Gary Shilling, “Japan's unsustainable deficit-financing model,” *Bloomberg*, June 5, 2012, accessed July 30, 2012, <http://www.bloomberg.com/news/2012-06-05/japan-s-unsustainable-deficit-financing-model.html>

² Savings rates most certainly would have been negative by now had it not been for the GFC in 2009 which resulted in a faster decline in spending relative to income as both households and corporations (globally) went defensive.

³ While households may still express a bias toward domestic and government-related investments, we believe that sharply poor performance of these assets and the discussion in the news will be enough to greatly soften this bias. As external investors are depended upon for an increasing share of Japan's government debt and refuse to pay today's prices, all bond holders will quickly come to appreciate why Warren Buffet referred to bonds as “among the most dangerous of assets.”

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corporate sector is quickly eroding. Over time, corporations will earn much less and, like households, will have less capacity to buy bonds. Information provided by the Ministry of Finance provides almost all of the evidence one would need to reach this conclusion. For example, fixed asset growth is declining in Japan and depreciation expenses have been **negative** year-on-year since 1Q2008. In other words, Japanese companies have become net *disinvestors* in productive assets and have lost confidence in Japan as a domicile in which to earn back the cost of capital! This trend is further confirmed by actual capital expenditure figures, although the quarterly numbers are volatile.

If the direction of capital expenditures does not turn, one would expect that both income and retained earnings would also eventually move lower. In fact, retained earnings (earned surplus) already appear to be losing momentum. The point is this: the growth engine of Japan's corporate sector is damaged. At the same time, a shrinking domestic market, an historically high currency valuation, and labor-friendly employment policies are forcing erstwhile inward-looking Japanese to seek opportunities off-shore.^{1,2}

Domestic market demand for government debt in Japan is rapidly retreating as households and corporations have greatly diminished capacity to absorb new government bond issuance. Because national savings have collapsed, and will soon move into negative territory, the marginal price for debt will increasingly be determined by international investors.³

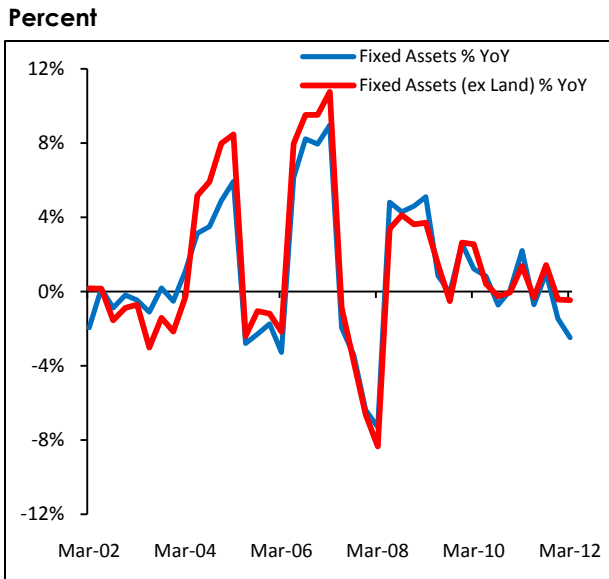
¹ Hiroko Tabuchi, "Young and Global Need Not Apply in Japan," *New York Times*, May 29, 2012, accessed July 30, 2012, <http://www.nytimes.com/2012/05/30/business/global/as-global-rivals-gain-ground-corporate-japan-clings-to-cautious-ways.html>.

² According to the *Financial Times*, if companies cut their workforces to match the actual level of demand, unemployment would increase more than threefold. Even in the best of times, such measures are likely to drag on competitiveness. See Jonathan Soble, "Japanese Manufacturing in Search of Salvation," *Financial Times*, January 4, 2012, accessed July 30, 2012, <http://www.ft.com/intl/cms/s/0/7631c496-36bb-11e1-9ca3-00144feabdc0.html#axzz1wOMB9MGh>.

³ Insurance companies, the other big buyers of JGBs, have become increasingly sensitive to the balance sheet risks of concentrated sovereign debt positions. Insurers are grasping for yield to meet fast approaching liabilities and are unlikely to significantly increase their holdings of JGBs. The world's biggest pension fund, Japan's Government Pension Investment Fund (GPIF), has been a net seller of assets (for the third straight year) to raise cash for pension payouts. See Chikafumi Hodo, "Japan's Giant Pension Fund Sold \$32 billion of Assets in 2011/2012," *Reuters*, July 6, 2012, accessed July 30, 2012, <http://in.reuters.com/article/2012/07/06/japan-publicfund-idINL3E8I61XY20120706>.

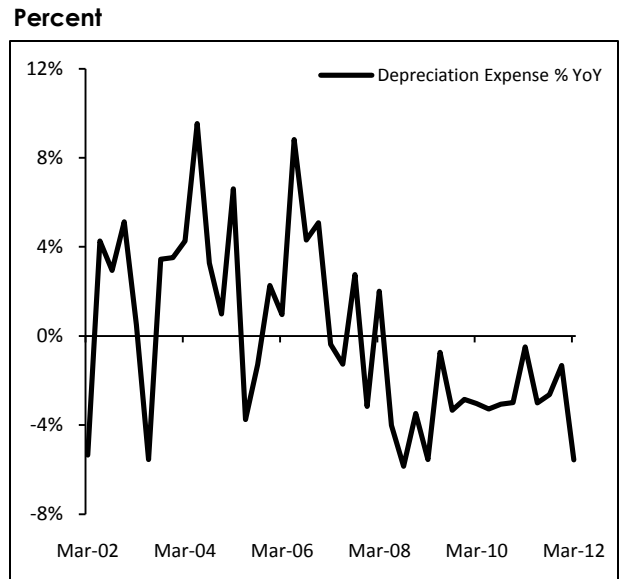
Figure 5. Japan Corporate Uncertainty

Corporate fixed asset growth is declining...



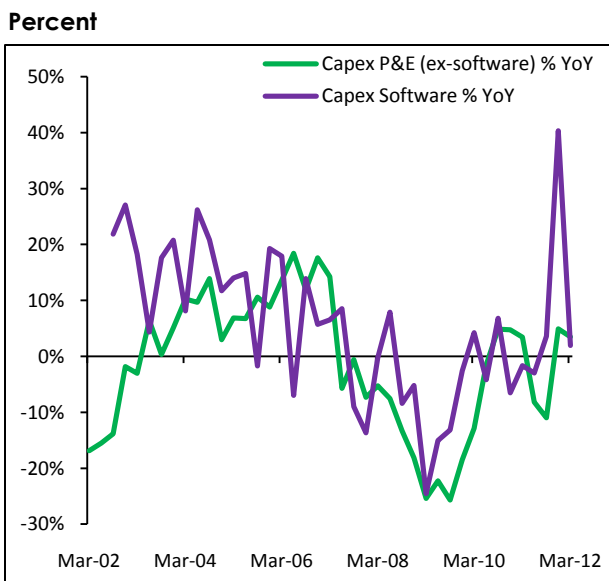
Source: Ministry of Finance

...and replacement of capital has been negative since 2008.



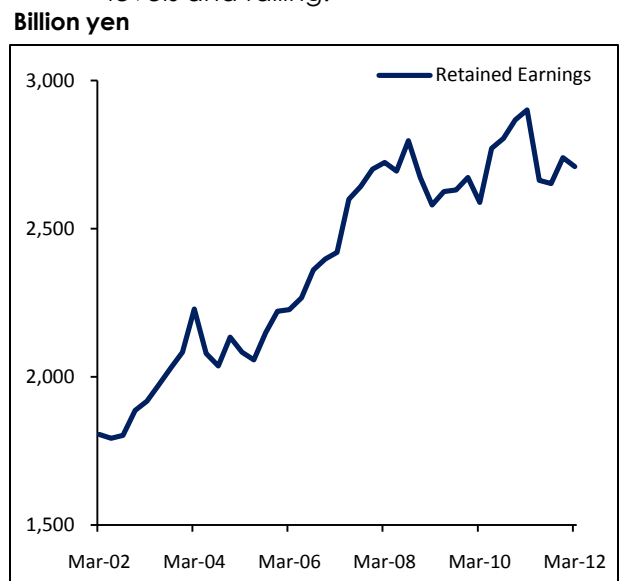
Source: Ministry of Finance

Capital expenditures do not signal confidence.



Source: Ministry of Finance

Retained earnings are below 2008 levels and falling.



Source: Ministry of Finance

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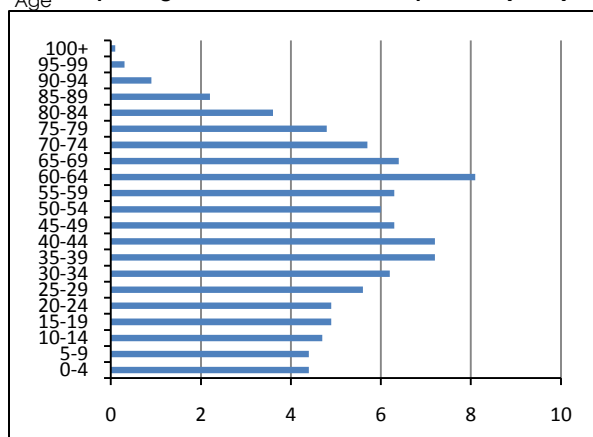
Public Sector

Since the asset bubble burst in 1990, Japan has heavily relied on fiscal policy, in the form of increased spending and tax cuts, as the primary source of stimulus to the economy. Monetary policy, on the other hand, has been underutilized. This uneven policy mix has created dangerous imbalances in the economy in the form of a massive amount of debt relative to GDP which will subtract from the country's ability to grow. Fiscal policy accommodation has reached its limit in Japan and at some point, markets will begin to seriously question Japan's ongoing ability and willingness to manage its budgetary expenditures in light of the serious obstacles that exist:

1. Japan's Ministry of Health, Labor, and Welfare now forecasts that Japan's population will shrink from the current level of 128 million to 87 million by 2060.¹ This means that within the coming decade, the population will begin to decrease by a **million people per year**. As a result, the labor force and tax base will shrink significantly.
2. Japan's aging population represents a greater burden on the budget via increasing social security payments. According to the IMF, spending on social security benefits has risen by almost 60% over the past fifteen years and now represents nearly 30% of government expenditures.²

To be sure, at some point, social security claims will trend lower as the retiree

Age **Japan Age Distribution as % of Population (2012)**



Source: US Census

cohort passes away. Based on the age distribution of the population and long life-expectancies, however, that is unlikely to happen within the next four decades. Until then, social security expenditures as a percentage of the overall budget will continue to rise unless reforms can be made. 2012 marks only the first year that Japan's baby boomers are set to retire.

¹ Japan has the second lowest annual birthrate of 221 countries according to the *CIA World Factbook*.

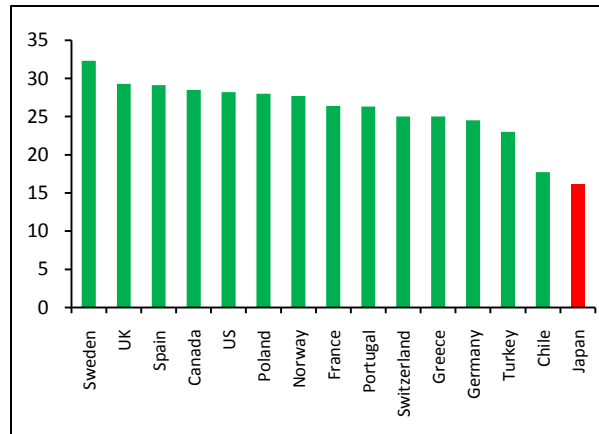
²"Japan's Fiscal Condition," Japan Ministry of Finance, December 2011, accessed July 30, 2012, <http://www.mof.go.jp/english/budget/budget/fy2012/e20111224b.pdf>.

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- Over the past decade, defense spending in Japan has been essentially flat. Given constitutional restrictions which limit Japanese military activity to self-defense, the capacity for military spending is effectively bound by overall GDP growth. Yet, there have been recent efforts by the present government to expand the definition of self-defense to include "collective self-defense". Such a change would enable Japanese troops to intervene to help its allies even when Japan is not directly attacked. A constitutional amendment allowing collective self-defense would represent an enormous shift among the balance of North Asian military capabilities because it creates the legislative space for a much greater military build in Japan. In other words, defense spending in Japan will very likely grab a bigger portion of the budget in upcoming years.¹

For these reasons, we believe the government will be hard pressed to stabilize, much less reduce, budgetary expenditures in a meaningful way within the upcoming decade. In fact, according to the IMF, non-social security and non-interest spending in Japan was, at 16.2% of GDP, already the lowest of all OECD countries. There is very little room

Non-Social Security and Non-Interest Spending in 2008 (% GDP)



Source: IMF WEO database

for significant expenditure reductions. This would be less of a potential problem if households and corporations had the capacity to continue providing sufficient funding for the government. Unfortunately, as previously discussed, Japan's internal funding engine is slowing and the consequences will be severe.

¹ "Defence Economic Trends in the Asia-Pacific 2010," Australia Department of Defence, 2010, accessed July 30, 2012, http://www.defence.gov.au/dio/documents/DET_10.pdf.

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The Beginning of the End of Internal Funding

Japan, like other industrialized economies, has tough choices to make in managing fiscal policy and setting it on a sustainable path in the medium term. The risk is that accelerating socio-economic trends are forcing Japan closer to a tipping point much sooner than the market expects. As such, investors should recognize the important consequences for JGBs and the yen. We believe that the catalyst for an acute debt crisis in Japan will be a breakdown in Japan's ability to fund itself.

The significance of the threat to Japan's internal funding mechanism is perhaps best understood in terms of the behavioral dynamic among investors. Japanese retail and institutional investors seem to have been willing collaborators in a financial repression scheme. While investor conservatism and home bias have likely played important roles in these parties' investment strategy to date, they also had a rational expectation of very low inflation. Conservative investors became used to yen and JGB strength during times of stress. Perhaps a supreme faith in government overall or unease with the overly consolidated industrial structure contributed somewhat to a sovereign bond preference.

Regardless of the reasons for prior behavior, these dynamics are weakening sharply. As Japanese pensions see near-term obligations increase and worry about sovereign's ability to pay as played out in Europe, these pensions are heading for the exit.

As government bonds are priced to attract international investors who will certainly be more objective than Japan's private sector when evaluating the overall fiscal position and presently hold only 7% of the existing debt, rates will climb toward similar-risk assets. This relationship is why 2012 differs from 2007

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or 2002 or 1997. International investors will have a bigger role in funding Japan than at any time previously and will demand a bigger risk premium on loans to the government. ***This means that yields will equilibrate at rates notably higher than major distressed sovereigns in Europe and the debt burden will substantially increase.***¹ When this happens, the fiscal situation in Japan could rapidly deteriorate into a traumatic sovereign debt crisis which paralyzes Japan, threatens economic and geopolitical stability throughout Asia, and leads to an epic devaluation of the yen to bring the debt load more into balance with GDP.

¹ As a "distressed" benchmark, Italy seems stronger than Japan on most metrics. Italian yields, however, trade at 6.25% compared to Japan's 0.80% at the same time that Italian debt outstanding is ¼ or less of Japan's total sum of debt.