OBSERVATION

TD Economics

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JAPAN: ABENOMICS NOTWITHSTANDING, DEMOGRAPHIC TRENDS TRUMP FISCAL SUSTAINABILITY

Highlights

- Prime Minister Shinzō Abe came into office promising to end deflation and revive the Japanese economy. The introduction of fresh fiscal stimulus and aggressive monetary easing boosted consumer and investor confidence, sending stock prices higher.
- However, Mr. Abe's average 2% economic growth target for the next decade is optimistic, irrespective of how generous the assumptions used for labor force participation and productivity are.
- This, in combination with rising fiscal spending stemming from population ageing and an already high stock of sovereign debt mean that, under current policies, Japan's fiscal position is unsustainable in the medium-term.
- Structural elements underlying Japan's bond market have allowed it to escape market retribution thus far, but this is unlikely to persist if the government delays reforms to increase potential economic growth and tackle structural fiscal drivers.

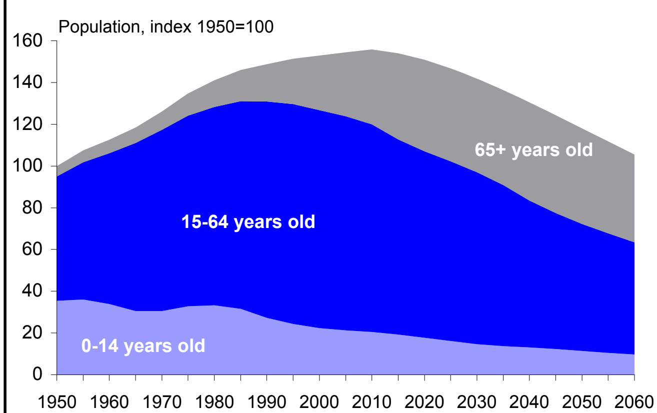
In December of 2012, Shinzō Abe led the Liberal Democratic Party of Japan (LDP) to a landslide win over the Democratic Party, which had been in office since 2009. Abe won the election promising to end deflation and revive the economy by deploying a mix of flexible fiscal policies, aggressive monetary easing, and growth-boosting structural reforms.

Thus far, he has delivered on the first two fronts. In January, Mr. Abe launched a fiscal stimulus program worth around 2% of GDP. In April, under a newly-appointed governor, the Bank of Japan introduced its Quantitative and Qualitative Monetary Easing (QQME) program. The program aims to reach stable 2% inflation by doubling the monetary base by the end of 2014. These massive liquidity injections will drive up the size of the BoJ's balance sheet from roughly 35% of GDP currently, to 60% at the end of 2014.

Although Mr. Abe's introduction of structural reforms has been less tangible, there is a market expectation that after having secured a solid majority in July 21st upper house elections, he will be bolder in the future. His government will announce a reform package this fall aiming to boost Japanese annual average real GDP growth to 2% over the next decade.

Given that Japan's population is already contracting, our analysis shows that, even if very high labor participation rates are achieved, a substantial increase in productivity – to levels not seen in advanced economies in recent decades – would be required to raise the trend in real GDP growth to 2%. In

JAPANESE POPULATION IS CONTRACTING AND AGEING FAST



Source: UN Popul. Division, Japan Institute for Population and Social Security, TD Economics

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other words, unless Japanese authorities unleash a battery of reforms to dramatically boost labor productivity, achieving 2% economic growth on a sustained basis will prove an elusive target. This has a number of implications, not only in terms of the odds for success of Mr. Abe's policies, but also for the country's fiscal sustainability and financial stability.

Despite the widely accepted view that, in the medium-term, Japan's sovereign debt position is unsustainable, the country has been spared investor backlash. Markets are in a wait-and-see mode on Japan's reforms and ultimate effectiveness. In addition, structural elements of its bond markets have mitigated near-term risk stemming from investor flight. But, the favorable factors propping up Japan's bond market will fade in the medium term, exposing the country to a loss of investor confidence if government reforms are not implemented soon.

Demographic shift is a major challenge for Japan's future

Japan's total population has already started to contract and the decline will accelerate in the coming decades. From around 127 million people in 2013, total population is expected to fall to 87 million by 2060. Furthermore, the age structure of the Japanese population is also changing rapidly. In 1955, there were 11.5 working-age individuals for each person older than 64. That ratio has dropped to 2.5 and will decline to an alarming 1.3 by 2060. This demographic shift has had, and will continue to have, a significant impact on potential economic growth.[1]

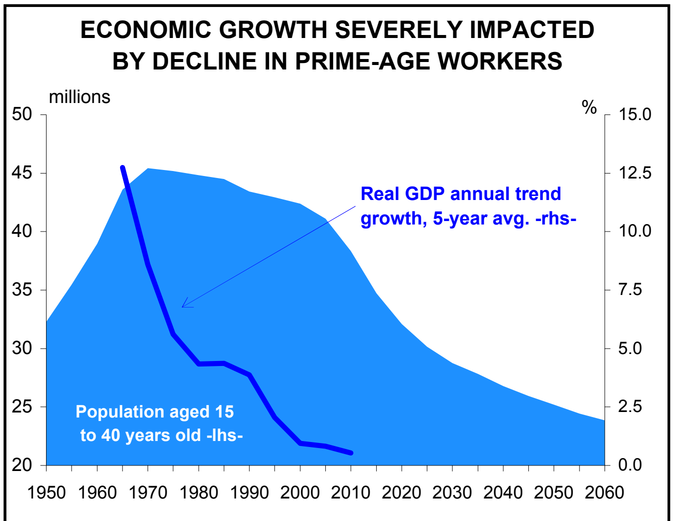
In the next 10 years, a decline in the population between the ages of 15 to 64 will lead to a contraction in Japan's labor force in the order of 4%. If nothing is done to increase labor participation rates and/or labor productivity, Japan's trend annual real GDP growth will fall from 0.4% in 2012 to 0.1% by 2023, averaging 0.2% over the period.

We compute Japan's real GDP trend growth under different labor participation rate and productivity scenarios to gauge the potential impact of the underlying demographic trends on Japanese economic growth in the coming decades.

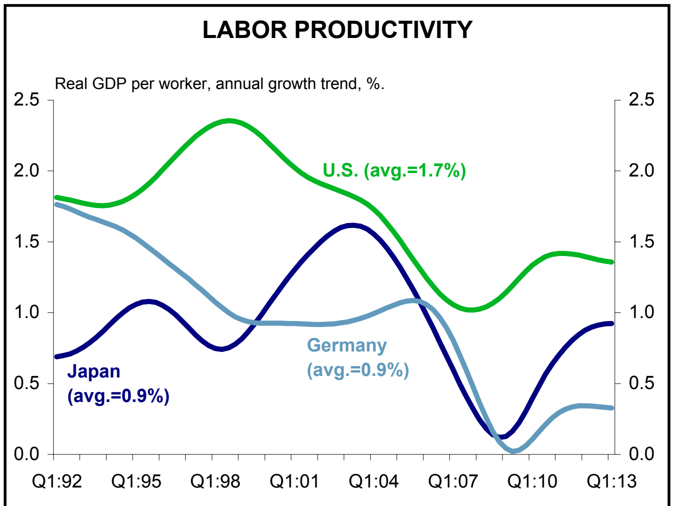
The first scenario assumes a linear increase in women's participation rate for all 5-year age cohorts by a total of 10% over a period of 10 years. Under this working assumption, the participation rate for Japanese women in the 40 to 44 age cohort, increases from 71.1% in 2013 to 78.2% in 2023. Given the differing population growth rates for each age cohort, the end result is an increase in the participation rate for women between 15 and 64 years of age from 61.1% in 2013 to 67.8% in 2023. For the 25 to 44 age group, the participation rate jumps from 67.7% to 74.5%, which is higher than Mr. Abe's declared goal of 73%.

In addition, we assume that the unemployment rate for each age cohort remains constant at their 2012 levels. We also assume that the annual growth rate of GDP per worker remains constant at 0.91%, which is Japan's average trend productivity growth for the period 1991-2012. Under these assumptions, real GDP trend growth would rise to an annual average of only 0.6% over the next ten years, from 0.2% under the status quo scenario.

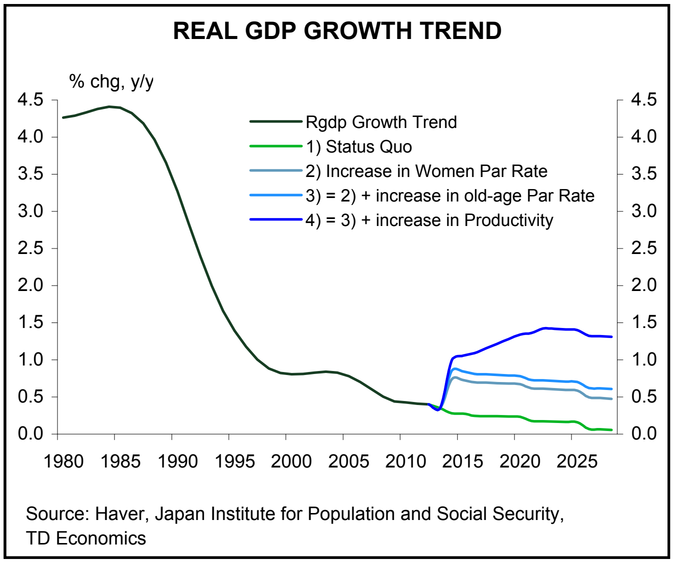
The second scenario adds to the first scenario a 7% increase in the participation rate of both women older than 54 years and men above the age of 59. This results in a further increase in average annual real GDP trend growth to 0.8%



Source: UN Popul. Division, Haver, St. Louis Fed, TD Economics



Source: Haver, TD Economics



Source: Haver, Japan Institute for Population and Social Security, TD Economics

from 0.6% in scenario 1.

Furthermore, as the accompanying chart shows, increases in the labor participation rate are a one-time shock. Once the participation rate stabilizes at the higher level, trend real GDP growth dynamics are once again primarily governed by demographic trends. In the case of Japan, the only way to avoid a subsequent decline in trend growth is to boost labor productivity. We evaluate this in scenario 3, where, in addition to the assumptions under scenario 2, we allow annual average worker productivity growth to rise linearly from 0.91% in 2013 to 1.7% in 2023. The latter equals the productivity trend observed in the U.S. during 1991-2012. Under these working assumptions, annual real GDP trend growth would rise to 1.2%, on average, over the 10-year projection period.

At last, we compute the growth rate that is needed in productivity to yield annual real GDP trend growth of 2% over the next decade under the labor participation assumptions in scenario 3. We find that productivity growth would have to average 2.2% to achieve that objective. In other words, Japan's underlying demographic trends imply that, even under quite optimistic labor force participation rate assumptions, labor productivity would have to rise more than two-fold from current levels for the Japanese economy to achieve trend real GDP growth of the magnitude targeted by Japanese authorities. This is a critical issue for Japan's medium-term fiscal sustainability. As we discuss below, under current fiscal policies, Japan's sovereign debt is – arguably – sustainable only if its GDP expands consistently at rates in the upper bound of our range.

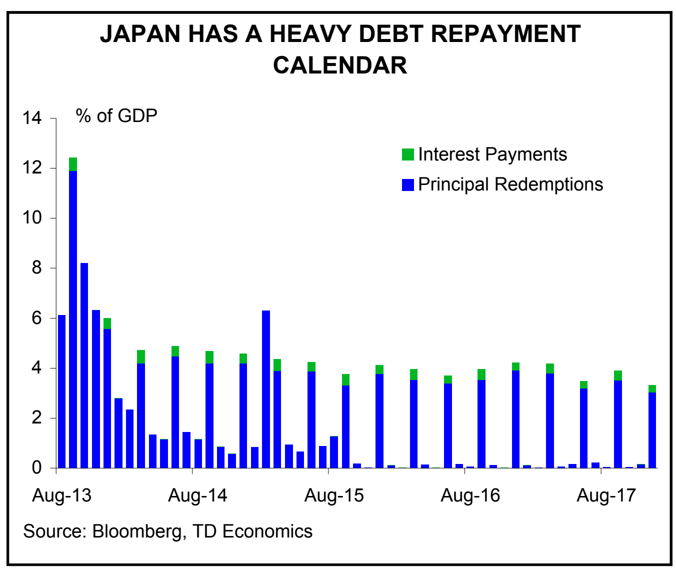
Barring extraordinarily positive outcomes, Japan's fiscal situation is untenable in the medium-term

Japan has been running fiscal deficits at an annual average of 6.2% of GDP for the last two decades. This drove gross sovereign debt up to a level equivalent to 238% of GDP at the end of last year from 71% in 1992. To address its mounting debt, a Fiscal Management Strategy was announced in June 2010. As part of this strategy, the Diet passed legislation in August 2012 to increase the consumption tax rate in two steps, from the current 5% to 8% in April 2014 and to 10% in October 2015. However, this increase is conditional on "an improvement in economic conditions". The government has to decide whether to proceed with the increase by October of this year.

A projection made by Japan's Cabinet Office estimated that the planned increase in the consumption tax and the spending ceilings imposed by the Fiscal Management Strategy would be sufficient to meet the Strategy's target of reducing the primary budget deficit to 3.2% of GDP in 2015. However, even before the January 2013 fiscal package was introduced by Mr. Abe, the primary budget was expected to remain in deficit through 2023 under the two alternative scenarios in the Cabinet Office projection.

Under a "prudent scenario" that assumed nominal GDP growth of around 1.5% over the next decade, the primary fiscal deficit was projected to stabilize at 3% of GDP in 2015. Consequently, the public debt ratio would rise by 40 percentage points of GDP by 2023. That is, Japanese gross sovereign debt would be in the vicinity of 280% of GDP.

Under the "Growth Strategy scenario", which assumed a real growth rate of 2% and a nominal GDP growth rate of



Source: Bloomberg, TD Economics

3% over the next decade, the primary deficit would remain at 1% of GDP in 2023 and gross sovereign debt would reach 265% of GDP.[2]

For an alternative perspective on Japan's sovereign debt sustainability, consider the latest IMF's fiscal sustainability analysis.[3] It assumes both nominal and real GDP growth rates behave according to the latest IMF's World Economic Outlook projection until 2018, and, beyond that year, they remain fixed at 2.2% and 1.0%, respectively.

Along those general macroeconomic assumptions, the IMF's "baseline scenario" includes the two-stage consumption tax rate increase, the winding down of the past and current stimuli (1% of GDP each) and a modest expenditure adjustment (1.5% of GDP) through 2020. Under this scenario, gross debt would climb to 300% of GDP by 2030.

Under the IMF's alternative "fiscal adjustment scenario", it assumed a heroic improvement in the structural primary balance equivalent to 11% of GDP over the next decade. Under this scenario, the gross debt-to-GDP ratio is projected to decline to 225% by 2030. However, the IMF also considered shocks to growth, inflation, and interest rates, consistent with historical patterns. In doing so, even with an 11% of GDP improvement in the structural primary balance, the debt ratio remained explosive with a 25% probability. To achieve a declining debt trajectory with a 90% probability, an additional adjustment of 5% of GDP is needed.

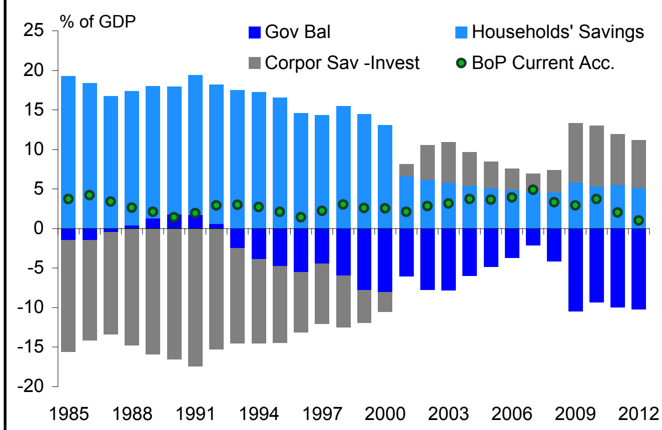
To sum up, under an optimistic assumption of 2% real GDP growth, current fiscal policies – including the planned increase in the sales tax – would still drive Japan's gross debt to GDP ratio to 265% by 2023. A less ambitious – but still hard to achieve – rate of economic growth of 1% would see Japan's sovereign debt rise to 3 times the size of its annual economic output, and the country would be devoting 10% of GDP to annual interest payments on its public debt. These results make it extremely hard to argue against the widely accepted view that, in the medium-term, Japan's sovereign debt dynamics are unsustainable.[4]

Given that Japan's public finances and its demographic trends are nothing new to the markets, this begs the question why there hasn't been a "Greek-style" crisis in the Japanese government debt market.

Why Japan has not entered into a sovereign debt crisis

Many factors have contributed to keep Japanese sovereign bond yields low in recent years. Chief among them are high domestic savings and a home bias by domestic

PRIVATE SAVINGS HAVE MORE THAN OFFSET FISCAL DEFICITS... UNTIL NOW

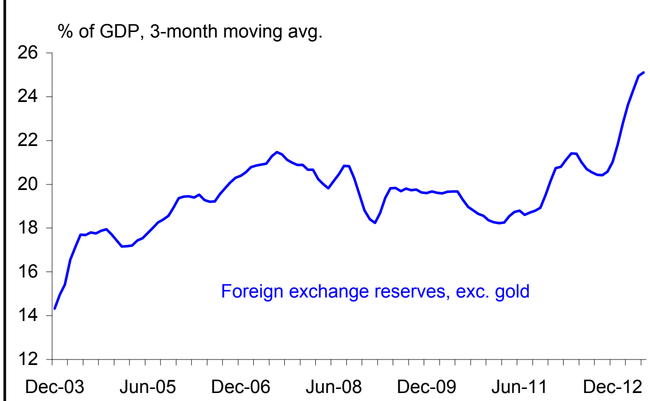


Source: IMF WEO April 2013, Haver, TD Economics

banks and institutional investors favoring Japanese sovereign bonds over alternative investments. Declining growth potential, disinflation, and population aging (preference for safe assets), have also played a role. Ditto for ultra-low monetary policy rates across most advanced economies in the aftermath of 2008's financial crisis. The combination of these elements has more than offset the impact of deteriorating fiscal conditions.

Other factors, such as the low share of government debt held by foreigners (8.7% of the total), the fact that Japan has no outstanding foreign-currency denominated debt, and the country's large holdings of foreign exchange reserves (US$1.18 trillion, or 24.5% of GDP) have also acted to mitigate risk. As a result, the effective interest rate

JAPANESE FX RESERVES PROVIDE A SAFETY BUFFER TO FOREIGN INVESTORS



Source: Haver, TD Economics

on Japanese government debt has remained well below 1% for the last decade.[5]

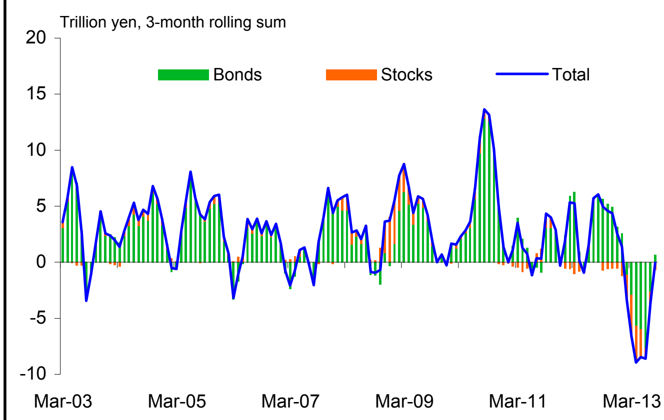
Are these low yields sustainable?

In the short-term, most of these factors will remain at play and, taking into account the additional JGB purchases by the BoJ under QQME, yields should remain low. Furthermore, Japan has accumulated net private financial assets equivalent to 285% of GDP and net foreign assets equivalent to 62.9% of GDP. Over the next few years, this large pool of financial assets and a still respectable – albeit declining – flow of domestic savings should allow Japan's private sector to absorb both maturing and new government debt issuance. In other words, in terms of the capacity of Japan's private sector to fund the public sector, there doesn't seem to be an imminent trigger for a liquidity crisis in the JGB market.

However, in the medium-term, many of the factors that have kept Japanese sovereign yields low will start to fade. This is particularly the case with the savings rate and the net stock of financial assets due to the impact of rapid population ageing.[6]

This is why it is imperative for the government to introduce reforms to limit the impact of population ageing on fiscal spending before some of the above-mentioned secular trends begin to take hold. The longer Japan postpones dealing with its unsustainable fiscal trajectory, the larger the magnitude of the required adjustment, and hence, the higher the risk of a market shock. The fact that from now until the end of 2015 Japan has estimated funding needs – i.e., maturing debt plus fiscal deficits – equivalent to half its total debt outstanding (or roughly 120% of GDP) makes a potential rise in yields particularly worrisome.

NET JAPANESE INVESTMENTS IN FOREIGN ASSETS



Source: Bloomberg, TD Economics

In the coming quarters, beyond sovereign bond yields, investors will be closely monitoring Japan's current account and its foreign exchange reserves position. The former provides an easy reading into the overall flow of savings of both the public and private sector – net of fixed investments. The latter is a good proxy of net capital inflows. Even if sovereign bond yields remain low, a deterioration in these metrics, especially on the foreign exchange position would mark a change in investors' perceptions towards Japan.

Final Remarks

Prime Minister Shinzō Abe came into office promising

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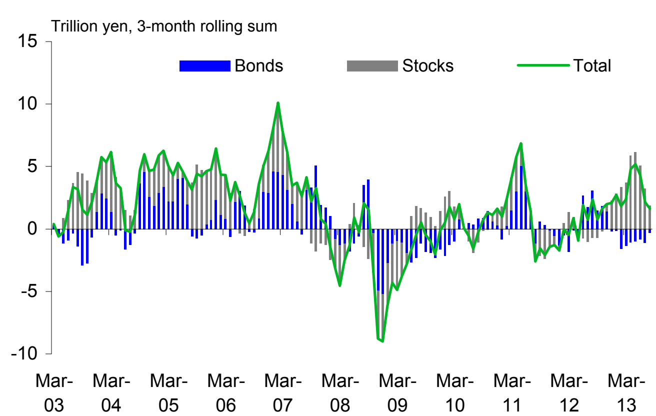
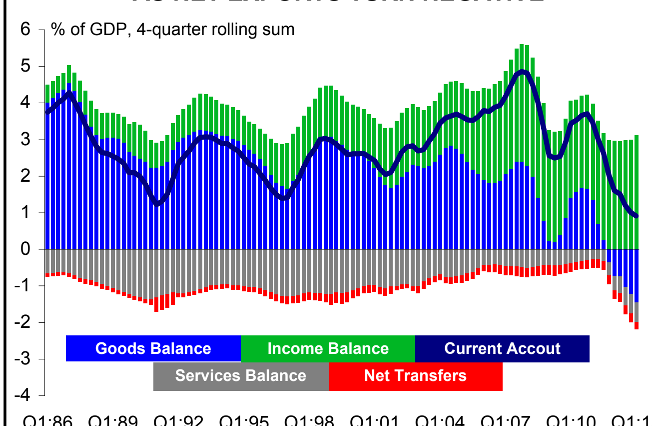


Source: Bloomberg, TD Economics

CURRENT ACCOUNT SURPLUS NARROWS AS NET EXPORTS TURN NEGATIVE



Source: Haver, TD Economics

to end deflation and revive the Japanese economy. The introduction of fresh fiscal stimulus and aggressive monetary easing boosted both consumer and investor confidence, sending stock prices higher.

However, when compared against trend real GDP growth projections based on future demographic dynamics and past average labor productivity, Mr. Abe's average 2% economic growth target for the next decade is far too optimistic. This, in combination with rising fiscal spending stemming from population ageing and an already high stock of sovereign debt mean that, under current policies, Japan's fiscal position is unsustainable in the medium-term.

Delaying reforms that would increase potential economic growth and tackle structural fiscal drivers would only exacerbate the unavoidable adjustment. Hence, as time wears on, there is a high risk that foreign investors will lose confidence in Japan, even if domestic factors manage to keep sovereign bond yields low.

A natural question to ask is what the potential impact of this outcome would be on the global economy. Although foreign holdings of JGB are relatively small, the same cannot be said about Japan's trade and financial linkages with the rest of the world. However, the knock-on effects from a correction in the JGB market depend on a myriad of factors, such as the abruptness and depth of the correction, the holdings of JGB by Japanese financial institutions at that time, as well as the strength of the global economy to absorb a shock, etc. Therefore, a financial shock and its ensuing impact on economic activity in Japan would certainly have significant global repercussions, but a proper assessment would be difficult without knowing the timing of its occurrence, particularly since it does not appear to be within the immediate horizon. This analysis is outside the scope of this report and will be left for a future date.

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Endnotes:

1 Some researchers have linked Japan's dismal economic performance during the 1990s more to demographics than to poor macroeconomic policies. The entry into the labor force and subsequent accumulation of work experience of Japan's baby boomers boosted economic growth during the 1970s and 80s. However, as the youngest of that generation reached age 40 in the early 90s, their skills' accumulation peaked and fewer young workers were ready to take their place. This had a dampening impact on potential economic growth. See "Japan's Macroeconomic Dilemmas: The Implications of Demographics for Growth and Stability"; Smitka, Michael; 2005.

2 See "Restoring Japan's Fiscal Sustainability", Jones, Randall S. and S. Urasawa. OECD Economics Department Working Papers No. 1050, May 2013.

3 See "Japan: Article IV Consultation, IMF Country Report No. 13/253, August 2013", pages 43-45.

4 See "Defying Gravity: How Long Will Japanese Government Bond Prices Remain High?" Hoshi, Takeo, and T. Ito. March 2012; pages 3 to 8 for a review of the literature on Japan's debt sustainability under different methodological approaches.

5 It is important to note that despite the very low JGBs yields, the fact that the country has sustained mild deflation for the last two decades – since 1993, the GDP deflator has contracted at an average annual pace 0.9% – means that, on average, a Japanese citizen investing in JGBs has obtained a positive real rate of return. This has provided a strong enough incentive for Japanese households to maintain the home bias on their investment portfolio.

6 The IMF estimates that, based on current policies, long-term rates are expected to rise by 4 percentage points to near 5.5% between 2012 and 2030, with the deterioration in fiscal conditions contributing 3.5 percentage points. Inflation and higher growth would add another 2 percentage points, while shrinking external surpluses would contribute another half a percentage point to nominal yields. The net increase, however, would be much smaller because population aging and BoJ purchases would subtract around 1.25 and 0.75 percentage points, respectively. .Japan: Selected Issues, IMF Country Report No. 13/254, August 2013; page 11