Meketa Investment Group Global Macroeconomic Research Series

Abenomics

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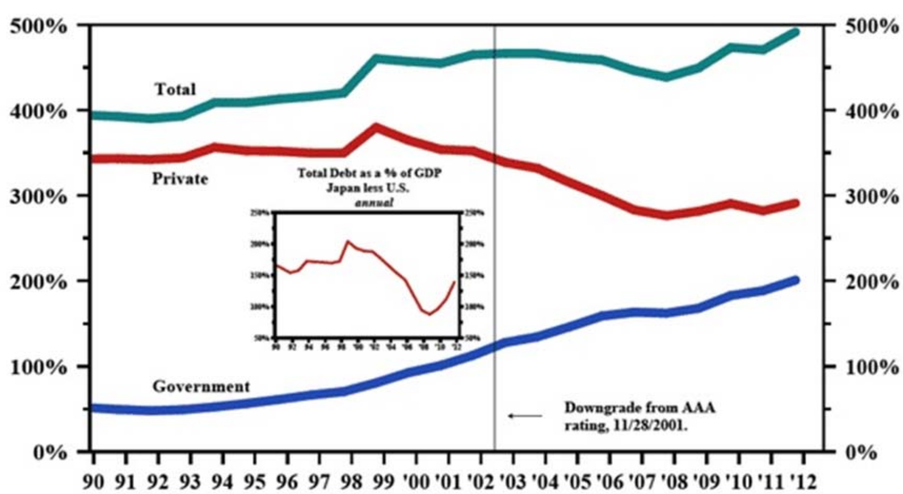
While there has been an escalating trend of monetary and fiscal stimulus around the world in the aftermath of the Global Financial Crisis, new Japanese Prime Minister Shinzo Abe recently pushed this trend to a new level. In a bold attempt to "shock" Japan out of an economic slump that has now reached two decades, Mr. Abe unleashed a three-pronged stimulus plan (dubbed "Abenomics") that is unprecedented in modern economic history. These new actions have sparked widespread debate as to whether they can lift a Japanese economy that is slowly crumbling under the weight of excessive debt and deteriorating demographics, or whether they will simply accelerate its demise. In this paper, we provide a brief background on Japan's predicament, details of the "Abenomics" stimulus plan, and an in-depth discussion of its potential consequences.

Background

In early 2013, Japan remained an afterthought for many global investors, its once high flying economy a distant memory. Its "lost decade" turned into two. Furthermore, Japan continues to face a number of headwinds to future growth (a declining/aging population, the largest government debt/GDP ratio in the world, etc.). In short, for the past twenty years or so, Japan has been easy to ignore. But despite all of its problems, past and present, Japan remains the World's third largest economy. As such, its future course can still have a profound impact on the rest of the world.

With the bold new policies of Prime Minister Shinzo Abe, Japan is starting to take center stage once again. He has promised monetary and fiscal stimulus on a scale never before seen in Japan, or anywhere else in the developed world. In many ways, Mr. Abe has embarked on the greatest monetary experiment the world has ever seen. Will these new policies finally awaken a sleeping giant? Or, will they potentially detonate the largest debt bomb in the history of the world?

Japan: Total, Government, and Private Debt as a % of GDP, 1990—2011
annual



Source: Bank of Japan, Cabinet Office. Through Q2 2011. Data before 1998 estimated from McKinsey Global Institute.

Why Now?

While Japan's systemic problems have been brewing ever since their asset bubble burst 23 years ago, they may have finally reached the tipping point. Japanese corporations and individuals have endured a long and painful deleveraging process, as they have been forced to slowly pay down the excessive debt accumulated during the bubble years. This deleveraging of the private sector resulted in extremely weak economic growth, but it could have been far worse. Largely offsetting the deleveraging of the private sector was the massive releveraging of the public sector. In effect, much of the debt that was used to inflate the Japanese asset bubble was simply moved from the corporate/individual balance sheet to the government balance sheet. While the desire of

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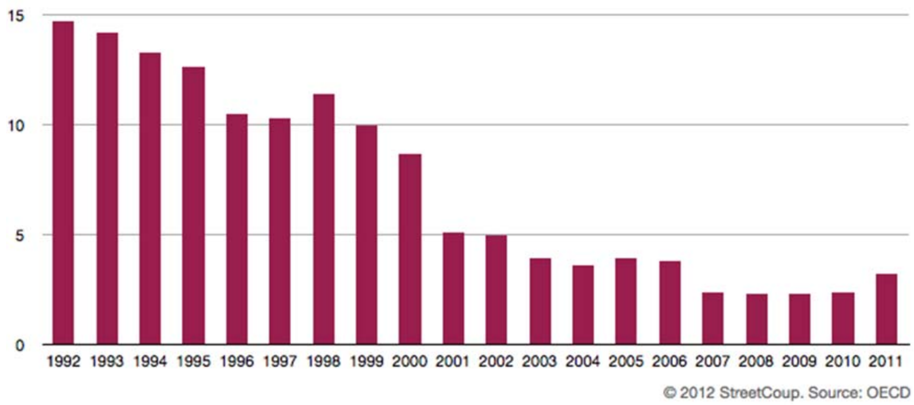
Japanese Household Saving Rates as % of Disposable Income

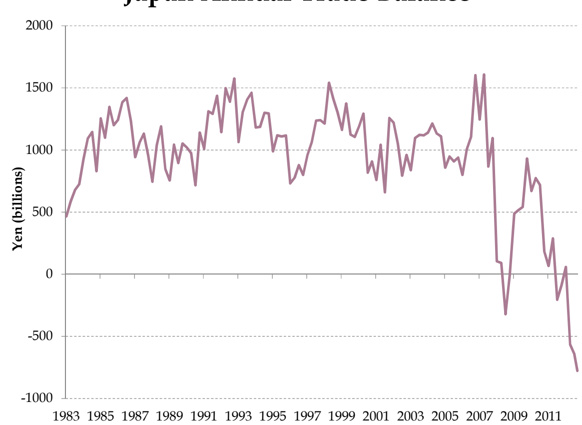


corporations and individuals to pay down debt put a lid on economic growth, the willingness of the government to fill the void prevented an outright collapse.

But while the capacity of a government to borrow and spend money far exceeds that of any corporation or individual, the Japanese government may finally be reaching their limit. At roughly 230%, the debt/GDP ratio of the Japanese government far exceeds that of any other developed country. Furthermore, the sources of new funding (i.e., demand for Japanese Government Bonds) dwindle by the day. An aging population has slowly eroded the savings rate of Japanese people, as many who were saving for retirement are now there. Much of this massive pool of savings has been invested in Japanese Government Bonds ("JGBs") and provided a "captive audience" for the government to roll over and issue new debt at lower and lower interest rates. But, as seen in the chart above, the ability of the Japanese people to fund their government through investing savings in JGBs has declined significantly.

Another historical source of funding for the Japanese government was their trade surplus with the rest of the world. Despite their economic struggles, Japanese companies still produced a number of goods that the rest of the world wanted to buy (e.g., cars, electronics, etc.). Combined with Japanese consumers' desire to save rather than spend, the resulting trade surplus led to a constant flow of money into Japan from the rest of the world. Much of this money eventually found its way into the JGB market. But Japan's trade dynamics changed dramatically in the past few years. Exports to Europe declined significantly due to the ongoing European Debt Crisis. Exports to China have fallen sharply, driven partly by anti-Japanese sentiment surrounding the Senkaku Islands conflict. Exacerbating the problem of declining exports, Japan's imports jumped. Following the Fukushima nuclear disaster, Japan shut down all 54 of its nuclear reactors. Lacking any viable domestic alternatives, Japan has been forced to increase its energy imports dramatically. Thus, a net inflow of capital from the rest of the world quickly reversed to a net outflow. While Japan's current account is still in surplus (a measure that also includes income earned on foreign assets), at just 1% of GDP it is dwarfed by Japan's annual fiscal deficit of roughly 10% of GDP.

Japan Annual Trade Balance



As the main historical sources of funding for the Japanese government eroded, the need for a new source of capital has arrived. While there are theoretical new funding sources for the JGB market (e.g., foreign investors), they may demand higher interest rates to hold Japanese government debt than the domestic "captive audience" just discussed. Unfortunately for Japan, paying higher interest rates (without a

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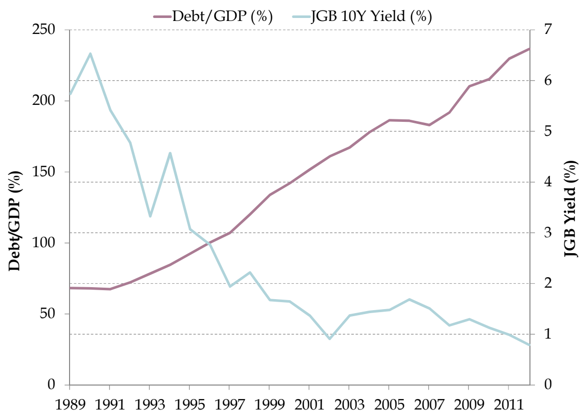
corresponding increase in government revenues) is simply not an option. Persistently low and declining interest rates have enabled the government to expand debt without a commensurate rise in interest expense (i.e., the cost of servicing that debt).

Japanese Debt GDP v. JGB Yields



But after 20+ years of binging on "cheap" funding provided by their "captive audience," Japan has now reached the point where annual interest expense on their outstanding debt alone consumes roughly 25% of their total tax revenue. And, that is with historically low interest rates. Thus, even a modest move in interest rates could cause the government's interest expense (never mind all of their other expenditures) to exceed their total revenues.

So Japan now finds itself in a very difficult predicament. Due to aging demographics and a deteriorating trade balance, Japan needs to find new sources of funding to support their massive debt levels; but because their debt levels are already so large, they may not be able to withstand even a relatively small rise in interest rates. Of course, a better alternative would be for Japan to grow out of their debt problems (i.e., lowering their debt/GDP ratio by growing the denominator). But the same structural issues that are removing support for the JGB market are also weighing heavily on the country's growth potential. Desperate times call for desperate measures.

The "Three Arrows" of Abenomics

Into this daunting set of circumstances steps Shinzo Abe, elected as Japan's new Prime Minister in December 2012. He campaigned on the promise of bold new policies that would shock the sluggish Japanese economy back to life. Since taking office, he has begun to deliver on some of these promises. His comprehensive plan to address Japan's economic woes has been dubbed "Abenomics." The plan contains three main components, referred to in Japan as the "three arrows." The first arrow is monetary stimulus, the second is fiscal stimulus, and the third arrow is structural reform.

First Arrow – Monetary Stimulus

To date, Abe's first arrow of monetary stimulus has received all of the headlines. In a world already experiencing unprecedented monetary stimulus and central bank intervention, Abe's policies went even further. The first step of Abe's monetary plan was to effectively take over the Bank of Japan. He forced out the Bank's existing governor (Masaaki Shirakawa) and replaced him with a hand-picked successor (Haruhiko Kuroda) who would implement his policies. This sets a potentially dangerous precedent. While it is debatable how independent global central banks truly are from their respective governments, there is no longer *any* debate in Japan. At best, the politicization of the Bank of Japan ensures a smoother transmission mechanism for Abe's desired monetary policies. But at worst, it sacrifices an independent assessment of what is in Japan's long-term economic interests, in favor of short-term objectives driven by election cycles.

On the back of these developments with the Bank of Japan, market expectations were high for the magnitude of stimulus that Abe and Kuroda would announce; and they did not disappoint. On April 4, 2013, the Bank of Japan announced that it would double Japan's monetary base over the next 21 months. To do so, they will buy 7.5 trillion yen (roughly $75 billion) of long-term government bonds per month, attempting to push down interest rates in the process. This represents roughly 70% of planned total government bond issuance. The Bank of Japan also increased the size of its existing programs to purchase ETFs ($10.5 billion per year) and REITs ($323 million per year) in a direct effort to boost the stock and real estate markets, respectively. Adjusted for GDP, the

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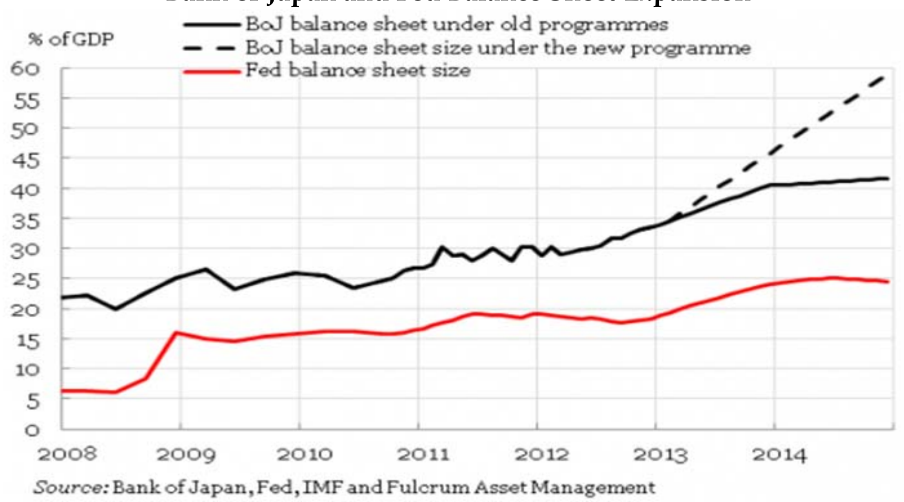
Bank of Japan and Fed Balance Sheet Expansion



Bank of Japan's new monthly program is roughly twice the size of the Fed's purchases in the United States.

But will it work? As countries who have implemented similar forms of "quantitative easing" have experienced, a country's monetary base is really just an abstraction. It is a theoretical amount of money that *could* be lent into the real economy by banks, but this is not automatically so. In other words, if consumers/ corporations are unwilling to borrow this money (or banks are unwilling to lend it), then the effect on the real economy is negligible. The money essentially becomes "stuck" in the banking system, and does not provide stimulus. Furthermore, interest rates in Japan were already extraordinarily low to begin with. Will lowering them a few more basis points by buying JGBs on the open market really make much of a difference?

Thus, the key to success for Japan's new monetary policy seems to be less about the "tangibles" (e.g., how much money they print) and more about the "intangibles" (e.g., changing investor/consumer *psychology*). In this way, Japan's long and painful deleveraging process provides both an impediment, and a potential silver lining. On the bright side, in contrast to parts of the world that are still in the midst of a deleveraging process following the bursting of a debt-fueled asset bubble (e.g., the United States, Europe), Japan's private sector deleveraging is largely complete. The vast majority of debt accumulated during the boom years has been paid down over time, written off, or effectively transferred to the public sector as discussed earlier. Thus, relative to many of their global peers, Japanese corporations and households have a greater *ability* to re-leverage their balance sheets; but the question is, do they have the *desire* to do so? This is downside of what Japan has experienced over the past twenty plus years. The bursting of the bubble is still fresh in the minds of Japan's older generations, while the younger generations have never known anything but economic stagnation. As a result, the desire to remain ultra conservative is perhaps more ingrained in the collective Japanese psyche than anywhere else.

Monetary Stimulus and Currency

One side effect (unintentional, as claimed by Japan) of this new massive monetary stimulus has been a sharp decline in the value of the yen. As discussed in our previous newsletter, *Currency Wars*, the hope is that a declining yen will be the catalyst for a positive feedback loop whereby a cheaper currency leads to cheaper exports, which leads to more sales, which leads to increased corporate profitability, which leads to increased wages, which leads to higher spending and consumption. Indeed, we are already beginning to see early evidence of improvement in each of these areas.

Of course, the impact of currency fluctuations is not limited to exports. While the price of exports declines with a falling yen, the price of imports rises. While the former can act as a catalyst for economic growth, the latter most certainly does not. Particularly for a country like Japan that is largely deficient in natural resources and needs to import the vast majority of both its food and energy (Japan's energy

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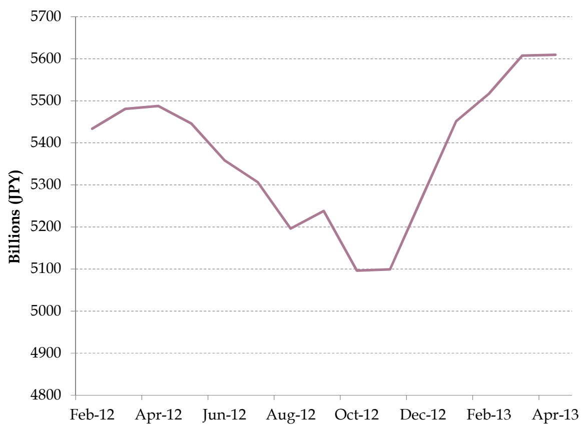
dynamics were damaged by the closure of the country's nuclear power plants following the Fukushima disaster).

JPY Trade-Weighted Exchange Rate[1]

Japan Exports[1]



Monetary Stimulus and Inflation

Another critical component of the Abenomics monetary stimulus plan is an explicit inflation target of 2%. At first glance, an explicit inflation target seems to make sense for a country that has been battling deflation for the better part of twenty years. Although falling prices (i.e., deflation) appear to be beneficial, if enough consumers postpone purchases under the assumption that they will be cheaper tomorrow, economic activity can grind to a halt. Furthermore, inflation (if properly controlled) can slowly relieve a country's debt burden, as that debt will be paid back in a currency that is worth less over time.

There are two types of inflation – "demand-pull" inflation, and "cost-push" inflation. When Japan says they want inflation, they are referring to the former. Demand-pull inflation occurs when the aggregate demand of an economy exceeds aggregate supply. This is generally seen as a more positive outcome as rising growth leads to rising wages, which results in increased spending and a general increase in prices. But prices can also rise via cost-push inflation. Cost-push inflation is caused by an increase in the prices of important goods or services where no suitable alternative is available. Cost-push inflation is often driven by price increases of natural resources (energy, food, etc.) which is a real risk for Japan should their currency continue to decline. If the cost of food and energy increase without a commensurate rise in wages, consumers get squeezed. Thus, while the return of inflation may help the Japanese economy, the type of inflation is critical.

Second Arrow – Fiscal Stimulus

In conjunction with monetary stimulus from the Bank of Japan, Abenomics also includes a fiscal component. Roughly $116 billion (~2% of GDP) of new government spending has been earmarked for infrastructure projects including bridges, tunnels, roads, and clean energy. While fiscal stimulus certainly has the potential to provide a short-term economic boost, it is nothing new for Japan. As shown in the following chart, the Japanese government has been running sizeable fiscal deficits for quite some time.

There are several reasons why past fiscal stimulus has proven largely ineffective, and it is not clear that this time will be any different. In Japan, as in many countries, fiscal spending is driven as much by politics as economics. Thus, the efficiency of past fiscal expenditures has left much to be desired. Furthermore, fiscal stimulus in Japan has too often come in intermittent bursts; pulled back at the first signs of economic recovery, which continually proved to be too early.

Given the reality of Japan's current debt situation, this remains a risk today. At current debt/GDP levels, Japan is already pushing the limits of market confidence. Embarking on a new spending spree, even if it generates near-

[1] Source: Bloomberg

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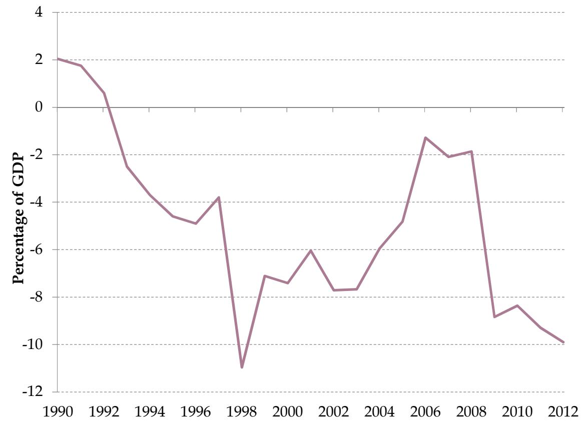
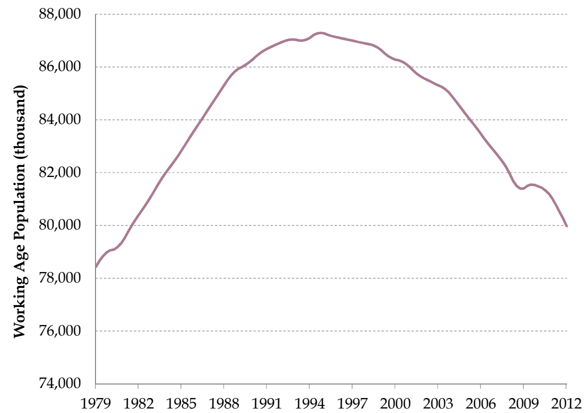
Japan Government Deficit/GDP[1]



Japanese Working Age Population[1]



term results, may only exacerbate market concerns over Japan's fiscal standing. Indeed, to help address fiscal concerns, Japan's Value Added Tax (VAT)[2] is set to rise to 8%, from its current 5%, in 2014, and to 10% in 2015. Thus, as it stands now, Japan's fiscal policy has a relatively short window in which to stimulate growth, before it quickly turns into an economic drag through increased taxes.

Third Arrow – Structural Reforms

While the first two "arrows" of Abenomics have already provided a short-term jolt to the Japanese economy and capital markets, it is the third "arrow" of structural reforms that is critical for long-term success. If Japan is to truly revert back to a path of sustainable long-term economic growth, a number of difficult issues must be addressed. Economic growth is a function of two main variables – labor force growth and productivity growth. With a declining population, particularly the working age population, Japan is in a very difficult position. There are a limited number of ways in which a country can reverse the effects of an aging population. Certainly a rising birth rate would help (albeit with a considerable lag), but Japan ranks 219th of 223 countries in projected 2013 birth rates according to the CIA World Factbook, and this is unlikely to change in any material way. For many countries with aging domestic populations, immigration can help provide an influx of young workers. Due largely to cultural and population density issues, however, Japan has very strict immigration policies and thus one of the smallest foreign labor forces of any major country in the world. Given that these immigration policies are driven in part by deep-rooted cultural issues, they are unlikely to change regardless of the potential economic benefits.

That leaves one potential demographic savior: women. While the female labor force participation rate in Japan is roughly average amongst other major countries, this is a bit misleading. Many Japanese women are only marginally attached to the workforce through temporary or part-time jobs, and many drop out entirely after starting a family. Thus, the Abe administration has made it a priority to further incentivize women to join the work force through greater spending on child care, tax incentives for dual income families, etc. This is not a new initiative, however, as Japan's demographic problems have been well understood for quite some time. Thus, the potential for women to materially slow or reverse Japan's demographic slide remains questionable.

If the working age population is declining and acting as a drag on economic growth, then increasing the productivity of the remaining work force becomes even more critical. Here, Japan seemingly has much room for improvement. Due to the relatively closed nature of the Japanese economy (i.e., limited foreign compe-

1 Source: Bloomberg

2 A VAT tax is like a sales tax in that ultimately only the end consumer is taxed. It differs from the sales tax in that, with the latter, the tax is collected and remitted to the government only once, at the point of purchase by the end consumer. With the VAT, collections, remittances to the government, and credits for taxes already paid occur each time a business in the supply chain purchases products.

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tition), many industries in Japan operate less efficiently than their global peers. Mr. Abe is pushing to increase competition (and therefore, efficiency) through measures such as joining the Trans Pacific Partnership, a free trade agreement currently being negotiated by a number of countries, including the United States. He is also pushing to increase domestic competition and reduce burdensome regulation in key industries such as energy and health care. But here again, Japan's issues are not new. Past Prime Ministers, most notably Junichiro Koizumi, have pushed for similar reforms, but ultimately met with overwhelming resistance from vested interests keen on maintaining the status quo.

While the first and second arrows of Abenomics (monetary and fiscal stimulus) are well known at this point, the third arrow of structural reforms has yet to be formally announced. While Mr. Abe has given some indications of the reform measures he will pursue, the full agenda will not be announced until this summer. Thus, the question remains – what will Abe try that has not already been tried before? And can he be successful where so many others have failed?

Abeonomics and Militarization

While not generally considered part of Abenomics, Mr. Abe's views on militarization are nonetheless critical to understand. Many have speculated that an even higher priority for Mr. Abe than revitalizing the economy, is reforming Japan's constitution (more specifically, Article 9, which renounces war and the use of force as a means of settling international disputes). Mr. Abe's supporters argue that Japan is simply moving towards something that every other country in the world already has (i.e., the right to maintain a formal military). In the process, however, Japan risks alienating some of its neighbors. The recent territorial dispute with China over the Senkaku Islands is the most recent, and most concerning, example. Regardless of right or wrong, a more hawkish Japan creates an increased potential for armed conflict.

Will Abenomics Work?

In many ways, Abenomics is an unprecedented monetary and social experiment. The converging forces of massive monetary and fiscal stimulus with a rapidly aging population and crushing debt load have never been seen in modern economic history. With no historical precedent to draw upon, forecasting the future of Abenomics and Japan is no simple task.

The Optimistic Scenario

- The bold new policies of Abenomics create a self-sustaining burst of confidence amongst Japanese consumers and investors.
- The initial belief that things will get better turns into a self-fulfilling prophecy as increased spending and consumption drives economic growth.
- A managed decline in the value of the yen boosts Japanese exports.
- The Bank of Japan is able to hold down interest rates until a sustainable recovery is achieved.
- Inflation returns to Japan, in moderation, allowing the Bank of Japan to set negative real interest rates to stimulate borrowing.
- Renewed growth in the world's third largest economy has a positive spillover effect to the rest of the world.
- Heightened geopolitical tension is avoided (Senkaku Islands, currency wars, etc.).

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The Pessimistic Scenario

- The combination of excessive debt and aggressive central bank easing causes investors, both foreign and domestic, to lose confidence in the yen before any economic recovery is realized. This leads to an unmanaged decline in the value of the currency.
- The corresponding rise in interest rates demanded to hold Japanese assets (e.g., government bonds) causes Japan's debt expense to explode.
- While capital flight from Japan is initially positive for "safe haven" assets elsewhere (e.g., US Treasuries), investor perception of global central bank control is damaged.
- Global markets extrapolate the "Japan scenario" to other countries with high debt levels supported by aggressive central bank policies.

The "Nothing To See Here" Scenario

- While the yen declines against other global currencies, the impact is insufficient to boost economic growth.
- The Bank of Japan continues to pursue its aggressive easing policy, but too little of this monetary stimulus finds its way into the real economy.
- A short-lived rise in capital markets is quickly reversed as initial optimism proves unfounded.
- Abenomics turns out to be just the latest failed attempt to jumpstart Japan's stagnant economy.
- Japan's debt and demographic issues continue to deteriorate, but at a relatively slow pace.

The Japan "Checklist"

Given the unprecedented nature of Abenomics and the current situation in Japan, Meketa Investment Group believes there is a danger in being too confident as to how this will all play out. We believe a more prudent approach is to understand the various potential scenarios (as detailed above) and then identify a "checklist" of key variables that will help us understand which potential path we are headed towards. Key variables that we will closely monitor include:

- ✓ Japanese Government Bond rates
- ✓ Yen/dollar exchange rate
- ✓ Wages versus inflation
- ✓ Trade balance
- ✓ Government revenues versus interest expense
- ✓ Consumer spending
- ✓ Corporate spending (capital expenditures)
- ✓ Sentiment
- ✓ Abe approval ratings

Putting It All Together

While a number of developed countries suffer from debt and demographic problems, Japan's situation is the most advanced. Japan has the highest debt/GDP ratio in the developed world, a declining/aging population, and a notable lack of viable response mechanisms (e.g., immigration). As of April 4, 2013, they also have the most aggressive monetary policy in the developed world. While extremely difficult to forecast, how this plays out will have a significant impact not only on Japan, but on the rest of the world as well. If these new policies are able to finally stimulate growth in the world's third largest economy, the positive ramifications for the rest of the world will be significant. But there are a number of reasons why Abenomics may not produce the desired results. And, even if it does, it may not be a good thing (i.e., inflation). For twenty years, Japan has largely been ignored by a world more focused on events and risks elsewhere. That is precisely why Japan is so important today.

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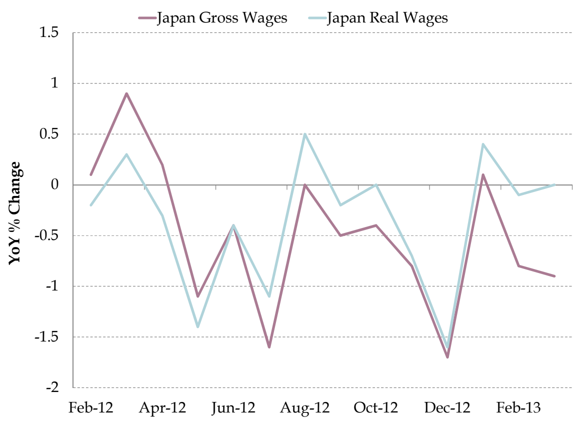
APPENDIX

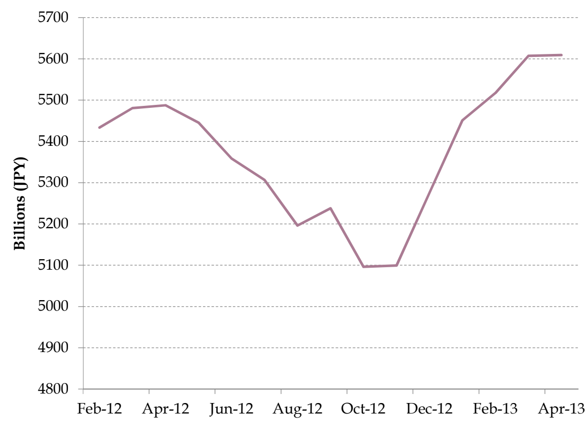
The charts below are a small sample of some of the key variables that Meketa Investment Group continues to monitor in real time as part of our Japan "checklist." While some of these variables have shown recent signs of improvement, it is still early days for Abenomics, and premature to draw any meaningful conclusions. Furthermore, while the past twenty plus years are generally remembered as a continual decline for the Japanese economy, in reality there have been a number of intermittent bursts of growth and optimism that ultimately proved to be fleeting. Thus far, the magnitude of economic improvement is not significant enough to suggest that this time is any different.

10 Year JGB Yields[1]

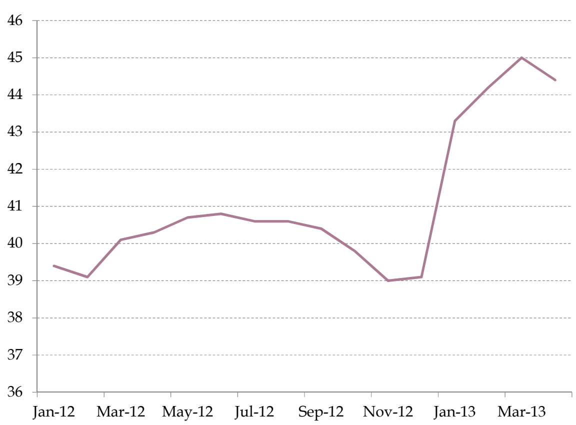
Japan Wage Growth (Gross vs. Real) (Year-Over-Year % Change)



Japan Exports[1]



Japan Consumer Confidence[1]



JPY Trade-Weighted Exchange Rate[1]

[1] Source: Bloomberg