



**Vladimir Karlov**  
*Managing Director, Head of  
Quantitative Portfolio Management,  
Fixed Income*

**Allison Emmert**  
*Vice President, Product Specialist,  
Global Economic Strategy Group*

## **JAPAN VIEWED IN 3D (DEBT, DEMOGRAPHICS AND DEFICITS): Decision-Making Implications for the Yen**

### **EXECUTIVE SUMMARY**

---

The Japanese currency is testing all-time highs as a risk-averse market favors the yen over the dollar and the euro. We believe the Bank of Japan and Prime Minister Naoto Kan may view this as an aberration. Their 30 August announcement of increased bank lending to just over US \$355 billion, combined with additional, albeit small, fiscal stimulus is likely an acknowledgement that the yen's recent rise is detrimental to Japan's economic and financial market stability.

We tend to agree with this perspective and believe the yen's current strength is an anomaly and that the currency is bound for a secular decline. Our beliefs are based on the following long-term drivers:

- First, Japan's fiscal position is widely considered the worst in the developed world. The scale of adjustments necessary to stabilize the country's debt remains unprecedented, requiring deep spending cuts, large increases in taxation and other potentially onerous austerity measures.
- Second, Japan is in the midst of an unprecedented demographic shift and boasts the world's most elderly population. The country can expect to see a lower Support Ratio made worse by a decline in income tax revenues.
- Third, with Japan's shrinking demographical base, combined with its lower savings rate, the country will have no alternative but to seek new foreign investors. In a world where concern is growing over fiscal deficits, we expect this will be no easy task. Our estimates predict an increase in foreign holders of Japanese government debt from today's 5% to 13.5% by 2015.

There are clearly a number of drivers that may affect short-term movement. Yen-positive catalysts include increased global risk aversion; appreciation of the Chinese renminbi; and diversification of reserves by the world's central banks.

Conversely, there are several drivers that threaten to weaken the yen including investors' demand for higher yield; the interest rate differentials between the US and Japan; the steepness of the US Treasury yield curve as a proxy for global growth; and, finally, the possibility of an intervention by the Japanese authorities to keep the yen weaker than 85.

The Bottom Line? The 3Ds of Japan – Debt, Demographics and Deficits – conspire to cause a secular decline in the yen. We believe the opportunity is ripe for investors to consider using short-term strength in the yen as a good entry point to reduce their JPY exposures or to short it outright.

## Japan's Deficit and Debt

Over the past 20 years, Japan's net debt-to-GDP grew faster than any other developed nation, from 13% of GDP in 1991 to an estimated 115% by the end of 2010. Most investors are familiar with the oft-quoted gross debt-to-GDP number, which is closer to 200%. But this number misrepresents true financial health, as it does not account for a country's assets. While Japan is currently ranked after Italy in terms of net debt, it is projected to overtake Italy by 2014, with the net-to-GDP ratio estimated to increase to 143%.

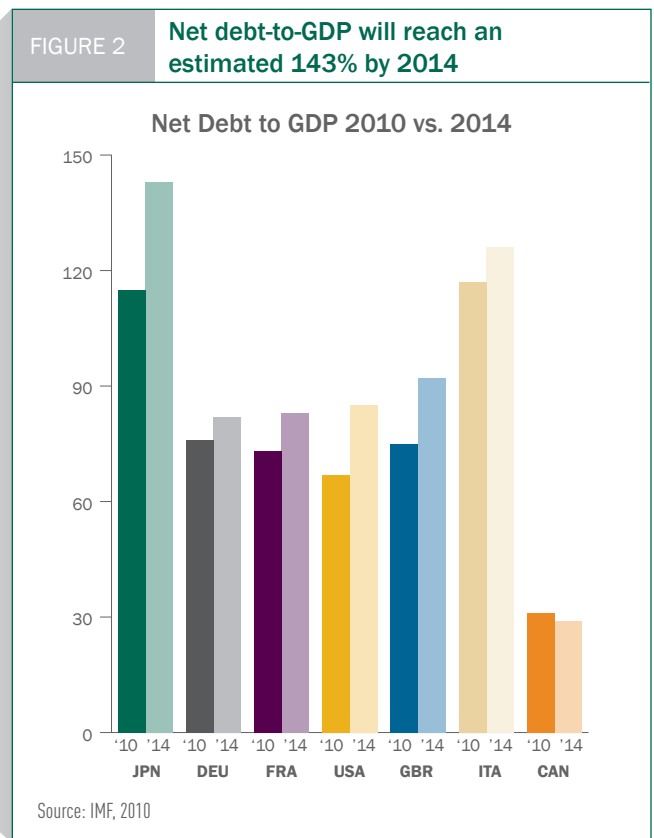
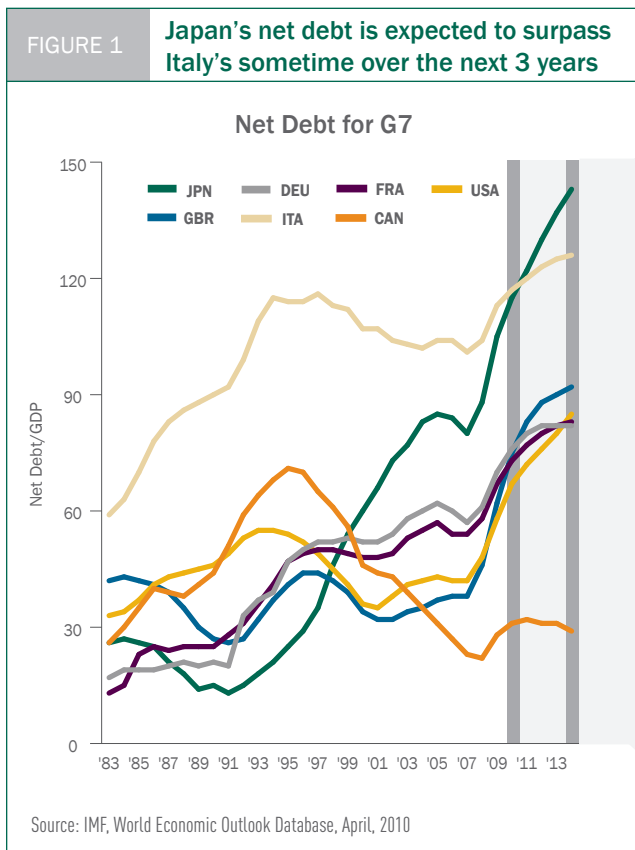
One reason for this projected increase is the high structural component of Japan's fiscal deficit, which will not likely decrease, even if Japan experiences high GDP growth moving forward. Fiscal austerity measures appear to be a better way of reducing the country's debt.

Prime Minister Kan has pledged to improve Japan's fiscal health by raising the consumption tax from 5% to 10%. Japan may actually have the ability to accomplish this dramatic shift, given the fact that its current consumption tax rate is the lowest in the world. However, a similar approach was attempted in 1997, but

yielded dismal results. This effort "helped derail Japan's economic recovery, plunging the country into a second lost decade of economic growth."<sup>2</sup> Furthermore, Kan's agenda experienced a major set-back after the DPJ lost control of the upper house in July.

Clearly, debt-to-GDP ratio and structural versus cyclical deficits are important factors in determining a country's vulnerability to a ratings downgrade and a sovereign debt crisis. Independent Strategy created a Vulnerability Index that uses these variables, along with foreign ownership of debt, domestic savings rate, and the rollover rate for redemptions. Based on this Vulnerability Index (see Figure 4 on page 3), Japan is on par with the more well-publicized PIIGS (Portugal, Italy, Ireland, Greece, Spain)<sup>3</sup> that became notorious for their fiscal problems.

What separates Japan from its European counterparts is that this singular nation has sole control over its currency and therefore over both fiscal and monetary policy. We believe that the Democratic Party of Japan will have no choice but to force the Bank of Japan to conduct additional quantitative easing, as ultimately GDP growth during 2010 will disappoint. This, in turn,



<sup>2</sup> "Enter the Prudent Mr. Kan," *The Economist*, 24 June, 2010.

<sup>3</sup> "Sovereign Discredit," *Independent Strategy*, 9 March, 2010.

FIGURE 3

**Only Great Britain and Ireland have higher structural deficits than Japan**

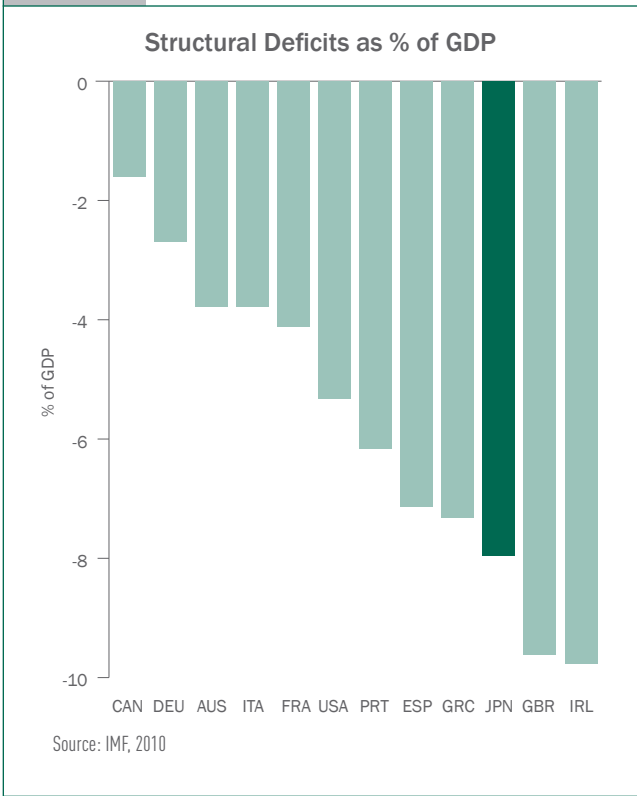
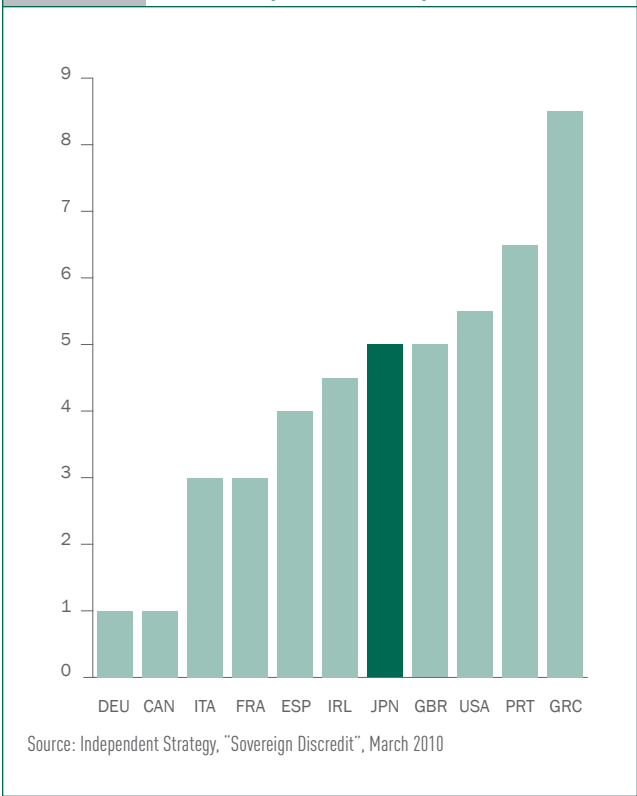


FIGURE 4

**Japan's vulnerability due to sovereign risk is on par with Europe**



should weaken the yen and provide much-needed support for exports, which could improve GDP growth.

Earlier this year, Prime Minister Kan indicated a preference for a weaker yen. "There are a lot of voices in the business world saying that [the dollar] around 95 yen is appropriate in terms of trade...In cooperation with the Bank of Japan, I will make efforts to deal with individual cases in order to bring the exchange rate to appropriate levels."<sup>4</sup>

Naturally, quantitative easing should help Japan with its chronic deflation but there is a risk that the debt servicing portion of national expenditure will skyrocket from the already very high level of 22.4%.<sup>5</sup> This would increase the chances of the country having to either restructure or default on its debt.

The ratings agencies have also expressed ongoing concern. After the July upper house elections, Standard & Poor's maintained the AA grade for the time being, but also stated:

"...it remains uncertain whether the goal of achieving a primary balance within the next decade, as the government announced in June 2010, will be enough to retain market confidence and prevent Japan from falling into a sovereign crisis. Market confidence is also dependant on factors such as the domestic and global economy, the financial markets, and the status of inflation (or deflation). Generally speaking, the longer the government delays decisive action on fiscal consolidation, the greater the potential risk of losing market confidence."<sup>6</sup>

Even before the ratings agencies took note, institutional investors pushed levels of 5-year Credit Default Swaps (CDS) on Japan's Government Bonds (JGB) to 84 basis points from 40 in less than one year. This is the highest level since the height of the global credit crisis in March 2009. In fact, 5-year CDS are now roughly twice the spread of 5-year Japan Government Bonds. This means investors wishing to go long JGB credit risk are better off

4 Nakamichi, Takashi. Mochizuki, Takashi. "New Japan Minister Starts Talking Yen Down," Wall Street Journal; 8 January, 2010.

5 "Japan's Fiscal Condition," Ministry of Finance, December 2009.

6 "Stabilizing Political Environment is Key Hurdle for Japanese Fiscal Consolidation Following Upper House Election," Standard & Poor's Ratings Direct, 12 July, 2010.

FIGURE 5

5-year Credit Default Swaps now offer twice the spreads of 5-year Japanese Government Bonds



selling CDS protection on JGBs, without assuming either currency or inflation risk.

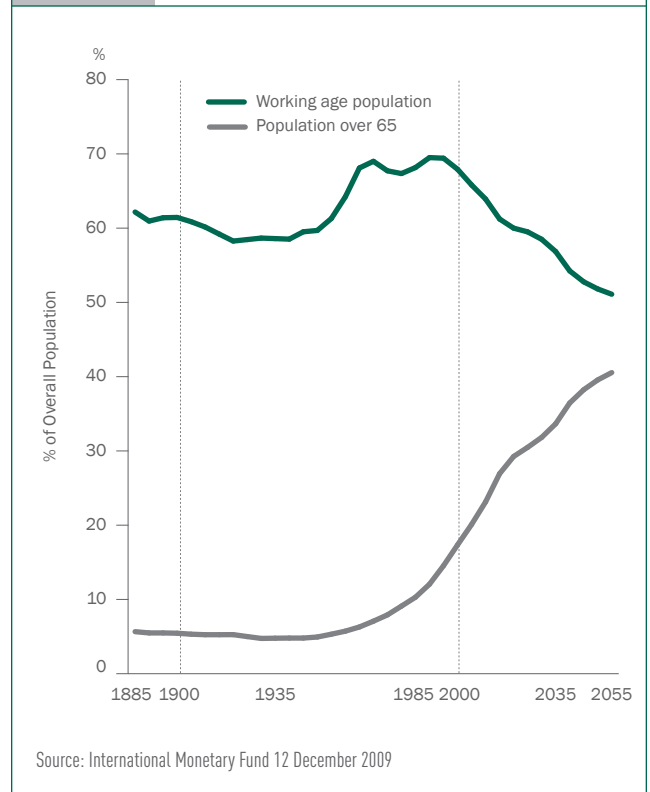
### Japan's Demographics, Savings Rate and the Need for Foreign Finance

Japan is in the midst of an unprecedented demographical shift and boasts the world's most elderly population, with a life expectancy of 82.7 years. The percentage of Japanese over the age of 65, which was 17% in 2000, is estimated to grow to over 24% in 2015.<sup>7</sup> The effects of an increasingly large aged population will be magnified because Japan will pull from a smaller tax base; the general population is set to decline by one and a million half people in the next five years.

As a result of this demographic shift, social security-related expenditures increased from approximately 20% in 2000 to a budgeted 30% in 2010.<sup>8</sup> Although

FIGURE 6

More retirees, combined with a shrinking workforce = reduced tax base



this number sounds very high, there is little room for the government to cut pension benefits because the after-tax replacement rate in Japan is very low compared to other developed countries. Japanese retirees receive approximately half of their ending gross income in national social security benefits. Clearly, the balance of retiree income will have to come out of personal savings.

This would put further pressure on Household Savings and, as a result, on JGBs, which are largely held by domestic investors, and Japan's net Household Savings rate has already been in decline for the past 30 years. In 1980, the savings rate was approximately 12%, plummeting to just 2% in 2009. A drawdown in savings that resulted from a decade-long zero-interest-rate policy is partially responsible for the steep decline.

As a result of a combination of Japan's debt, deficits and demographic trends, we estimate that by 2015 approximately 13% of JGBs (JPY 135 trillion) will need to be absorbed by foreign investors, compared to just 5% today. With rising fiscal deficits in the rest of the

<sup>7</sup> United Nations Human Development Index, 2005.

<sup>8</sup> "Japan's Fiscal Condition," Ministry of Finance, December 2009.

FIGURE 7

### Japan's Household Savings Rate has already seen a precipitous drop



Source: Bloomberg/Economic and Social Research Institute, as of 31 December 2010

developed world, we expect global bond investors to demand increasingly not only higher yields, but, in the case of Japan, a lower exchange rate.

## Timing and Technical Drivers

Rarely do investors trade markets solely based on medium- to long-term fundamentals. Ironically, in spite of today's growing concerns over sovereign solvency, the yen remains a currency of choice for risk-averse investors. But that is not the only reason why the yen remains strong; Japan runs a current account surplus, as imports remain curbed due to weak domestic demand.

Additionally, net financial flows have been moving higher since the beginning of 2009, as Japanese stocks have garnered considerable attention by foreign investors during 2010, and a slowdown occurred among Japanese households purchasing higher-yielding, non-JPY assets.

Finally, the world's central banks are left with few other options for reserve currencies. In particular, China

purchased US \$6 billion in Japanese government bonds in an attempt to diversify away from US Treasuries in June 2010.

While investors continue to be unfazed by Japan's longer-term problems, a number of catalysts might push the value of the yen higher in the short-to-medium term. For one, JPY/USD has a high correlation to the steepness of the US Treasury curve (10-year minus 2-year), Japan's TOPIX performance, and the interest-rate differentials between the US and Japan (see Figures 8-10 on page 6). All three indicators serve as different proxies of global growth and risk aversion, which may affect the currency.

With short-term interest rates in both countries close to zero, there is a high probability that the US will raise rates before Japan does, which could spur risk-seeking Japanese investors to resume purchasing foreign sovereign bonds in an attempt to generate higher yields. Additionally, institutional investors will see an all-clear sign that they should begin implementing JPY carry trades. In our opinion, the strength of the JPY in the last year was one of the major "non-confirmations" of the global risk trade.

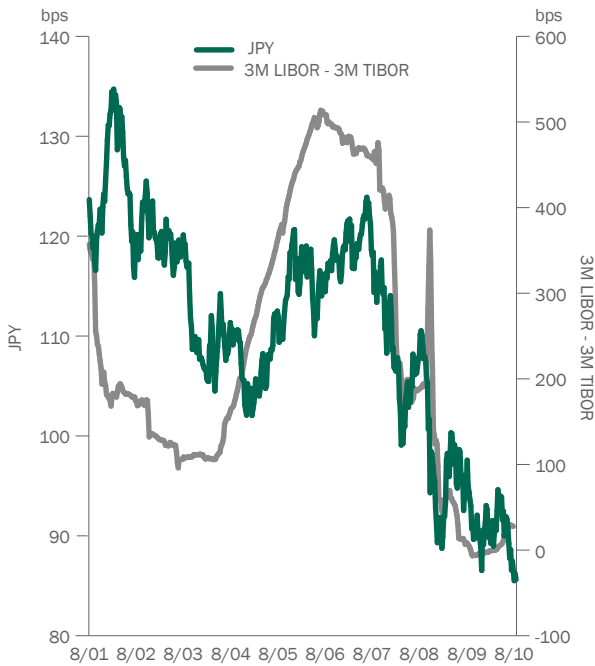
In 2004, the last time interest rates moved up in the United States, most of the JPY movement took place in anticipation of the hike, with less depreciation taking place after the actual move. We expect the yen to depreciate once the market starts pricing a higher probability of a US rate hike, as indicated by Fed Funds futures. With the latest worries of a double-dip scenario, the probability of a rate increase seems potentially to be on pause until at least the second quarter of 2011.

With the JPY recently appreciating versus both the EUR and USD, Japanese exporters are at a real disadvantage to their European and US competitors, which puts pressure on Japanese authorities to resume quantitative easing or outright intervention in the foreign exchange market.

While it is hard to time shorting the JPY based on government policy and short term factors, it is important to note that purchasing power parity (PPP) as estimated by the IMF is around 94 versus the USD, making JPY overvalued compared to one of its largest trading partners.

FIGURE 8

Proxies of Global Growth And Risk Aversion - JPY vs. 3M LIBOR - 3M TIBOR



Source: Bloomberg

FIGURE 10

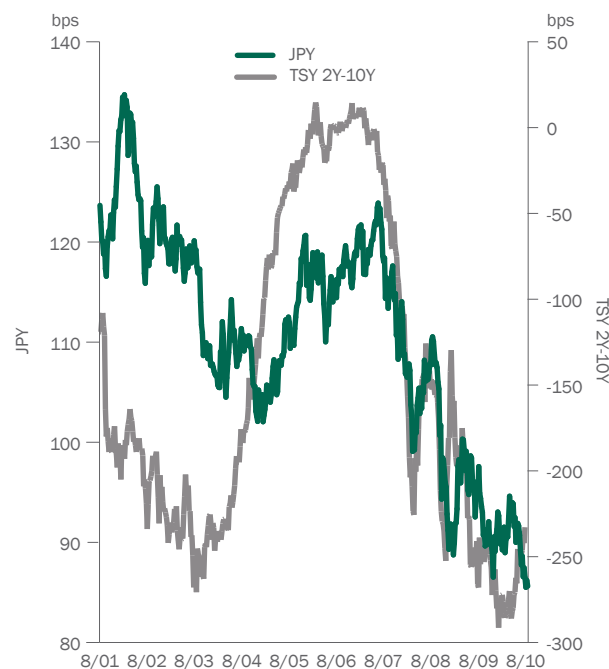
Proxies of Global Growth And Risk Aversion - JPY vs. TOPIX



Source: Bloomberg

FIGURE 9

Proxies of Global Growth And Risk Aversion - JPY vs. TSY 2Y-10Y



Source: Bloomberg

## Concluding Thoughts and Our Outlook

While many investors remain focused on the Western world’s debt concerns, we believe that the world’s attention should shift to Japan. Most Japan-watchers still dismiss sovereign debt concerns for the world’s third-largest economy, as a vast majority of JGB owners have traditionally been domestic investors. While this might have been true in the past, the dynamics of debt, demographics and deficits will now require Japan to finance its growing debt externally. We believe that foreign investors will require lower JGB and yen valuations.

As long-term yen “bears,” we plan on using any short-term strength that results from market volatility to go short JPY or to hedge the currency in institutional portfolios. Clearly, it makes sense for investors to concurrently move into fixed income strategies that are diversified and dynamically allocated between countries, currencies and sectors, and that will provide stable income over time in this ongoing volatile environment. ■

**Vladimir Karlov**

*Managing Director, Head of Quantitative Portfolio Management, Fixed Income  
Chairman, Investment Solutions Committee  
PineBridge Investments, New York*

Mr. Karlov joined the firm in 2000 and is responsible for managing preferred equity portfolios. As the Chair of the firm's Investment Solutions Committee, he is involved in establishing "House Views" with regard to investment opportunities and risks. He is also engaged in asset allocation decisions, asset-liability management, liability driven investments, execution of structured and derivatives transactions. Previously, Mr. Karlov was responsible for managing capital structure arbitrage and convertible portfolios. Prior to joining the firm, he was a Consultant in the Financial Risk Management Group at PricewaterhouseCoopers LLP in New York. At PwC, Mr. Karlov worked with banks, investment management companies, mortgage companies and government agencies on a wide variety of risk management projects. He received a BS and an MS (Honors) in Applied Mathematics and Cybernetics at Moscow State University in Russia, and a Doctor of Science in Operations Research from George Washington University.

**Allison Emmert**

*Vice President, Product Specialist, Global Economic Strategy Group  
PineBridge Investments, New York*

Ms. Emmert acts as an interface between internal investment professionals and PineBridge's client-facing teams in Business Development and Client Relations. Through the facilitation of Brainpools, she works with PineBridge's global analysts teams across numerous asset classes in order to determine the overarching themes that will influence investment strategy over the medium-term. Ms. Emmert provides oral and written communications that convey the views of PineBridge's Chief Economist, portfolio managers and analysts. Prior to PineBridge, Ms. Emmert spent nearly 10 years with AIG in a variety of research and corporate strategy roles. She also spent several years in sales and relationship management at Nuveen Investments. She holds her Series 7 and 63 licenses and graduated from New York University with a Bachelor's degree in International Relations.

---

PineBridge Investments is a group of international companies acquired by Pacific Century Group from American International Group, Inc. in March 2010. PineBridge companies provide investment advice and market asset management products and services to clients around the world.

PineBridge Investments is a service mark proprietary to PineBridge Investments IP Holding Company Limited. Services and products are provided by one or more affiliates of PineBridge Investments. Certain middle and back office functions incidental to the services and products provided by PineBridge Investments and its affiliates may be outsourced to third parties.

Readership: This document is intended solely for the addressee(s). Its content may be legally privileged and/or confidential.

Opinions: Any opinions expressed in this document may be subject to change without notice. We are not soliciting or recommending any action based on this material.

Risk Warning: Past performance is not indicative of future results. Our investment management services relate to a variety of investments, each of which can fluctuate in value. The value of portfolios we manage may fall as well as rise, and the investor may not get back the full amount originally invested. The investment risks vary between different types of instruments. For example, for investments involving exposure to a currency other than that in which the portfolio is denominated, changes in the rate of exchange may cause the value of investments, and consequently the value of the portfolio, to go up or down. In the case of a higher volatility portfolio the loss on realization or cancellation may be very high (including total loss of investment), as the value of such an investment may fall suddenly and substantially.

In making an investment decision, prospective investors must rely on their own examination of the merits and risks involved.

Unless otherwise noted, all information contained herein is sourced from PineBridge Investments internal data.

The content included herein has been shared with various in-house departments within the member companies of PineBridge Investments, in the ordinary course of completion. All PineBridge Investments member companies comply with the confidentiality requirements of their respective jurisdictions.

Parts of this presentation may be based on information received from sources we consider reliable. We do not represent that all of this information is accurate or complete, however, and it may not be relied upon as such.

PineBridge Investments Europe Limited is authorised and regulated by the Financial Services Authority ("FSA"). In the UK this communication is a financial promotion solely intended for professional clients as defined in the FSA Handbook and has been approved by PineBridge Investments Europe Limited.

Approved by PineBridge Investments Ireland Limited. This entity is authorised and regulated by the Financial Regulator in Ireland.

---