

FUNDING THE FUTURE

The Tohoku region of Japan was dealt a mighty one-two blow on March 11 by an earthquake and tsunami. The global financial and business communities have been fully engaged in the nation's recovery



Unless you lead an unusually sheltered life, you are no doubt aware that Mother Earth has spent a good part of 2011 reminding us all that she has a mind of her own. The Tohoku region of Japan's East Coast was on the receiving end of more than its fair share of disaster on March 11, when a powerful one-two punch of an earthquake and tsunami left the nation and much of the world in a temporary state of shock.

A person watching TV in Denver or Durban or Denmark could hardly be blamed for assuming the entire nation of Japan had been overwhelmed by the occurrence. In fact, the damage was limited to only the Miyagi, Fukushima and Iwate prefectures. The rest of Japan, including the major Tokyo and Osaka regions, was almost completely unaffected by the quake and untouched by the tsunami. There were, of course, disruptions to services and some relief efforts took longer than hoped for, but on the whole, first responders, aid groups and the people themselves worked tirelessly in the nascent stages of the recovery.

What went unharmed was Japan's spiritual strength. The toughness and willingness of the Japanese people to endure and bounce back, expressed best in Japanese by the term *gaman*, have impressed those around the world. Japanese companies, foreign companies working in Japan and companies with no direct ties to Japan at all worked with this *gaman* spirit to help the nation regain its footing.

The true scope of the earthquake and tsunami is best understood by the Japanese government's assessment that it will take 10 years for reconstruction, with the first five of these years designated as the "concentrated reconstruction period." The initial estimated cost to national and local governments over these 10 years is 23 trillion yen (about \$300 billion), and surely that figure might grow as unforeseen aspects of recovery reveal themselves. Still, planning is well underway. PPPs are a key element of the reconstruction effort, and so are "New Public Commons," entities that will include NPOs, local companies, national construction companies (on a town-wide scale) and local organizations. A vital piece in all of this is the involvement of local businesses and governments, together with the involvement of the citizens, to make these rebuilt communities better and safer places to live.

Japan will continue to learn from the disaster, and can repay the help that has been offered from around the world by offering its experience and assistance in the event of future tragedies elsewhere. Even though the events of March 11 were an enormous humanitarian tragedy, they have presented opportunities beyond reconstruction of the area, including reform in the stricken areas, such as the building of new industries, and the deregulation of land-use rules to produce new types of communities, which can then serve as models for Japan and future developments in other countries. —Hugh Ashton

Global Investors Discover a Bold New Japan

Institutional investors gathered at Bank of America Merrill Lynch's eighth annual Japan Conference to meet the star performers of the global supply chain and observe firsthand the resilience of Japanese enterprise



At 2:46 p.m. on March 11, 2011, in the blink of an eye, manufacturing production and business activity effectively stopped in Japan. Homes, businesses, factories and vital infrastructures were laid waste, and parts of Japan's domestic supply chain and electrical grid ceased to exist. Impact on the global supply chain was immediate. Unable to get the vital parts they needed to maintain production, supply chain managers of automobile, electronic and other manufacturing plants the world over awoke to the full scope and significance of Japan's mission-critical position in the global economy. Japanese companies possessing anywhere from 50 to 100 percent of global market share of essential high-technology components suddenly appeared on the radar of institutional investors everywhere.

Renesas Technology, for example, is the world's only provider of certain essential automobile parts. Murata Manufacturing supplies proprietary components essential to smartphones, tablet computers and numerous other products. THK furnishes the industrial robots, precision machinery and advanced technologies that most of Japan's and half the world's manufacturers use to maintain production and stay competitive.

All Japanese companies were tested to their limits in the wake of 3/11, and most demonstrated an impressive ability to get production and distribution back to pre-quake levels in a surprisingly short amount of time—often within days.

"No doubt, Japan's irreplaceable role in the global manufacturing supply chain was put to the test by the earthquake and its aftermath. And we can honestly say that corporate Japan passed with flying colors,"

says Yohei Osade, Deputy Director of Asia Pacific Equity Research and Head of Japan Research at Merrill Lynch Japan Securities Co. Ltd., the Japanese unit of Bank of America Merrill Lynch (BofAML).

In effect, the Japanese phoenix has once again largely arisen. This time, however, it may in fact be a "white swan," a symbol of a new ascension of corporate Japan and greater recognition of its essential role on the global economic stage.

A fresh start

According to best-selling author and Japan Conference keynote speaker Nassim Nicholas Taleb, a "black swan" is an unpredictable event such as the March 11 earthquake and tsunami, and subsequent nuclear plant crisis. However, if government and industry accept natural disasters as inevitable and prepare by identifying and mitigating vulnerabilities, it is possible to turn the black swan into a white one, or create a positive outcome and emerge better than before the black swan event.

"I think the white swan of 3/11 is the vindication of Japan's relevance as a provider of key parts of so many finished goods," says Patrick Hogan, Head of Global Japan Institutional Sales for Merrill Lynch Japan Securities Co. Ltd., the Japanese unit of BofAML. "The corporate response has been magnificent. Production has resumed much faster than expected. The corporate earnings that we saw for the June 2011 quarter and the rebound in corporate optimism have been very impressive."

At the 2011 BofAML Japan Conference, held in Tokyo September 12–16, the white swan of 3/11 was on display for the largest



French economist Jacques Attali, CEO of Attali and Associates. "In Europe, Japan is seen as a safe partner. There is not the slightest doubt that Japan will rebound."



*Nassim Nicholas Taleb, bestselling author of *The Black Swan*, speaking during the Bank of America Merrill Lynch Japan Conference in Tokyo.*



gathering in the event's eight-year history. More than 2,000 foreign and Japanese institutional investors and 1,400 corporate participants—3,500 visitors from virtually every corner of the globe—were in attendance. In his keynote presentation, Taleb, author of *The Black Swan: The Impact of the Highly Improbable*, which has sold more than 3 million copies and been translated into 27 languages, framed the black swan concept in the context of the multiple tragedies in Fukushima.

"Japan has built-in redundancies and a penchant for action that mitigates negative consequences," says Taleb. "In a complex world, knowing what not to do is more important than knowing what to do."

After Taleb spoke, a panel discussion featured French economist Jacques Attali, CEO of Attali & Associates, and Keio University professor Heizo Takenaka. They noted that one thing Japan has learned not to do is expect customers to return once they find a reliable alternative.

In comparison to the current situation, they discussed the aftermath of the Kobe

earthquake in 1995. Kobe's port facilities were severely damaged by that quake, and in a short time the port dropped from the world's fifth-largest to No. 23. Today it ranks 46th. Such experiences were no doubt on the minds of many Japanese executives as they managed the supply chain crisis in the days following 3/11.

A new perception of Japanese business

The road ahead for Japan will be paved with a new perception of Japanese business resulting from its post-disaster performance, according to Osade. His team of award-winning analysts came face-to-face with a worldview of corporate Japan that literally transformed before their eyes.

"On our post-3/11 tours abroad to meet with investors, we could feel the outpouring of genuine concern and empathy for the plight of Japan," says Osade. "Clients of Japanese companies pitched in with financial and manpower support. When we sent out invitations

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"The corporate response has been magnificent. Production has resumed much faster than anyone expected."

for the conference, people responded by asking how they could perform volunteer work in Tohoku."

The September conference let them do that and much more. Attendees got a firsthand look at the state of Japan and its promising new potential for institutional investors. Major presentations and workshops by more than 70 industry leaders and experts provided detailed insight into a wide range of industries and business sectors. These included the automobile, technology and Internet sectors, as well as real estate development, construction and housing.

Investing in post-3/11 Japan

"Real estate is relevant because the valuations in Japan are attractive and the quality of product is high," says BofAML's Hogan, who expects the real estate sector to be of particular interest to investors. "Interest rates are very low, so funding for transactions is potentially very low. The stocks are cheap. I think we will see a resurgence in foreign interest in Japanese real estate, especially as investors discover the big developments coming in 2012."

Many foreign investors participating in the conference joined tours that included visits to real estate development projects, as well as popular resorts. Other tours visited reconstructed factories, shipping facilities and production lines turning out advanced products made only in Japan.

"I don't see any lack of trust or confidence in Japan," says Attali. "In Europe, Japan is seen as a safe partner. There is no doubt that Japan will rebound."

Osade's research concurs with that belief. "Investors believe the quality of Japanese products and performance outweighs the risks that earthquakes pose," he says. "We are also witnessing a new and positive assertiveness by more and more Japanese executives who are speaking up and demonstrating better leadership with their business partners abroad. It is safe to say that Japan has overcome 3/11 and is emerging stronger than ever, but we won't know the full impact for another 12 to 24 months."

Hogan notes that, "within that span of time, if a slimmer, more efficient and profitable corporate Japan emerges, investors will be rewarded by higher valuation and a healthier stock market and economy."

In a post-March 11 world, that would be the whitest swan of all.

—Kevin Hamilton

TRAVELING LIGHT

Carbon-fiber-reinforced plastic is super-strong and doesn't weigh very much. So when you build an airliner with it, operating costs fly far below those of older planes

All Nippon Airways (ANA) is the lead customer for the new Boeing 787 Dreamliner, but the aircraft may prove to be the start of a new venture for much of the Japanese industrial sector. Bucking past trends, 35 percent of the futuristic airliner is made in Japan, the result of a unique international collaboration between Boeing and multiple Japanese manufacturers. The process quite literally changed the way airplanes are constructed, and the end result is an elegant, highly efficient and cutting edge airliner. Truly, the Dreamliner has dramatically altered the playing field in the airline industry. Every aspect of the Dreamliner has changed the norm for jetliners, from the construction of the fuselage as a single tube to tires that are less likely to be damaged from the strain placed on them, and from larger passenger windows to advanced onboard entertainment systems.

The 787 weighs considerably less than previous airliners, due to the extensive use of carbon-fiber-reinforced plastic (CFRP). The use of CFRP is a boon to ANA, which aims to use the plane for expanded international routes and thereby raise the company's profile outside Japan where ANA enjoys the No. 1 position. The lightweight CFRP makes a significant contribution to the Dreamliner's 20 percent fuel efficiency gains, and also helps to reduce maintenance time and costs (30 percent lower than those of comparable aircraft), meaning more international routes can be flown for ANA.

Along with ANA, the 787 is also good news for Toray, the developer of the CFRP materials used to create the aircraft. There are currently 821 firm orders for the Dreamliner, guaranteeing long-term demand for Toray's highly toughened Torayca 3900-series carbon-fiber-reinforced epoxy pre-preg.

With at least 20 suppliers spread over three continents producing major structural components of the Dreamliner, Toray must



coordinate production and development of the materials to meet the requirements of the various processing equipment used. The sheer scale of the 787's components has forced the evolution of new production methods used by Japanese partners working on the Dreamliner project, such as Fuji Heavy Industries Ltd., Kawasaki Heavy Industries and Mitsubishi Heavy Industries. Jigs and curing autoclaves capable of accommodating fuselage sections six meters in diameter have been developed, putting these makers at the forefront of those incorporating CFRP into their work. Although these partners have experience in the manufacture of aircraft parts (for example, Fuji Heavy Industries produced the 777's aluminum alloy center wing), and also with these advanced composite materials, the partnership arrangements placed additional demands on the 787's manufacturing process, which requires precision engineering on a very large scale to create strength and durability in the product. The three Japanese partners have risen to the challenge, and the result—largely thanks to the use of new materials technology—is an undeniably graceful and attractive aircraft.

Increasingly, reinforced carbon fiber is being used in a variety of products: wind turbine blades, leisure and recreational goods, and automobiles, to name a few. With growth in the demand for carbon fiber estimated at 15–20 percent annually (with a 2010 demand of about 30,000 tons), Toray is in a very strong position to continue as the technical and market leader in this field, which offers great promise in the environmental and new energy markets.

Anticipating greater demand worldwide, with projected sales of carbon fiber products in 2011 of 80 billion yen (\$1.03 billion) and a projected net profit of 10 billion yen (\$130 million), Toray is constructing a plant in Korea and anticipates that production of similar materials will begin in 2013. —Hugh Ashton

Innovation by Chemistry



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Light, strong, corrosion-resistant Toray carbon fiber composite materials are expanding the horizons for next-generation wind power generators, automobiles, ships and aircraft like the Boeing 787 and Airbus A380. The world leader in carbon fiber composite materials, Toray continues to develop mold-breaking technologies to meet the global energy challenge and bring new value to life. **The right chemistry, the right answers.**

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Innovation by Chemistry

A BOND OF STRENGTH

The success of two Japanese credit-backed bonds issued by JBIC in the aftermath of 3/11 showed faith remains strong in Japanese government-guaranteed issues

On May 11, Japan Bank for International Cooperation (JBIC) issued the first Japanese credit-backed bond for the international market since the Tohoku earthquake. A report from the Japanese Cabinet Office on March 23 estimated the damage of the earthquake to be as high as 25 trillion yen, and forecast a decrease of as much as 2.75 trillion yen in GDP for the following fiscal year. To address post-quake reconstruction efforts and needs, on May 2 the Japanese Diet passed the first supplementary 2011 budget of about 4 trillion yen.

The bond issued by JBIC was a five-year global dollar bond for \$2 billion. The bond matures May 18, 2016, with a 2.5 percent coupon. JBIC believed that, given market conditions at the time of issue, a U.S. dollar bond would be the most attractive structure to bring back overseas investors wary of Japanese credit after the earthquake. JBIC also hoped to increase awareness of the JBIC brand by issuing this highly liquid bond that could serve as a benchmark.

Concern over Japanese credit wasn't purely the result of the Tohoku disaster. On January 27, 2011, Standard & Poors downgraded Japan's credit from AA to AA-, citing Japan's debt ratios and persistent deflation in their appraisal. Then, following the earthquake on March 11, S&P revised Japan's credit rating outlook to "negative" from "stable" on April 27.

For attracting investors to the bond after the unprecedented disaster, the bookrunner was concerned that it would take more time to build interest. The bond was announced at the New York open on Monday, May 9—two days before the books were opened—in order to give investors time to focus on the credit. These concerns were also the primary impetus for the conservative price guidance at midswaps +48bps.



On Wednesday, May 11, the initial response to the bond offer was overwhelmingly positive. The order book increased to \$5 billion with interest from more than 100 investors. Because the issuer could only print 2 billion and most of the investors were thought to accept a tighter spread, the bookrunner suggested tightening the offer from ms +48bps to ms +45bps. The price change caused little fallout among the interested investors.

The final book size was around \$5 billion. 40 percent of the bond was placed outside of Asia (with a breakdown of 25 percent EMEA and 15 percent U.S.). As for investor types, 60 percent



The headquarters of Japan Bank for International Cooperation (JBIC), in Tokyo.

and structure (a five-year U.S. global dollar bond), but opened the price at ms +35bps, 13bps tighter than where the first bond initially opened. JBIC hoped to demonstrate through the tighter spread that the cautious view about Japanese credit had subsided among overseas investors, despite the fact that, on May 31 (after sale of the first bond), Moody's placed Japan's sovereign rating on review for possible downgrade.

The book priced later at 34bps after it was subscribed for more than \$3.5 billion. The deal was bid at ms +32bps late in the week. Again, interest among international investors was encouraging. Of over 100 investors, 38 percent came from Europe, 36 percent from Asia, 15 percent from the Middle East and Africa, and 11 percent from the U.S.

"The transaction demonstrated the demand for high-quality assets offering a slightly higher spread than some other SSA issuers, at a time when U.S. Treasury yields remain close to their recent lows," says Nathaniel Timbrell-Whittle, co-head of SSA DCM at BNP Paribas. At ms +34bps the bond was 64.3bps over the 1.5 percent June 2016 UST.

The bookrunner was moved to comment on the speed at which the issuance of the second bond followed the first; "The borrower was debating whether

were central banks and government institutions, and the rest broke down to 20 percent banks, 15 percent asset managers and 5 percent other investors.

The sale of the bond was taken as precisely the sign of good faith among investors in Japanese credit that the bookrunner had hoped for prior to sale. Kerr Finlayson, director of SSA syndicate at HSBC, says the sale "demonstrated the faith investors still have in Japanese government-guaranteed issues following recent events in Japan and the subsequent Standard & Poor's rating action. The choice of maturity and the attractive spread relative to other recently priced issues ensured a strong investor reception and successful performance of the issue after pricing."

On July 8, JBIC issued another Japanese credit-backed bond after a late June post-disaster damage assessment of 16.9 trillion yen. The second bond had the same principal (\$2 billion)

to do the trade now or wait more, and they clearly made the right decision in going now. To be able to access the market twice in such quick succession demonstrates the positive reception to Japanese credit generally." JBIC said they chose the short window partly to take advantage of a stable market after the approval by the Greek Parliament of the austerity package in late June.

The bookrunner also noted that the timely sale of the bond showed that "credits distanced from the European crisis can generate significant investor appetite." One investor says, "At a time when Portugal was blowing up, a nice non-European name for investors to get stuck into was just what was needed." Says another investor, "Japan benefits from having absolutely nothing to do with the periphery of Europe. To a certain extent the bond sale offered diversification away from the headline risk in Europe."

—Ilana Stone



JBIC appreciates your kind thoughts and prayers for those affected by the unprecedented natural disaster that hit Japan. With its enhanced function, JBIC stays actively committed to fulfill its mandates. We value your ongoing trust.

Japan Bank for International Cooperation (JBIC) is the international wing of Japan Finance Corporation (JFC), a policy-based financing institution wholly owned by the Japanese government. JBIC provides policy-based finance with a mission to contribute to the sound development of the Japanese and international economies.

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- Frequent and leading issuer of international bonds explicitly guaranteed by the Japanese government since 1983
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