Northern Trust

INVESTMENT STRATEGY COMMENTARY

Japanese Aftershocks

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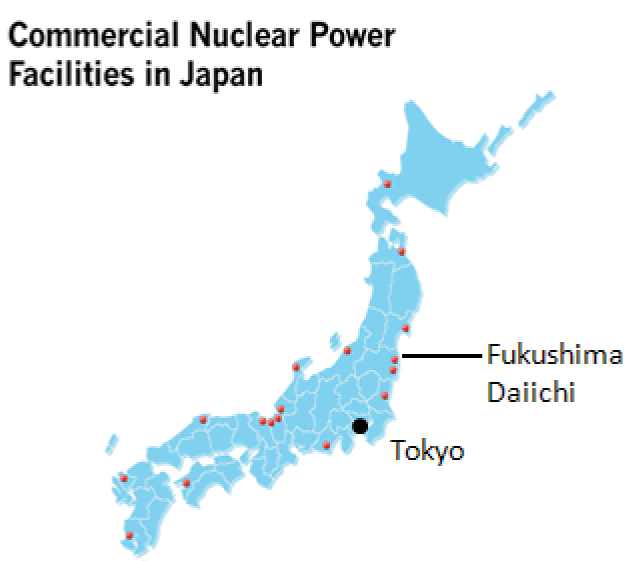
Summary

The physical destruction, loss of life and human suffering in the wake of the March 11 earthquake in Japan are devastating. Information flow remains uneven, and the reliability uncertain, at the time of this writing. With that understanding, this report will share our analysis of the current state of affairs and the potential impact on the global economy and financial markets. We are seeing tentative signs today that the radiation situation at the Fukushima facilities could be stabilizing, but the accident to date has surpassed the damage created by the Three Mile Island disaster. Due to the use of lower-enriched uranium and stronger containment structures, we do not think this accident will approach the impact of the Chernobyl accident. The global economy had considerable momentum entering this event, but faces concurrent risks from the unrest in the Middle East and the European debt saga. We think these risks will push developed economy central bankers to continue to pursue accommodative policies, increasing the global economy's shock absorbers. While we are fully cognizant of the negative potential impact of deterioration in any of these global risk factors, our base case scenario does not expect a sustained disruption of the global economic expansion. In this environment, we still believe global equities are currently more attractive than bonds and cash.

Exhibit 1: Japan Nuclear Power Facilities



Source: Federation of Electric Power Companies of Japan.

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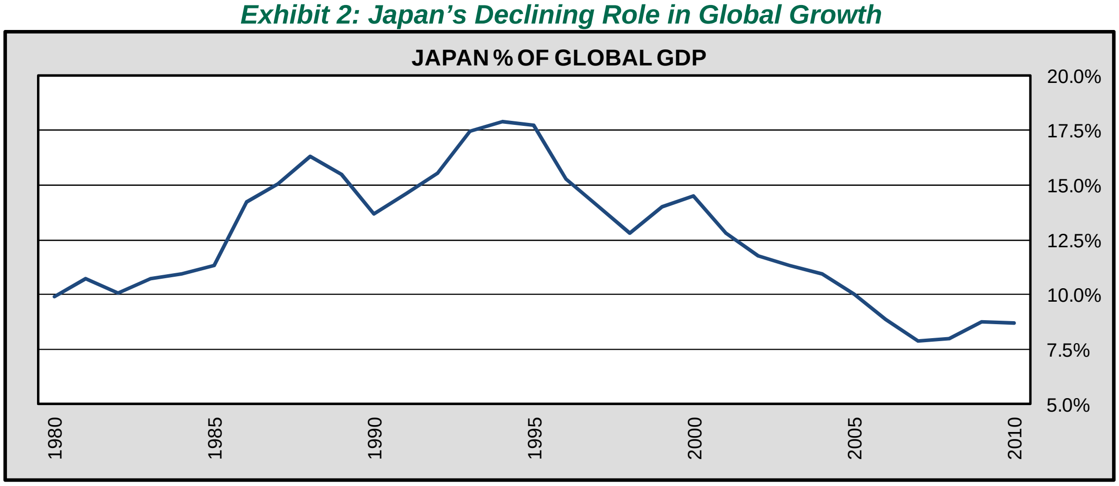
Japan's Role in the Global Economy

China eclipsed Japan in 2010 to become the world's second-largest economy, and China has clearly been a significantly larger contributor to growth. Japan has struggled with weak growth and bouts of deflation since the bursting of their real estate bubble in the 1980s. The country's share of global gross domestic product (GDP) peaked in 1995 at just over 18%, and is currently about one-half of that level.

While Japan has not been an important driver of global growth, they are still the world's third-largest economy and are a critical manufacturer in areas like technology, autos and auto parts. Evidence is still accumulating about the level of direct disruption to these associated production facilities, but restoration of reliable electricity throughout the country will be essential. The risk to global growth from supply chain disruption is real but unquantifiable. Global companies certainly understand their vulnerability to shipping disruption and likely have some plans and inventories in place. The lack of availability of a single part could theoretically halt production of entire products. But some production could also temporarily shift from Japan to countries like the United States, in industries such as autos, during the recovery period. General Motors announced today a one-week suspension of manufacturing at one small pickup plant, apparently to allocate parts to the most important needs. It seems most likely that supply disruptions will be seen by the market as temporary, and as such, not weigh heavily on investor sentiment.

Exhibit 2: Japan's Declining Role in Global Growth



Source: International Monetary Fund. Data through 2010.

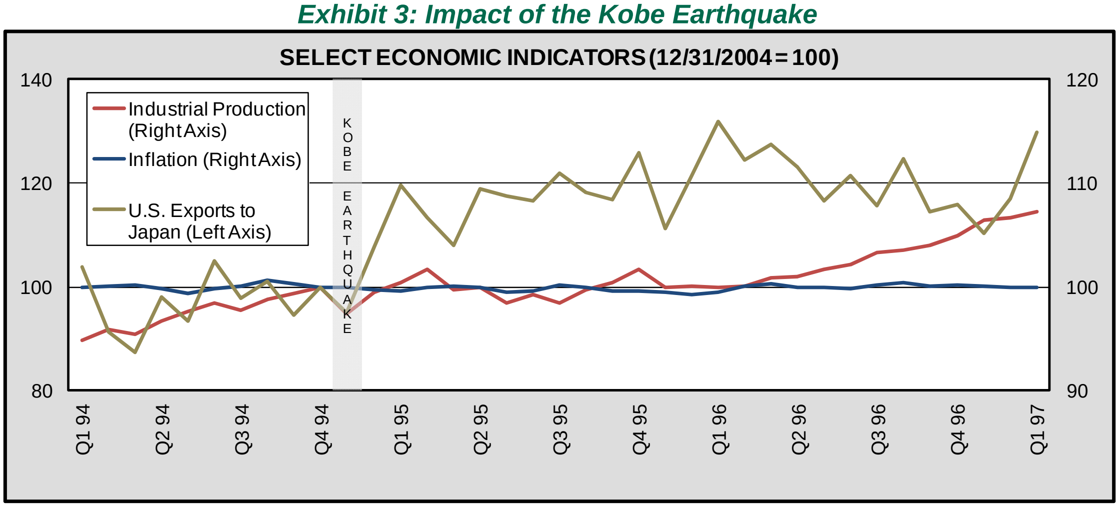
Earthquake Impact on the Japanese Economy

The Hanshin (Kobe) earthquake of January 1995 is the closest Japanese analogue to the current situation, although on a smaller scale and without the nuclear contamination risk. The Kobe earthquake measured 7.3 on the Richter scale (compared with 9.0 for the current earthquake), killed 6,500 people, and saw massive engineering failures as scores of buildings collapsed. Government authorities were also roundly criticized for a timid response, which is believed to have compounded the after-effects.

Despite the hit to Japanese confidence from the Kobe earthquake and the sarin gas attack two months later that killed 13 people in the Tokyo subway, Japanese industrial production jumped in the quarters subsequent to the earthquake. Additionally, U.S. exports to Japan surged in the wake of the rebuilding. While it does not do an economy much good to destroy its productive stock and just rebuild it, it does lead to a near-term surge in economic activity. The Japanese inflation picture, meanwhile, barely budged through the whole episode.

According to Japan's minister for economic and fiscal policy, the three prefectures worst hit by the disaster (Iwate, Miyagi and Fukushima) accounted for 4.1% of Japanese GDP. The Tokyo prefecture, which accounts for 18% of GDP, will suffer some hit to potential growth as they are vulnerable to planned electricity blackouts.

Exhibit 3: Impact of the Kobe Earthquake



Source: Northern Trust Global Investments, Bloomberg.

Potential impact on the U.S. economy

We believe the direct impact on U.S. economic growth from the earthquake should be minor. U.S. exports to Japan are 4.7% of the total, and represent just 0.4% of U.S. GDP. If the Kobe experience provides any guidance, U.S. exports could actually benefit from reconstruction.

Exhibit 4: Impact on U.S. Economy

2010 UNITED STATES EXPORTS BY COUNTRY			
Country	**Exports in Millions**	**% of Total US Exports**	**% of US GDP**
Canada	248,738	19.3%	1.7%
Mexico	163,322	12.7%	1.1%
China	91,878	7.1%	0.6%
Japan	60,546	4.7%	0.4%
Germany	55,870	4.3%	0.4%
UK	48,496	3.8%	0.3%
Korea	38,843	3.0%	0.3%
Brazil	35,358	2.7%	0.2%
Netherlands	34,997	2.7%	0.2%
Singapore	29,151	2.3%	0.2%
Total of Top 10	**807,199**	**62.8%**	**5.5%**

Source: Northern Trust Global Investments, Bloomberg.

The potential indirect effects of the earthquake are more nebulous. The negative impact on consumer and business psychology from uncertainty around the continued nuclear contamination risks are real, but will prove to be short-lived if the plants are brought under control shortly. As we indicated in the front of the report, we do not think that the risk of widespread nuclear contamination is as high as a casual read of media reports might indicate.

Potential Impact on Interest Rates, Currencies

The yen has rallied strongly post-earthquake, due to expectations of considerable currency repatriation to fund reconstruction. In the three months after the Kobe earthquake, the yen appreciated 18% against the U.S. dollar – but then depreciated by 25% in the ensuing six months. An appreciating yen is probably not welcome in current circumstances, where export competitiveness remains central to Japan's growth outlook and deflationary concerns still linger. Japan's financial strength has also deteriorated significantly since the Kobe earthquake, as two decades of government spending and slow growth have ballooned debt-to-GDP levels.

While it is well known that Japan is the world's largest debtor, its status as a large creditor (with $886 billion of dollar reserves) is less appreciated. It also provides a path beyond just additional debt issuance to fund reconstruction. Ballpark estimates of $200 billion in reconstruction costs, necessarily crude at this stage, are manageable in a $5 trillion economy with $11.4 trillion in government debt outstanding. Also helping to support the short-term outlook for Japanese debt is the fact that it is owned 95% domestically, and is denominated in yen. So while Japan's gross debt level is headline-grabbing, and its demographic picture is poor, the relatively small incremental debt associated with this event looks unlikely to be a catalyst for a fiscal crisis in Japan.

Exhibit 5: U.S. & Japanese Debt Holders

2010 U.S. DEBT HOLDERS			2009 JAPANESE DEBT HOLDERS		
Owner	**Dollar Amount (Billions)**	**%**	**Owner**	**Yen Amount (Trillions)**	**%**
Fed/U.S. Government	5,656	40.3%	Bank of Japan	50	7.4%
Other U.S. Holdings	3,999	28.5%	Domestic Banks	293	42.9%
Foreign Held	4,370	31.2%	Domestic Insurance Co.	137	20.0%
memo: China	*1,155*	*8.2%*	Pensions	109	16.0%
Japan	*886*	*6.3%*	Other Domestic Holdings	58	8.5%
UK	*278*	*2.0%*	Foreign Held	36	5.2%
Total	**14,025**	**100%**	**Total**	**683**	**100%**

Source: Northern Trust Global Investments, Bank of Japan, U.S. Treasury.

Potential Impact on U.S. Interest Rates

Yields on the U.S. 10-year note have fallen from 3.4% on the day of the earthquake to 3.26% today, while the yen has strengthened by 4% against the U.S. dollar. With the Japanese owning 6% of U.S. Treasuries (based on gross debt), the likelihood of their driving down U.S. bond prices materially seems low. They also have unleashed massive liquidity programs to support their financial markets, so government spending may be financed by new debt issuance. We think U.S. interest rates will be more importantly influenced by the outlook for growth, inflation and the U.S. budget deficit. Our current expectation is that the Federal Reserve won't raise interest rates in 2011, and that the 10-year Treasury will yield around 3.5% in six months' time.

Future of Nuclear Energy

So far, we have seen reactions from numerous governments. Germany shut down seven of its oldest plants for inspection. China halted approvals of new projects temporarily. Despite this, we have also seen examples of support for the industry. The U.S. Nuclear Regulatory Commission (NRC) and various state regulatory bodies have publicly supported our industry here, particularly the plants targeted by the media: Three Mile Island unit 1 and California's Diablo Canyon and San Onofre plants. The majority of Congress has also been publicly supportive. We expect the industry will learn from the Japanese crisis and adapt.

For the nuclear industry, there will be examination of the numerous lessons to be learned at this plant. Several design and operator failures already have been identified and will no doubt identify more once the full story is revealed. While new plants being considered currently are "Generation III" plants which have enhanced passive safety systems, designs will still need to be reviewed – certainly plant designs and emergency procedures and potentially reactor designs. The NRC has been critical of these Generation III plants in the past regarding the ability to withstand earthquakes. We currently envision some delays to plants like Southern's Vogtle units 3 and 4 (Generation III+ designs) and SCANA's planned units in South Carolina, none of which had yet received their construction licenses. We could also see early closures of some older plants. Exelon recently agreed to close the oldest plant in the United States, Oyster Creek in New Jersey, 10 years early due to environmental concerns regarding water usage from a nearby bay. We will likely see several plants have license extensions denied – most plants in operation today were designed for a 40-year life with license extensions often allowing them to go to 60 years. That means plants like Entergy-owned Indian Point in New York, supplying about 30% of New York City's electricity, could shut down by 2014.

Countering all this pressure to close nuclear plants in the United States is the reality of our grid. Yesterday morning, we learned that the Environmental Protection Agency has nearly finalized its rule for a 91% required reduction in mercury emissions from coal plants. This rule and others on the way could result in significant coal plant closures over the next five years, putting pressure on the states and the federal authorities to keep their nuclear plants running.

Exhibit 6: Planned Nuclear Plant Growth

NUCLEAR REACTOR SUMMARY				
Country / Region	**Current**	**Under Construction**	**Planned**	**Proposed**
USA	104	1	9	23
Europe	161	4	25	61
Japan	55	2	12	1
Russia	32	10	14	30
China	13	27	50	110
India	20	5	18	40
World	**443**	**62**	**158**	**324**

Source: World Nuclear Association. Data as of 3/1/2011.

Abroad in China and India where the real "nuclear renaissance" is occurring, we expect Generation III plants to also be delayed but eventually continue on as planned. China has already said it is suspending new nuclear development approvals for now and conducting safety reviews at all plants. Germany, Switzerland and others have announced similar measures. That being said, experts do not consider the Japanese nuclear disaster involving Generation II plants designed in the 1960s as directly applicable to their plans for Generation III plants. China was planning to triple its nuclear capacity with 20 new plants in the next five years entering some phase of construction. Given their need for new power and the inherent problems with coal, we believe cooler heads will prevail and new plant approvals will soon resume.

Investment Strategy Outlook

The global economy has been on the mend since the coordinated intervention of central banks in early 2009. The strength in developing economies is starting to be joined by some developed economies, specifically the United States. With evidence of improvement in labor markets, continued strength in the corporate sector and a more benign political environment, we think the U.S. economy is approaching a self-sustaining recovery. The Federal Reserve, in the statement accompanying this week's Federal Open Market Committee meeting, indicated an upgraded outlook for U.S. growth.

Against this backdrop, we face an unfortunate trio of potential exogenous shocks. Negative developments in the Middle East could lead to a spike in oil prices – an event which could derail the global expansion. Of course, OPEC knows this and will do what it can to cushion supply disruptions – and as long as there are not power shifts in key producers, this will likely work. We also continue to monitor the European Union's efforts to manage the debt problems of their over-levered members. Recent efforts appear to be expanding the scope of the

European Financial Stability Fund, and the countries that play ball (like Greece, which agreed to $50 billion of asset sales) may see reductions in their interest rate bills.

Exhibit 7: Market Reaction to Nuclear Accidents

PREVIOUS NUCLEAR CRISES				
Event	**Year**	**Market Decline**	**Number of Days**	**Days to Recovery**
Chernobyl	1986	3.7%	4	29
Three Mile Island	1979	1.8%	6	9

Source: Crandall Pierce & Company, Northern Trust Global Investments.

Finally, the potential disruption to the global economy from Japan remains on the radar screen – but as we have laid out in this report, we currently see this risk as insufficient to single-handedly derail the economic expansion. The market reaction to the Chernobyl and Three Mile Island disasters was benign – 3.7% and 1.8% declines that occurred over four- and six-day periods, respectively.

With what we know today, we continue to believe the most likely scenario is that the global economic expansion continues forward. Economic and investor uncertainty has risen in the wake of the aforementioned problems, and we continue to monitor developments and weigh the probable outcomes. We continue to see opportunities in U.S. equities when compared to developed ex-U.S. (primarily Europe and Japan) and investment grade bonds.

Special thanks go to Phil Grant and Joe LaPorta for data research.