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IN THE NEWS

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## Disaster in Japan

In Japan, the economic cost of the massive earthquake will play out over time. An early impact will be delays for complete assembled items such as automobiles. For example, by one estimate Toyota will produce 40,000 fewer cars [1]. For years, Japanese industry has evolved the concept of just in time manufacturing. That is, the parts arrive just as they are needed for manufacturing; thereby reducing costs for inventory. A question here is, what happens when the supply chain is interrupted? For example, Japanese manufactures set up assembly facilities in other countries, but many of the parts are made and come from Japan [2]. For instance, the Toyota and Sub-

aru cars assembled in the U.S. have stopped overtime shifts in the U.S. on fears the Japanese parts will be scarce [3]. On the plus side, Nissan is considering moving its engine manufacturing to the U.S. [4]. This would help Nissan by providing another source for engines while bringing jobs to the U.S.

It seems the Japanese nuclear power plants were designed to withstand only a 7.0 magnitude event; unfortunately, the Match 11 event was at 8.9 [5]. To keep the reactors safe, the nuclear fuel needs to be kept cool. Backup generators are used to power the water cooling systems. At the Japanese plant, the backup generators were located in basements. What is interesting is the reactors withstood the initial 9.0 earthquake but not the 7-meter tsunami that followed [6]. With the backup generators located in a basement, these were overcome by water.



In more disappointing news, the reactors were being cooled using sea water, rendering them useless for generating power in the future [7]. There is little chance Japan will replace these reactors with newer nuclear reactors. With the elimination of these electricity generation reactors, the cost for energy will increase. What's more, Japan will need to seek an alternative form of energy, perhaps imported natural gas. This will take time and the resulting energy cost will be higher. In a further sign of extended problems, high radiation levels were detected in the seawater near the stricken reactors [8]. This follows two workers who received radiation burns when radioactive water seeped over their

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For years, one of the leading vendors of security identification and authentication tokens, SecureID, has established a large customer base. However, the company experienced a sophisticated data breach [1]. Following disclosure of the SecureID vulnerability, the parent company RSA temporarily halt-

# Security

ed distribution of the authentication tokens [2]. The Supervisory Control And Data Acquisition (SCADA) software is widely used to control industrial systems such as utilities. Highlighting SCADA risk, the US-CERT issued a warning for new security vulnerabilities [3]. What's more, one security researcher published details on 34 SCADA security vulnerabilities [4]. Exploits to our critical infrastructure could result from these SCADA vulnerabilities if they are not quickly patched and corrected.

There are indications that Cybercrime increased at a double digit rate last year

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#### Special points of interest:

- Security company SecureID suffers
  data breach
- Oil reaches 2½ year high
- Gold futures reaches new record high
- Silver reaches 31-year high
- Japan struggles to restart its industry

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[5]. Consequently, the U.S. Senate Commerce Committee plans to have cybercrime cost hearings starting on March 29 [6].

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warns of SCADA flaws, March 18, 2011.

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- 6. AFP, US Senate panel to weigh cybercrime costs, March 22, 2011.

We learn geology the morning after the earthquake-Ralph Waldo

Emerson

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boots [9]. These incidents suggest one or more of the reactors is leaking radioactive material into the environment.

The Japanese response to the nuclear problem at the Fukushima Daiichi nuclear power plant has come under international criticism. For example, after nearly a week, a one mile power line was brought in to power water pumps [10]. Why would they not have brought in power generators prior to this? Robots were used at Three Mile Island and Chernobyl; yet Japan, known for its robot expertise, had no robots at the nuclear disaster site [11]. If power was restored to the cooling systems shortly after the disaster, radioactive release would likely have been avoided.

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## Economy

he disaster in Japan has resulted in a reduction of the price of oil. For example, on March 15, oil fell by 4% [1]. However, by March 23, oil was again at s  $2\frac{1}{2}$  high [2]. The disaster is causing a world -wide reassessment of nuclear power. For example, in Germany, an estimated 120,000 anti-nuclear protesters took to the streets [3]. What is the alternative to nuclear? We expect more price pressure on oil as support for nuclear wanes.

With the increased cost of energy there is the fear of inflation. Case in point, Gold reached a new record high [4]. Concurrently, silver reached a 31-year high [5].

In Europe, the recovery is still uncertain. For instance, Fitch downgraded Portugal's credit rating from A+ to A- with the bond yields reaching a high not seen since 1999 [6].

For the week ending March

12, the number of first time unemployment claims was 385,000 [7]. Then, for the week ending March 19, the number first time claims stood at 382,000 [8].

No banks were closed on March 18. However, on March 25, regulators shuttered the  $26^{th}$  financial institutions; The Bank of Commerce in Illinois [9].

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Not only will atomic power be released, but someday we will harness the rise and fall of the tides and imprison the rays of the sun–Thomas Alva Edison



### World News

ore turmoil in the Middle-East. For example, on March 14, Saudi Arabia sent 1,000 troops into Bahrain to help put down the Shi'ite protests [1]. The next day, Bahrain declared martial law [2]. Meanwhile, protesters demonstrated in Syria [3]. Reports indicate 20 of the Syrian protesters were killed so far [4]. Complicating matters, the protesters burned two government buildings in Syria [5]. Elsewhere, in Yemen, there are reports that President Ali Abdullah Saleh will step down due to the protests [6].

In past issues, we have highlighted the problem of pirates operating in the Arabian sea. We now have some good news from India. The Indian navy captured 61 pirates and rescued 13 crew members [7].

Readers may recall, in newsletter Vol. 3, issue 12, (June 6, 2010) we warned that China needed to be included in the nuclear treaty talks with Russia. We now have a better appreciation of the consequences from Director of National Intelligence, James Clapper, who appeared before the Senate Armed Services Committee. In his testimony, he indicated China was the most significant threat to the U.S. because they are modernizing their nuclear forces; have no START treaty, and spurn nuclear reduction talks [8].

The island nation of Japan was on the road to recover with February exports showing a 9% increase [9]. However, the massive earthquake's damage will likely have a negative impact. Case in point, Toyota announced the delay of two new models due to supply chain problems [10]. Furthermore, the damage to Japan is expected to help Korean steel companies [11].

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Syria and Yemen facing violent protests

Atomic power will make electricity too cheap to meter–Glenn Seaborg