

**Special points of interest:**

- Indices of Industrial Production rose 5.9% in May; "Tankan" Index increased 10 points in June.
- Toray membrane products meet the needs of clean water for the supply to 60 m. people
- Switzerland and Japan Free Trade and Economic Partnership Agreement (FTEPA) has been approved by the Federal Assembly of Switzerland and the National Diet of Japan.
- Prof. Sankai, University of Tsukuba, invented a cyborg-type robot that can expand and improve physical capability.

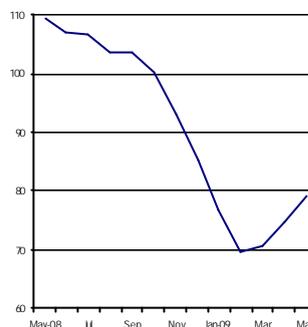
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## Japan's current economic situation

Japan economy is still affected by the world economic crisis, and may be hit again, but some economic indicators show improvements of Japan business environment. Jobless rate increased 0.2% to 5.2% from April to May, reaching highest level since September 2003. Jobless ratio fell from 0.46 in April to 0.44 in May. 44 job positions are now available for every 100 people seeking a job. As a consequence of unemployment rate and of critical level of consumption, consumer price index decreased 0.2% in May from the previous month and fell 1.1% over the year, the highest fall since the Index has been established in 1971. Deflation is higher than the one experienced from

Indices of Japan Industrial Production  
May 2008—May 2009  
Source: METI



1997 to 2006. Transport and communication, fuel and leisure prices decreases have a major impact on the Index. However, some figures recently published show that the economic situation is improving. Indices of Industrial Production, released by the METI, rose in May for the third straight month, following a five months decrease. It

increased 5.9% from 74.8 in April to 79.2 in May 2009, whereas it fell 29.5% in a year (see the figure). Industries of transport equipment, electronic parts and devices, steel and iron, mainly contributed to the increase. Furthermore, "Tankan" Index, issued on a quarterly basis by the Bank of Japan, improved for the first time in two years and a half. The confidence Index, which is the percentage of companies describing favorable business environment minus that of companies reporting unfavorable conditions, rose 10 points in June from previous publication, showing an increase from -58 (a record low since the survey was set in 1974) to -48.

## Toray's commitments in 21<sup>st</sup> century challenges

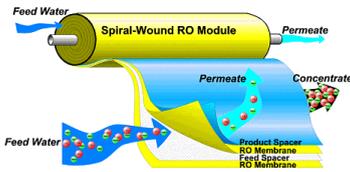
97% of earth's surface water is held in the oceans and 2.4% is capped in glaciers and polar ice. Therefore less than 1% of earth's surface water may directly be used as a drinking water. As the

world's population and its water consumption are increasingly growing, access to drinking water is becoming the major issue of the 21<sup>st</sup> century. Toray Industries Inc. in Japan, a leading chemical

manufacturer founded in 1926, develops and produces water treatment membrane products for water purification.

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## Toray's commitments in 21<sup>st</sup> century challenges



The Reverse Osmosis technology sifts out salt molecules, bacteria and viruses

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Today, *Toray* membrane products meet the needs of clean water for the supply to 60 m. people. *Toray* obtained the 2008 Humanitarian Award from the United Nations Association of New York in recognition of its environmentally friendly business activities, including its involvement in such areas as seawater desalination, water treatment and carbon fiber composite materials businesses as well as for its corporate social responsibility activities targeting climate change prevention and sustainable social growth. In 2004, Mr. Yoshio Ozaki became President of *To-*

*ray Membrane Europe AG (Basel)*, *Toray's* Switzerland-based subsidiary. TMEu is marketing *Toray Membrane Products* in EU, Middle East and African Countries. *Toray* group target is to achieve membrane sales, becoming No. 1 in the world by 2010.

### ***Toray Membrane Technology to purify Water***

Since 1968, *Toray* has developed different water purification technologies. *Toray's Reverse Osmosis technology* is a hyperfiltration process that works by using pressure to force water through a semi permeable membrane. It allows passage

of water molecules, but not salt molecules, bacteria and viruses (see the figure). It is used for drinking water production, industrial water processes, and in pharmaceutical and electronic industries and power plants.

*Toray's Membrane Bio-Reactor (MBR)* is a biological waste water treatment module. It produces crystal clear high quality treated effluent. Such treated effluent is used for crop irrigation, industrial use, and further membrane treatment such as *Reverse Osmosis*.

(For further information, please contact Mr. Imai: [kiyoshi.imai@jetroge.ch](mailto:kiyoshi.imai@jetroge.ch))

## Cultural and technical specificities

International standards are set in various bodies, such as the International Organization for Standardization (ISO), the International Electrotechnical Commission (IEC) and the International Telecommunication Union. The objective of setting international standards is essentially to prevent national trade barriers. However, Japanese and Swiss devices and equipments may still be different, because of cultural and geographical factors.

Japanese and Swiss washing machines have different features. In Japan, washing machines are designed with an horizontal-mounted basket and only use cold water. Japanese

machines are more water-consuming (80-110 L a washing against about 55 L a washing in Switzerland), but this is not a drawback in Japan where water is cheaper. Furthermore, as Japanese water contains less calcium, soap powder is more efficient and hot water is useless. However, European type washing machines (using hot water from 30° to 90° in a vertical-mounted basket) are more and more sold in Japan.

Japanese toilets are specific too. Many private homes and most of public facilities are today equipped in Japan with high-tech toilets. A control panel gives access to an impressive number of fea-

tures: integrated bidet, blow dryer, seat heating, automatic lid opening, automatic flushing, room heating and room air conditioning... Importance of being clean and interest in electronic devices may explain development of high-tech toilets.

Many other Japanese devices are designed with electronic devices. Cars may be equipped with automatic seat belts, rear back-up camera, speaking robot...

Consensus agreements related to these devices are discussed in standard-setting bodies, but they are sometimes difficult to be reached, because of above-mentioned specificities.

## Switzerland/Japan Free Trade Agreement is approved

Switzerland and Japan Free Trade and Economic Partnership Agreement (FTEPA) has been ratified by both Swiss and Japanese Parliaments. The Agreement was signed on 19<sup>th</sup> February 2009, following a total of eight rounds of negotiations since the first round in May 2007.

In Switzerland, National Council and Council of States approved it respectively on May 25 and June 8. In Japan, House of Representatives and House of Councilors approved it respectively on May 28 and June 24.

The Agreement shall enter into force in autumn 2009, "the first day of the second month following the month" in which the governments exchanged diplomatic notes informing that their respective necessary legal procedures have been completed.

Tariffs for more than 99% of the total trade in goods value between the two countries shall be eliminated within 10 years. It also will provide frameworks for an origin declaration by an approved exporter, which will be a new system in Japan, for further expansion and facilitation of cross-border investments and for services trade. It will facilitate free movement of persons. Both governments committed to enhance conditions for effective protection of intellectual property rights and not to use anti-dumping measures for protectionist purposes.

JETRO will participate in events designed to promote this Agreement. OSEC will organize a seminar in Zurich, on 1<sup>st</sup> September, in collaboration with SECO, SJCC and JETRO. Other seminars are scheduled afterwards in Basel and in Geneva.



February 19, 2009. Ms. Doris Leuthard, Vice-President of the Swiss Federal Council and Head of the Federal Department of Economic Affairs, and Mr. Hirofumi Nakasone, Minister of Foreign Affairs of Japan, signed the Free Trade and Economic Partnership Agreement (FTEPA) between Switzerland and Japan.

## Organization to facilitate business contacts

The Swiss-Japanese Chamber of Commerce (SJCC) is an association, located in Zurich and set up in 1985, to promote trade and economic contacts between Switzerland and Japan, and to exchange knowledge and experience. Over 300 companies (such as financial institutions, pharmaceutical, machine, electronic and service companies) and individuals are today members of the SJCC.

Its key role in facilitating business contact is likely to be increased following the ratification of the Agreement on Free Trade and Economic Partnership between Japan and Switzerland. The SJCC will promote this agreement, in close collaboration with

notably the Japanese Embassy, OSEC and JETRO. In particular a seminar, scheduled on 1<sup>st</sup> September in Zurich, and a celebration of the agreement conclusion, will contribute in promoting the Agreement.

The SJCC also organized in 2009 successful presentations on the following topics: "investing during times of crisis"; "Canon - a Global Company with Local Heart". The SJCC is planning to organize a presentation on the situation of Switzerland's banking and insurance industry.

Another activity of the SJCC is to facilitate business contacts for Japanese and Swiss companies. Mr. Martin Herb, Managing Director, ex-

plained the SJCC gives business advice and helps to be in touch with specialized organizations, such as the JETRO or the OSEC which will then provide in-depth information.

Moreover, the SJCC awards grants through its Scholarship Fund for Swiss and other students wishing to study in Japan. "The Fund supports 10-15 students every year in Japan, so as they can improve their Japanese language skills and gain working and living experience in Japan", said Mr. Martin Herb. Since its creation, over 160 students awarded scholarships. The "Japan Year" in their curriculum had very positive impact on their career development.



Mr. Martin Herb, Managing Director, Swiss-Japanese Chamber of Commerce

## Japan's future: robots in retirement homes?

Elderly care is a major issue in most of the developed countries, and especially in Japan, where over 22.6% of the population is older than 65 years and 10.6% is older than 75 years (as of 1<sup>st</sup> January 2009, Statistics Bureau, Ministry of Internal Affairs and Communications). It may therefore be useful to assist retirement homes staff members with robots.

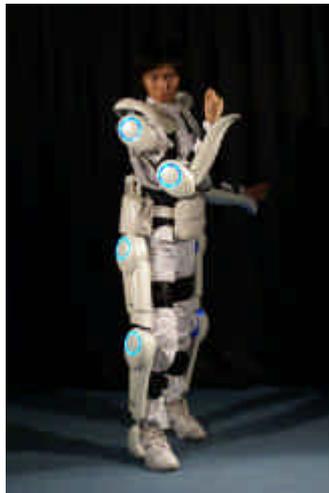
Prof. Sankai, University of Tsukuba, invented a cyborg-type robot, called "Robot Suit HAL" (Hybrid Assistive Limb, see the picture), that can expand and improve physical capability. The robot, which weighs 11 kg. (welfare version), detects nerve signals sent by a person attempting to move and then automatically moves the muscle as the person expects. It can multiply original strength by a factor of 2 to 10, depending on his/her condition. The robot is used by people with weakened muscles and with spinal disabili-

ties. It may be used, for examples, in hospitals, retirement homes and rehabilitation centers. Whereas the robot is designed for an indoor use, Prof. Sankai used a HAL robot to help Mr. Seiji Uchida, who used a wheelchair, to attempt to climb to a peak of the Breithorn in the Swiss Alps. HAL could work in the snow on the mountain.

The robot is rent out by CYBERDYNE Inc., a Japanese venture firm based in Tsukuba (located in Iba-

raki Pref.). The lease term can range from three months to five years. "HAL" is currently offered to Japan residents. A European office has been set up to introduce "HAL" to the EU clients.

\*CYBERDYNE\*, \*ROBOT SUIT\*, \*ROBOT SUIT HAL\*, \*Hybrid Assistive Limb\*, and \*HAL\* are trademarks (™) or registered trademarks (®) of CYBERDYNE, Inc. protected by Japanese and Foreign trademark Laws.



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### Robot Suit « HAL »

Height: 1,6 meter

Weight: approx. 23 kg (full body type), approx. 15 kg (lower body type)

Power: Battery drive  
Charged battery

Continuous operating time: 2 hours 40 minutes

Working environment: indoor and outdoor

## Agenda

1<sup>st</sup> Sept.: Seminar on Japan/Switzerland Free Trade and Economic Partnership Agreement (JSFTEPA) in Zurich  
9 am to 4.30 pm, World Trade Centre

21<sup>st</sup> Sept.: Hiroshima Business Seminar in Zug

*JETRO is a government-related organization that works to promote mutual trade and investment between Japan and the rest of the world. Originally established in 1958 to promote Japanese exports abroad, JETRO's core focus in the 21st century has shifted toward promoting foreign direct investment into Japan and helping small to medium size Japanese firms maximize their global export potential.*

*The JETRO Geneva Newsletter can also be viewed and/or downloaded online:*

*<http://www.jetro.go.jp/switzerland/newsletter>*

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