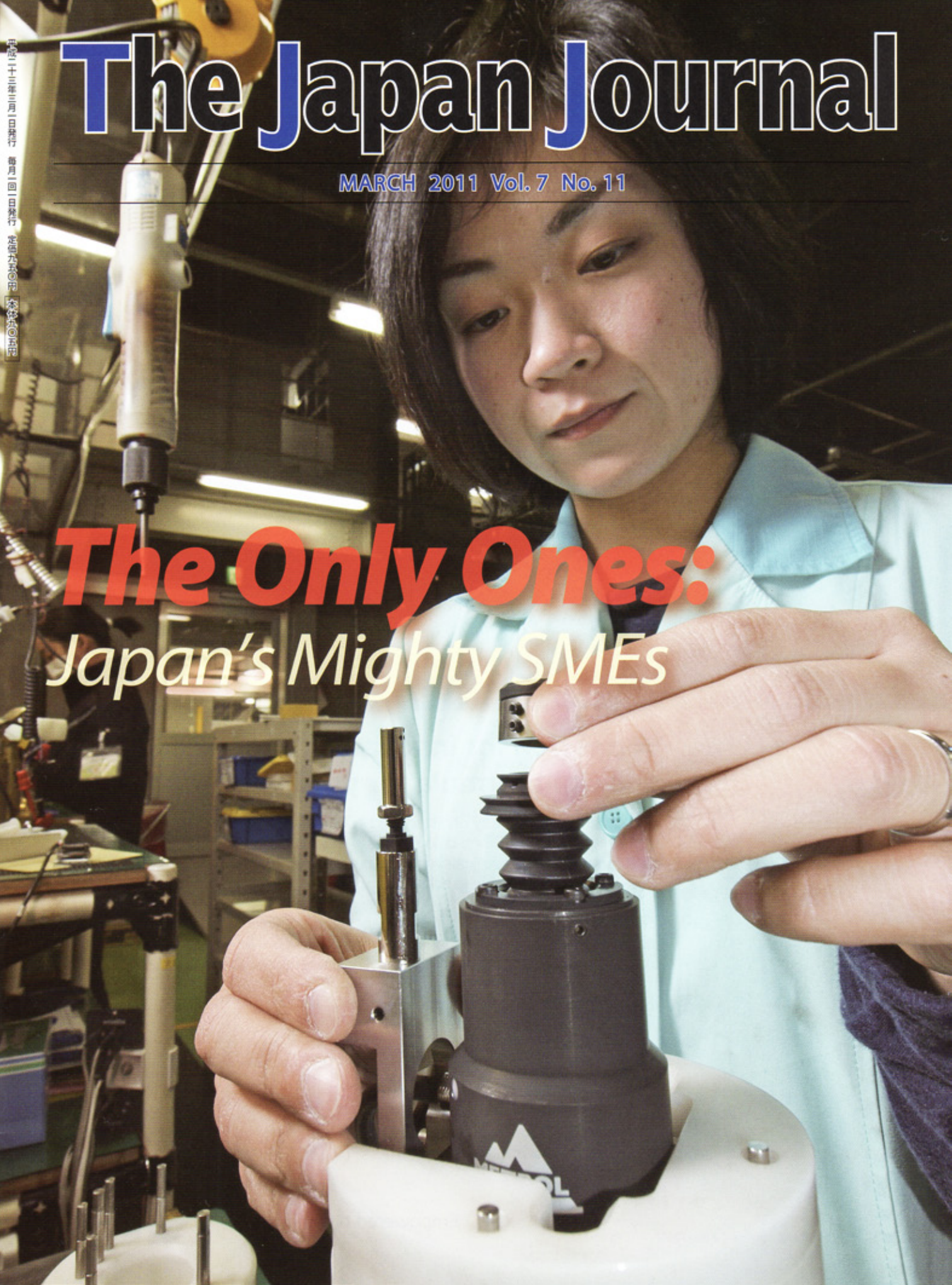



The Japan Journal

MARCH 2011 Vol. 7 No. 11

The Only Ones: *Japan's Mighty SMEs*



The **Only** Ones: Japan's Mighty SMEs

A photograph of four people in a factory setting. From left to right: a woman in a pink lab coat, a woman in a light blue lab coat, a man in a dark jacket holding a small device, and a woman in a grey lab coat. They are all smiling and holding small, precision instruments. In the foreground, there is a large, complex industrial machine with various components, including a black flexible hose and metal plates. The background shows a typical industrial environment with overhead lights and structural elements.

Matsuhashi Takuji, representative managing director of Metrol, and three of the company's 100 or so employees hold some of their unique ultra-precision products.

As the prolonged economic downturn continues, conditions facing small and medium enterprises (SMEs) in Japan remain as tough as ever. Rather than being overwhelmed, however, there are plenty of smaller companies out there that are harnessing unique technologies and marketing tactics to achieve strong growth and that have enormous potential for the future. So, what sort of steps should the government be taking to support SMEs such as these? And what role should financial institutions be playing in the development of such companies? **Yamada Masaki** reports.

Before me is a huge, open factory space, with no walls or partitions in sight. Despite being a factory, there are no conveyor belts or machine tools. Instead there are neat rows of desks, behind which an all-female workforce sits assembling and soldering tiny components.

"The key people in our company are women. Women have a delicate touch and are patient, which makes them ideally suited to this kind of manufacturing work," explains Matsuhashi Takuji, representative managing director of Metrol Co. (www.metrol.co.jp/en/) in Tachikawa, Tokyo. It may be a comparatively small company, with a workforce of around 100 employees, but Metrol is nonetheless a global company that is well-regarded by those in the know, with customers in sixty-four countries and regions around the world.

The ultra-precision switches manufactured by Metrol are used to determine the position of automated equipment such as drills and cutters, making them an essential part of the automation process for machine tools or robots. In order to precisely drill a hole in a predetermined location in a metal component for example, it is necessary to accurately position the cutting tool to within a micron (1,000th of a millimeter). That is why such ultra-precision switches are needed.

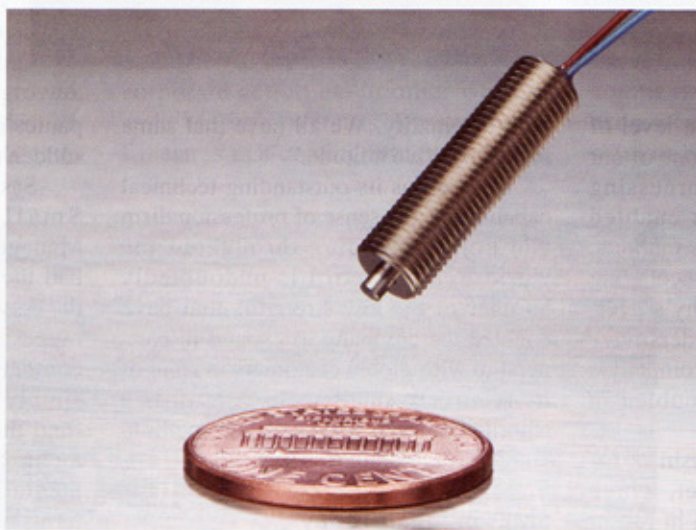
There are two types of sensors: electric noncontact sensors, which use magnetism or light to detect an object's presence, and mechanical contact switches, which detect objects by actually touching them. The vast majority of sensors are

electric. In fact, Metrol is currently the only company in the world manufacturing ultra-precision mechanical contact switches. It is the very essence of an "only one" company. So, why is the company so committed to ultra-precision mechanical contact switches?

"First of all, electric sensors are limited in terms of precision," Matsuhashi explains. "The level of

affected by their environment. Ultra-precision mechanical contact switches also have the advantage that they are relatively inexpensive. Our ultra-precision mechanical position switches are based on more than thirty years of technical experience, and the 7,000 different components we have made are all original products. It would be difficult for other companies to replicate our products."

Although Metrol exports its ultra-precision mechanical switches to customers in sixty-four countries and regions around the world, as mentioned previously, it never resorts to "hard-sell" marketing. In order to showcase its products, the company actively takes part in trade fairs in other countries. It has already exhibited at more than twenty fairs to date, in Shenzhen, Beijing and Shanghai in China; in Stuttgart, Hanover and Munich in Germany; and in



The world's smallest, M5 x 17 mm ultra precision position switch

COURTESY OF METROL

controllable precision is probably in the tens of microns at best. In contrast, ultra-precision mechanical contact switches enable controllable precision of within half a micron (2,000th of a millimeter). They also retain that level of precision for upwards of three million uses. When it comes to ultra precision switches, they just cannot be matched. Changes in the external environment are another key factor. Whereas you have to constantly adjust the sensitivity of electric sensors because they are susceptible to changes in temperature, magnetic fields or metal particles, you don't have to bother with mechanical switches, as they are not

Chicago, Boston and numerous other cities in the United States. Upon seeing the company's ultra-precision mechanical contact switches for the first time, people attending trade fairs are often surprised to find that such simple and precise switches even exist.

One of the reasons why Metrol's products have proved popular in so many countries is down to "speed from order to delivery," according to Matsuhashi. "We handle everything in-house, from manufacturing to product development, testing, inspection and sales. That means that, when we receive an order online, for instance, we are able to deliver the product anywhere in the



Metrol employees at work on the company's factory floor

world within seven days. That level of service in terms of delivery is one of our biggest strengths." Fully harnessing strengths such as these has enabled Metrol to break into overseas markets, with overseas sales currently accounting for around 60% of the company's overall sales figures. Overseas orders have increased so rapidly that the company's sales and workforce have doubled in size over the last three years.

At the moment, Matsuhashi is focused on the Chinese market, which has experienced rapid growth in recent years. Metrol will open a sales office in Bangalore in India. In addition to setting up a product inspection and repair base in Shanghai last year, the company has also outsourced assembly to local contractors, enabling it to launch products priced 30% lower than usual. It is trying to secure more new manufacturing contractors in order to achieve further growth.

"Our company is a bit like an orchestra," comments Matsuhashi. "We take pride in being a professional team in which each and every member of staff, from design and manufacturing through to inspections and marketing, is an expert in their respective field. Although we all play different instruments, together we produce one piece of music, in terms of creating products

with originality. We all have that same sort of positive attitude."

As well as its outstanding technical capabilities, the sense of professionalism and unity extending throughout the workforce at Metrol is undoubtedly another of the key strengths that have enabled the company to expand in partnership with global customers in spite of its relatively small scale. Metrol is a shining example for small and medium enterprises looking to get ahead.

SMEs in Japan Today

According to the Small and Medium Enterprise Agency, 99.7% of the 4.21 million companies registered in Japan are classed as small or midsize companies. Such companies also account for around 70% of Japan's corporate workforce. For the purposes of these figures, small and medium enterprises are defined as those with no more than 300 million yen in capital or 300 employees in the manufacturing, construction or transport industries, 100 million yen or 100 employees in the wholesale industry, 50 million yen or 100 employees in the service industry, and 50 million yen or 50 employees in the retail industry.

Small and medium enterprises account for 99.7% of all domestic companies and clearly play a vital supporting

role across a wide range of industries in Japan. Although they can't compete with large companies on a financial basis, there are plenty of smaller companies and factories that are more than competitive in terms of technology or quality. In the midst of the current economic downturn however, the majority of SMEs are having to contend with extremely difficult business conditions. Triggered by the sub-prime crisis in the United States in 2007, the Lehman Brothers crisis in particular has had a serious impact on smaller companies in Japan, not least in terms of a sudden decline in exports.

Sasaki Ichiro, advisor to the Japan Small and Medium Enterprise Management Consultants Association, had the following to say during one of the Association's meetings. "By far the biggest issue facing small and midsize companies is money. Such companies simply don't have enough money to fund their operations or capital investment. Smaller companies are fundamentally at a major disadvantage in terms of capital."

In response to the current state of affairs, the Japanese government is taking steps to improve subcontract transactions, so as to protect SMEs, and is introducing a range of corporate stabilization measures. For instance, it is working to promote "safety net" lending to help small and midsize companies with capital management. The safety net lending scheme is aimed at financing smaller companies whose sales and profits are on the decline due to socioeconomic changes, no matter what industry they may be in (with the exception of the agriculture, forestry and fisheries industries and those specified in official ordinances, and so on). Small and midsize companies are eligible to borrow up to 720 million yen, with micro companies eligible to borrow up