import subsidies and cut its budget deficit from 30% Of GDP in 1993 to 10% by the end of 1994.

In both countries the early reforms won endorsement from reluctant parliaments. In mid-October the Ukrainian parliament approved the package by 231 votes to just 54. Though dominated by panicky communists, parliament has not yet turned against reform. Its backing echoes the conditional support Boris Yeltsin received in October 1991 when the Russian parliament granted him emergency powers to implement his programme.

In early 1992 Russia's reformers wanted to move decisively to macroeconomic stabilization, curbing money growth and pegging the rouble. it was at that point that the Russian experience began to go awry. Largely because of its politics, Russia could not achieve stability without western help. Little was forthcoming. in the first few months of 1992 western governments held back, arguing that the IMF must take the lead. The Fund was unable (critics say unwilling) to do so. Later, western countries promised huge sums on their own-\$24 billion for 1992, \$28 billion for 1993. Relatively little was disbursed. The chance was lost.

Ukraine, reckons Anders Aslund, a Swedish economist who advises President Kuchma, could in 1995 do what Russia failed to do in 1992: implement radical stabilization with western help. it plans to cut the budget deficit to 5% next year and stabilize the currency. For that, Mr Aslund says, it needs about \$6 billion. That is for balance-of-payments support and a currency-stabilization fund.

Many of Ukraine's partners have learnt from the Russian experience. Its two biggest creditors are Russia and Turkmenistan. They have rescheduled part of Ukraine's debt and have offered big export credits for next year.

About \$4 billion of the \$6 billion needed is to come from the IMF and World Bank. They have supported Ukraine's reforms from the start. The IMF signed an agreement on September 23rd, even before the programme was announced. The first tranche (\$371m)was issued as the programme went into effect. The World Bank has signed a deal for \$500m, to be disbursed soon.

That leaves \$2 billion, which is to come mainly from America, Japan and the European Union. Like the IMF, America is helping early. it has provided about \$900M in aid this year, including \$100 m in balance-of-payments support. Ukraine is now the fourth-largest recipient of American aid after Israel, Egypt and Russia. Everything, it seems, is in place to avoid the mistake made in Russia. One thing is missing: aid from the European Union. This is pencilled in at about \$600m for next year.

On November 7th the EU'S finance ministers refused to approve the first tranche of this loan (\$106m). Only two countries supported it, Germany and Holland. Britain was flatly opposed; France, Italy and Spain said the money would be better spent in North Africa. The doubters pointed to the possibility that parliament could change its mind in Ukraine, as it did in Russia. They said a new system requiring export contracts to be registered was too bureaucratic. They pointed out

CANADIAN ENGINEER HEADS INTERNATIONAL SCI-TECH CENTRE IN KYIV

Winnipeg..."We want to build tractors, instead of missiles," said Dr. Ostap Hawaleshka, of the Faculty of Engineering of the University of Manitoba.

This month, Hawaleshka will forsake his office in the Department of Mechanical and Industrial Engineering for more spartan surroundings in Kyiv, Ukraine.

"We don't even have a phone line!" he said, throwing up his hands. Hawaleshka has been appointed the first executive director of the Science and Technology Centre in Ukraine. The goal of the project is "to re-apply the skills of weapons scientists and engineers to commercially viable civilian activities... Ideally, our mission is to keep Ukrainian brains in Ukraine for the good of the country," noted Hawaleshka.

The Canadian government is contributing \$5 million over two years to support its participation in the centre, which will include scientific assessment and funding support for selected projects. Canada is one of four founding members of the centre, along with Ukraine, Sweden and the United States. "It was natural for Canada to get involved with the centre," Hawaleshka explained. "Canada is closely connected with Ukraine and the Ukrainian Canadian community is very active in promoting ties with Eastern Europe."

After the end of the Cold War, Ukrainian scientists who had been working to reproduce nuclear weapons found themselves out of work and lacking in employable skills outside of the military establishment.

"Our job is to help them develop new uses for their skills and technology," Hawaleshka added. "We are encouraging project submissions from basic research to prototypes to the development of production technology, all for peaceful uses." Some of the proposals so far submitted include ecological products, projects for the space shuttle and controls for nuclear power stations.

As director of the centre, Hawaleshka said he has to "start from scratch". He said they still do not have office space, a telephone line or a photocopier, and they haven't hired their staff yet. "But we've got lots of project applications already!" he noted.

Hawaleshka was part of the first Canadian trade delegation to Ukraine in 1989. He fled with his family in 1940 and spent several years in Europe before emigrating to Canada. "The centre will be beneficial to Canada and Ukraine. We both have so much to offer each other," he said.

With files from the University of Manitoba Bulletin

that the liberalization of the foreign-exchange market is incomplete because restrictions remain on who may buy dollars. All this is true. What is in doubt is its importance.

On December 5th the ministers meet to discuss the loan again. If they refuse, other potential donors are likely to back out, starting with Japan. That would undermine the reformers' support in parliament, as happened in Russia in 1992. Given the importance of timing, that in turn would put the Big-Bang stabilization programme in danger.

A failure would not mean Ukraine could not win stability at all. Without western help, Russia was able to squeeze inflation down gradually to 5% a

month in August. But it was unable to stabilize prices in one go. The cost has been three years of turmoil, which is not yet over. In Ukraine the cost would be greater. Russia is a large oil producer and exporter in 1993 it ran a trade surplus of \$11 billion. Ukraine needs over \$5 billion a year just for energy imports in that respect its economic position is weaker. For good or ill, years of stability in Ukraine - and southwestern Europe - hinge on the outcome of the EU finance ministers' meeting.