

# **The Wire & Cable Industry in Asia (Japan, S. Korea, Taiwan & China)**

**Glynn Stainthorpe**  
**Managing Consultant, Wire & Cable**  
**CRU Analysis**



Good afternoon, ladies and gentlemen,

I hope you all enjoyed lunch. My name is Glynn Stainthorpe and I head the Wire & Cable team at CRU Analysis in London.

Earlier this year ICF engaged CRU to perform a study of the Asian wire & cable industry and I believe you have received a copy of our report in your delegate pack; my presentation today is a short summary of that report. I hope I can illustrate the type of information in the report by taking small examples from each country. They may not be the most important topic in any particular country but my intention is to entice you to read and therefore benefit from the report in full.

My presentation will take the following format:

- Country Market Dimensions & Growth Trends
- Trade Patterns
- Leading Manufacturers
- Market Outlook

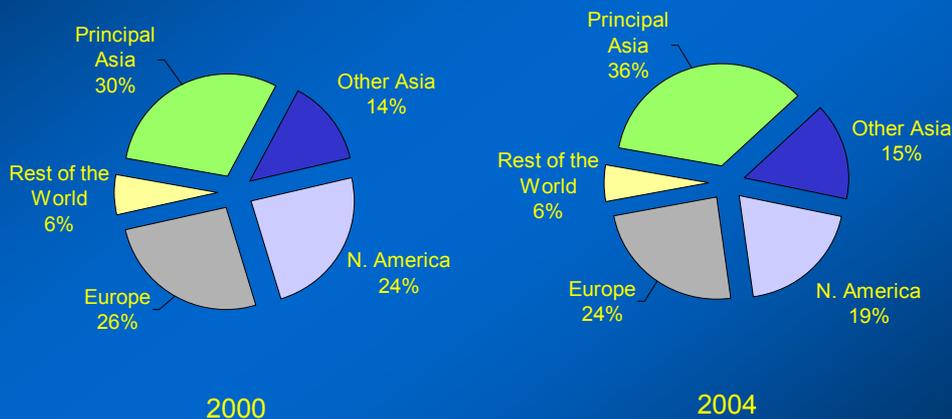
Firstly, I take a look at the individual market sizes and how they have grown in recent years

Secondly, I'll spend a little time looking at the trade flows in and out of the four countries

Thirdly, I will give some information on the leading manufacturers in the area together with a review of their investments in China

And finally, a quick review of the regional outlook will be given.

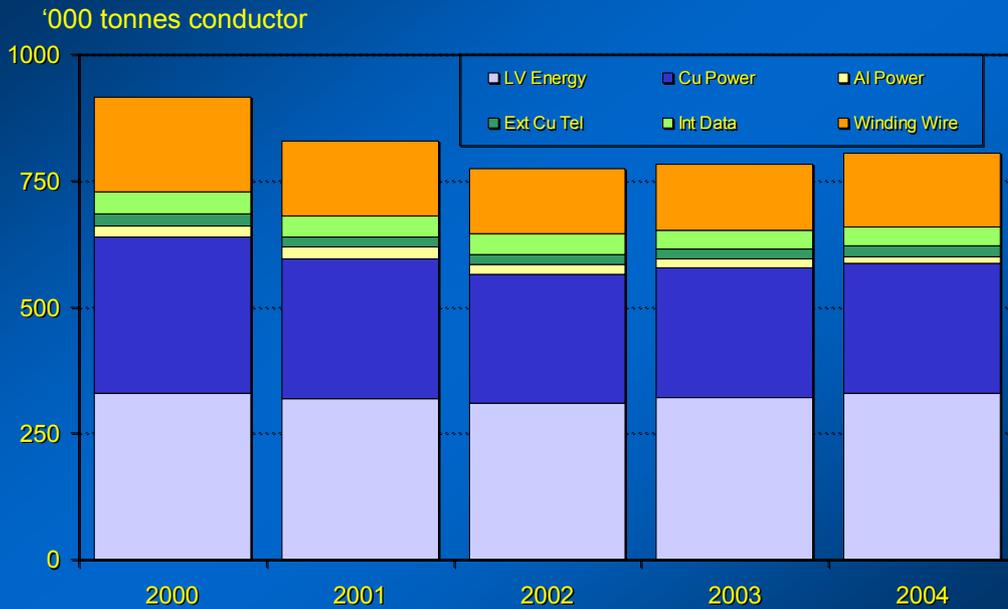
## Principal Asian Countries' Share of World Metallic Cable Production Growing



The two pie charts here show how the balance of market share for metallic cable has shifted, with the major Asian producers growing by 20% from 30 to 36% of the world market during the period 2000 – 2004. This has been mainly at the expense of US, and to a lesser extent European, producers. In 2004, total metallic cable production in the region was 4.24 million conductor tonnes, up 7.9% on 2003. This was due largely to strong growth in China and Taiwan, somewhat more modest growth in Japan and little change in production from Korea. The value of the market is estimated at US\$ 27.3 billion, boosted, of course, by higher selling prices resulting from increased material costs. Of the Asian regional metallic cable production, approximately 60% is derived from China, whilst Japan accounted for 18%, Korea 13% and Taiwan the remaining 10%. The Chinese proportion of the pie has grown from about 45% in 2000 while Japan has declined most in the area, having fallen from 28% in the same year. In value terms, China's production is worth 49.5% of the US\$27.3 billion whilst Japan – producing generally higher value products - was worth 27.7%.

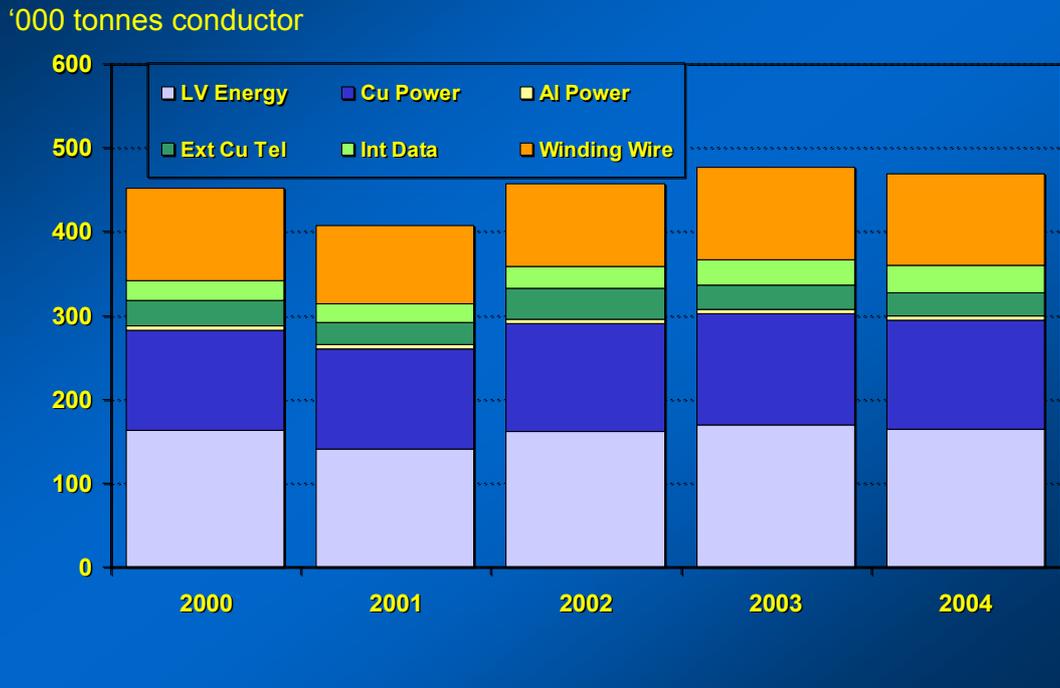
**Please note:** The figures in the last 2 sentences on page 1 of the report are incorrect and should read 49.5 and 27.7 as I've just mentioned.

## Japanese Cable Consumption Has Stagnated



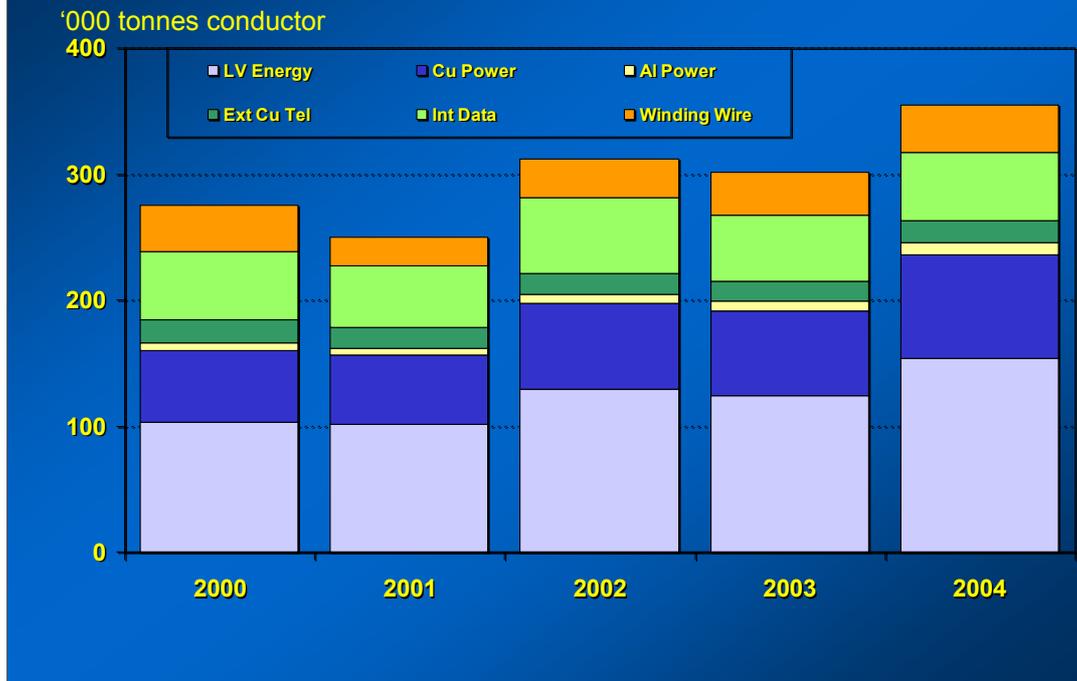
The total metallic cable production in the region has grown by about 12.6% over the period 2000-2004, which includes a reduction in Japanese production of over 17%, reflecting the sluggish Japanese economy, but buoyed by an enlargement in Chinese production of greater than 70%. Similarly, overall consumption has grown by almost 28%, despite Japanese usage tailing off by more than 12% from 2000 and showing only a slight recovery in 2003 and 2004. The value of the Japanese market has declined from about US\$9.4 billion in 2000 to US\$8.2 billion in 2004. The continued decline, from 1997 onwards, has been broad based, in that all sectors, from data cables to winding wires have experienced a similar trend. The Japanese consumption of fiber optic cables has also dropped markedly since the 2001 peak (following NTT's high domestic demand) and since 2003 mainly as a result of a slow down in the national deployment of fiber-to-the-home. In 2004 there seemed to be hope ahead after NTT's rumored investment in their fiber optic network, though this has not in fact happened on any significant scale and we foresee the situation remaining much the same for the near future.

## Korean Wire & Cable Consumption Slips in 2004



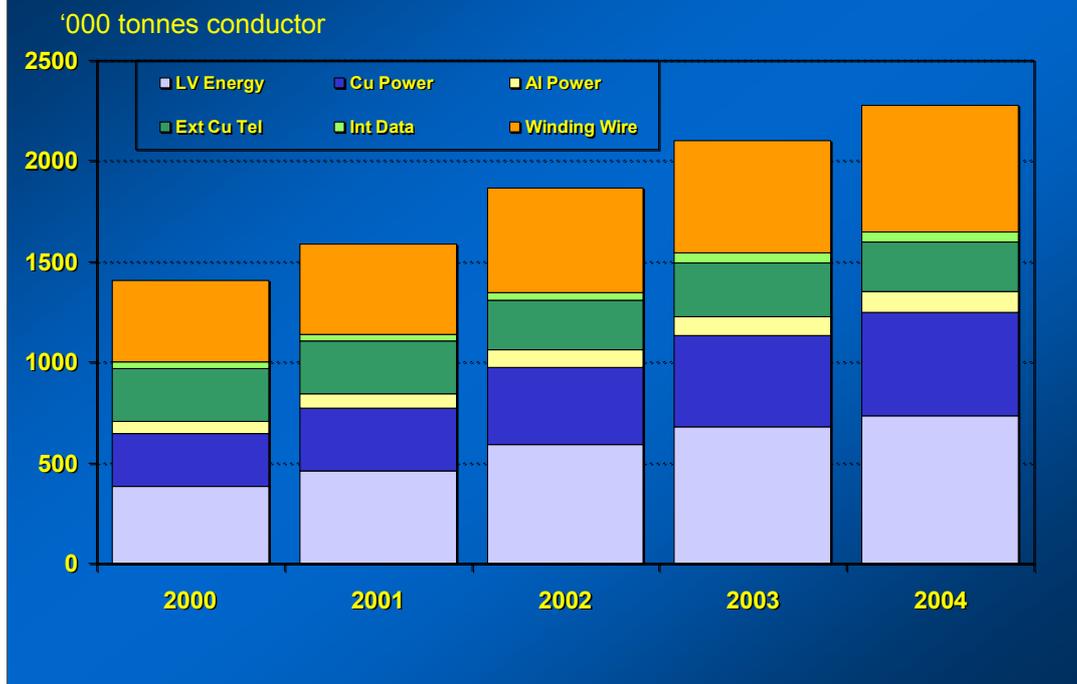
Following the economic shock that affected South Korea in 1997/8, a period of recovery has taken place and in recent years – 2002 onwards – GDP growth at around 3-4 % has been maintained. The assessment is that this economic growth will continue in the 4-5% p.a. range at least until 2008. Although the Korean market exhibited a re-growth during 2001-2003, it too has stagnated somewhat in 2004, mainly due, we believe, to the slow down in the construction industry, specifically for new buildings, where cable usage is the greatest. Conversely, the Korean ship building industry has shown strong improvement following a couple of flat years in 2001 and 2002, illustrating the country's premier position in this market. On the power cables front, the Korean Electric Power Corporation (KEPCO) has announced that it's capital spending in 2005 will increase from 8.4 trillion Won from 6.6 trillion Won in 2004, although it is not yet clear whether this will result in significantly increased power cable orders.

## Taiwanese Wire & Cable Consumption Surges in 2004



The Taiwanese economy has shown good recovery following a very difficult year in 2001 when a global IT and communications investment downturn severely battered its export markets. GDP and industrial production indices have returned to positive growth and future growth is expected to be in the range of 4-5% p.a. LV energy and copper power cables have shown strong progress in the 2003-04 period with the markets increasing in value to some US\$ 853 million and 721 million respectively. This has been partially due to public sector investment by companies such as Taipower and the Taiwan High Speed Rail Corporation as well as increasing exports to China in support of its labor intensive manufacturing operations. As far as external copper telecom cables are concerned, a decline in the installation of new fixed lines, typically 500,000 - 600,000 lines per year in the 1990's fell to 200 -250,000 per year between 2000 and 2003 and only 100,000 by the leading operator, Chungwha Telecom in 2004. However, growth in ADSL subscribers has helped support the demand in recent years. The trend in the Taiwanese winding wire market has largely been to follow the user industries to the Chinese mainland. This is illustrated by the fact that the peak of magnet wire production of 108,000 tons in 1997 reduced to only 76,000 tons by 2000, a situation which has remained more or less steady since. Also, the consumption of magnet wire in Taiwan has been maintained in the 20-30,000 tons per year level throughout the last 5 years. Even after some recovery in 2004 the figure for domestic consumption only rose to 38,000 tons, or approximately 50% of production.

## Chinese Cable Consumption Keeps Climbing



Now, the slide you've all been expecting, China. The country's GDP growth is expected to be 9% in 2005, with industrial production forecast to rise by 15%. Furthermore, this general level of expansion is expected to continue for the next 5 years and will cause the internal wire & cable market to expand with it, together with increasing cable exports. The impressive growth of the economy has caused a development of the wire & cable market totaling 61% over the last 4 years, with an even more impressive 73% growth in cable production. This equates to almost doubling the market value since 2000. It has chiefly been fuelled by strong growth in copper power cables, whilst winding wires have also shown significant growth, particularly since 2003. LV energy cables have also matched this level of growth in the last 4 years and have a value around US\$3.5 billion. When looking at the product mix, building wire represents only about 45% of this total, due to the large Chinese markets for appliance wire and other LV cables (such as flexibles) used in cordsets and other assemblies. Similarly, there is a fast growing market for automotive wire. The sheer number of domestic dwellings being built in China overcomes the relatively low intensity of use to generate this level of demand. All the leading Asian auto harness makers have established plants in China to benefit from low operating costs and these are supported by many of the foreign wire & cable investments in the country.

As you would expect, a country developing at the rate that China is has needs for ever-expanding infrastructure. This is reflected in the double-digit growth of copper power cable consumption in the last 5 years. Large towns and cities are expanding their transmission and distribution networks to cope with increasing demand and since much of the networks are underground, the growth in insulated power cable usage is the consequence.

China's telecom network expanded at the rate of over 49 million new lines in 2004 and was slightly higher than in 2003, however, we see a complicating factor in the market for external copper telecom cables, since 2005 data shows that Wireless Local Loop (WLL) technology – using less copper cable – accounts for 60% of new line additions. We therefore believe that the Chinese market for this product has probably peaked (at 83.4 million pair-km) in 2003.

Fiber optic cable consumption has been fairly steady although now, in the second half of 2005, there has been a slight reduction in demand due to uncertainty in procurement by China Unicom, China Telecom and China Netcom and over the proposed break up of China Unicom. On the other hand, China Mobilecom has increased its demand and in the longer term, network investment and infrastructure including the run up to the 2008 Olympic games, is expected to renew demand.

Growth of the Chinese magnet wire market has developed from two particular areas, firstly as an input into consuming industries that have relocated from other countries which then export the equipment containing the magnet wire, secondly, from the increasing internal consumption generated by the growing economy. The end result is a market that has grown by over 50% since 2000.

## Key Market Characteristics

- Japan is a very mature market, with cable production in decline
- South Korea is transitioning between a developing market and a mature market, and the cable industry will need to adjust to meet this change
- Taiwan is a relatively mature market. Its relationship with China is the key to its future outlook.
- China cannot really be viewed as single market for most product lines. It is a collection of regional markets. Only fiber optic cable, HV cable and some other niche products operate as a national market
- In terms of the relationship between these four countries the main feature has been the relocation of many cable consuming industries from N.E. Asia to China, with production of cable used by these industries following.

So, how do the individual country markets look and where do they differ from each other?

Japan is a very mature market with a well-established infrastructure, leading to the decline in production that we have seen.

South Korea has grown steadily over recent years, but is now itself becoming mature, resulting in the slow down in consumption in 2004.

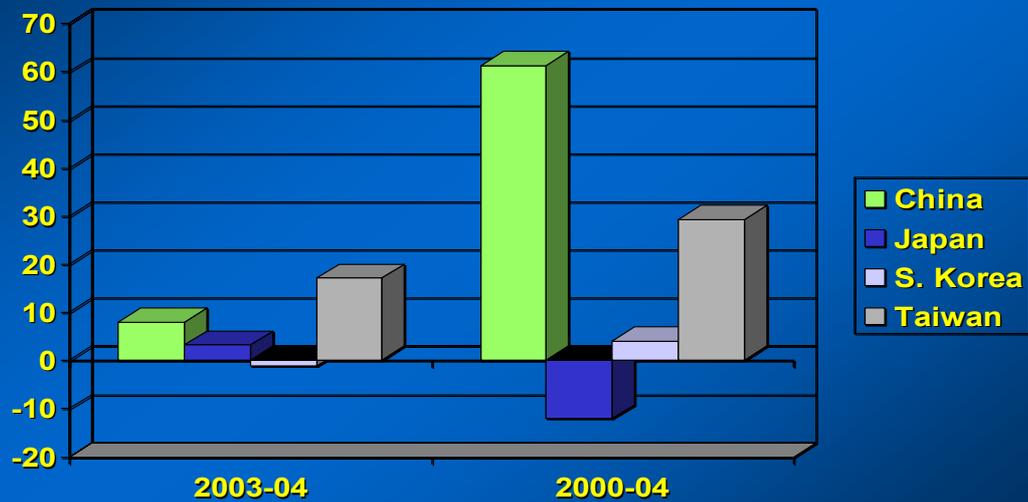
Taiwan is also a relatively mature market, having spearheaded industrial growth in the region many years ago. It now needs to look to its relationships in the region, especially the somewhat rocky one with China, in order to develop in the future.

The story of the region, as elsewhere, is that user industries have relocated from NE Asia to China in search of ever lower labor costs, with the corollary that the wire & cable manufacture to support these industries has moved there too.

This can be visualized on the next slide, which shows the change in the vastly different growth rates for metallic cable consumption across the region between 2003-4 and 2000-4

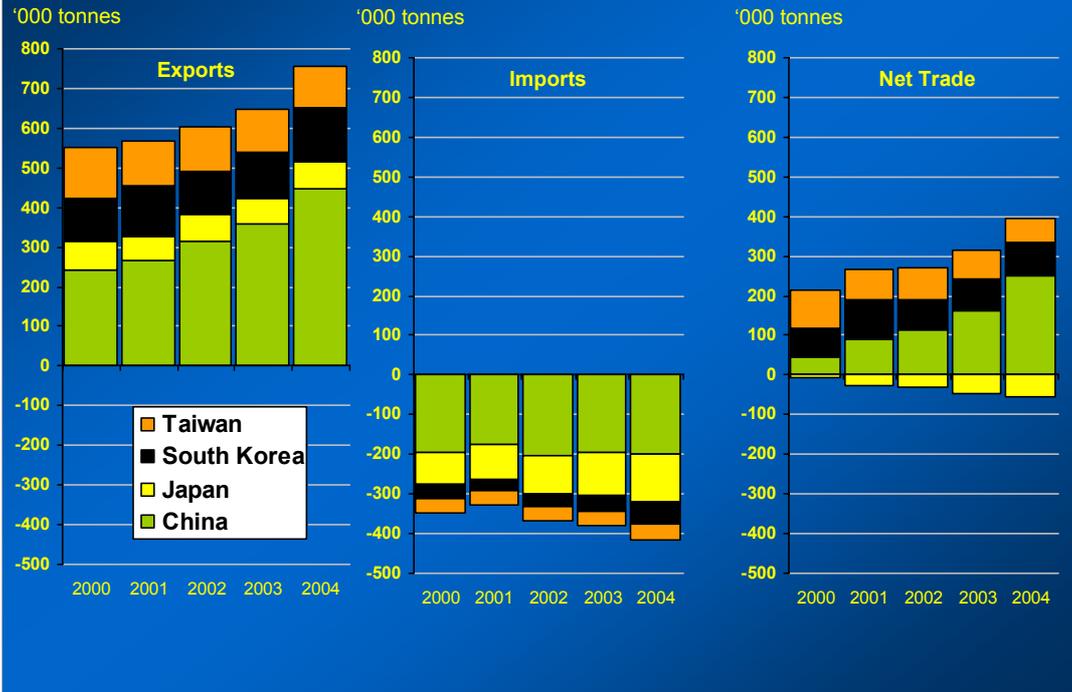
## Very Different Growth Rates for Metallic Cables by Volume

% Change in Consumption Over Period



Here the earlier 12% p.a. growth in Chinese consumption can be seen to have slowed slightly to around 8% p.a. in 2003-2004.

## Japan Only Net Importer and Growing



The Japanese market has traditionally been one that was difficult for overseas manufacturers to enter and whilst import penetration has increased to about 15% in 2004, we believe that much of this is due to “re-importing” of wire & cable produced by offshore Japanese subsidiaries. Similarly, manufacturing costs in Japan are higher than in many other markets resulting in exports accounting for only 8.3% of all wire and cable production. A look at the trade balances of the four countries shows that only Japan is a net importer of cable and that the trend is growing quite rapidly.

## Trade Patterns

- Growing exports from China, although much of this is cable assemblies and harnesses
- Growing imports of cable into Japan, but again much of this is harnesses and cable assemblies
- Korea is widening its geographical focus for exports. It is finding increased competition for its exports in nearby countries and so is looking further afield. For example it has had success growing exports to the Middle East.
- Taiwanese exports are declining, as its markets in China are replaced by local suppliers.

The reasons behind these patterns are as follows:

China's exports continue to grow and include cable assemblies and wiring harnesses

Japan is importing a growing amount of product, again including cable assemblies and wiring harnesses

South Korea is reacting to competition in its home region by looking more aggressively at other regional markets, including, for instance, the Middle East.

Taiwan is suffering from the transplanted manufacturers in China encroaching on its traditional export markets.

## Leading Cable Producers

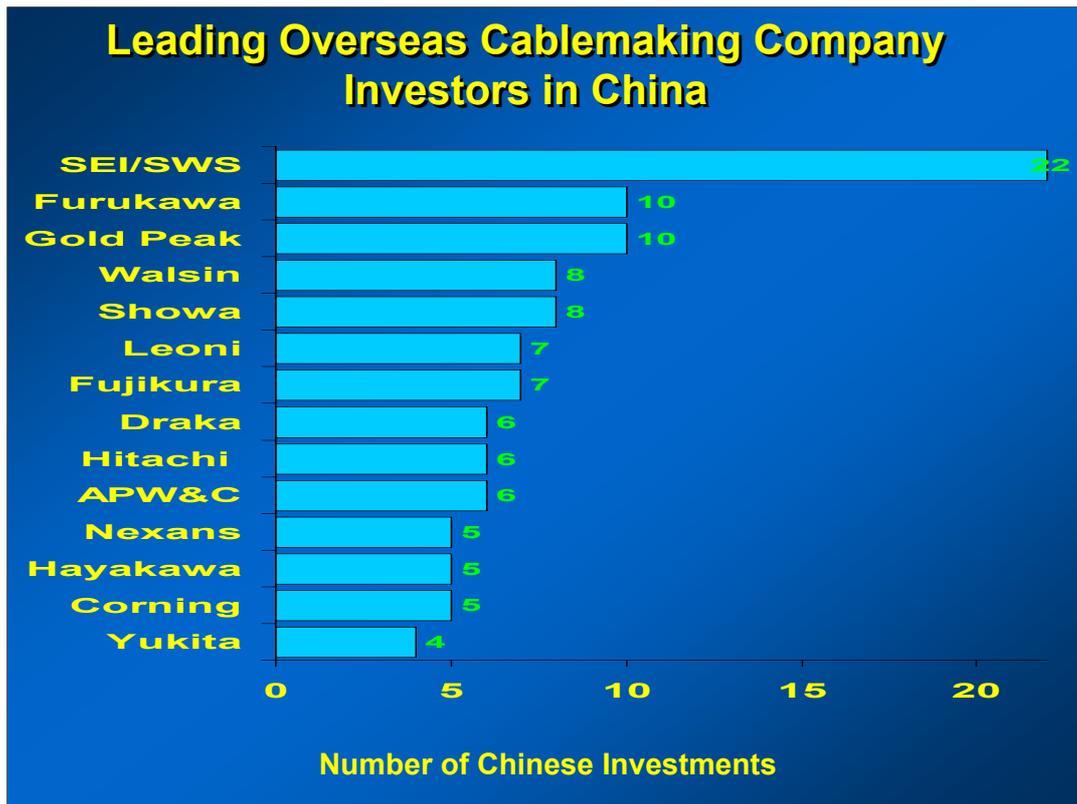
- The largest cablemakers in the region are the leading Japanese companies.
- The two largest Korean manufacturers are growing players on a global level, but have been cautious about expanding into China.
- The leading Taiwanese manufacturers are very active in China, but much less so around the world.
- The Chinese cable industry is still very fragmented. There has been some limited consolidation and some larger groups are emerging, but there is a long way to go.
- In general companies in Asia have a much broader product range and industry consolidation has been much slower than in North America and Western Europe.

A review of the leading manufacturers in the area shows that they are the main Japanese producers, whilst the 2 largest South Korean manufacturers are expanding on a global rather than a regional (i.e. Chinese) basis.

The top Taiwanese manufacturers are still very active in and dependent on China, but have been slow to extend their reach to outside the area.

China has a very diverse and entrepreneurial wire & cable industry, with hundreds, in fact probably thousands, of small independent manufacturers, few of which are coalescing into larger, more powerful groupings.

Finally, part of the reason for slow consolidation of the industry in NE Asia has been the fact that many companies have a very diverse product range which makes finding a strategic fit for partnering much more difficult than in the more focussed industry in Europe and the US.



This chart shows the number of external investments from NE Asia into China up to 2004. It shows that Sumitomo is by far the most active, with 22 investments followed by its Japanese competitor Furukawa and Hong Kong's Gold Peak Industries each having 10. In all, almost 250 companies have been established in China by foreign investors.

## Regional Outlook

- Current economic forecasts indicate that China is expected to continue to grow strongly. This, along with a need for heavy spending on infrastructure, should drive continued strong growth in cable consumption.
- As the level of net exports continues to rise, production growth should continue to outstrip consumption growth in China.
- The Japanese market is showing no signs of escaping from its current stagnation. Growing imports are a further threat to local manufacturers.
- With a maturing home market and growing competition in export markets, the Korean cable industry is facing challenges.
- Taiwan's outlook is closely allied to its relationship with China.

Just a final review now of the outlook for the region:

China's domestic consumption will continue to grow and continuing export growth in W&C means that production growth should also continue.

Japan is suffering from increased import penetration and in its mature state, it is difficult to see how the industry will re-vitalize itself.

South Korea has an opportunity to regenerate its markets on the basis of increased infrastructure investment funding by pension funds and state-linked corporations resulting from government efforts to stimulate economic recovery.

Whilst Taiwan has historically been less dependent on its local market than other economies in the area, due to strong exports of electronic goods, we believe that its future is very dependent on forging and maintaining strong links with the Chinese economy.

Ladies and gentlemen, that concludes my presentation, thank you for your attention.