GLOBAL MARKETPLACE Trends

Seize the moment

The growing market for railway equipment and services is becoming increasingly competitive as trade liberalisation allows companies to compete in many different regions. Meanwhile, technical evolution is highlighting the divide between high-value and low-cost production.

After many years of stagnation and decline, the railway market is growing rapidly, and it is forecast to continue expanding despite the tough economic conditions prevailing in many parts of the world. Global demographic and economic drivers such as urbanisation, energy efficiency and the globalisation of trade are often cited as underlying factors, but at the same time there is a growing recognition among both politicians and the wider public that the ever-increasing demand for travel and freight transport cannot be met effectively with the current mix of transport modes.

At the same time, reform and restructuring of the rail sector in many countries has been opening up state-owned operators to competition, outsourcing the supply of equipment and services, and removing trade barriers to facilitate international tendering.

These macro-changes have been reflected in the changing shape of the railway supply industry over the past three decades. Mergers between established companies to create multinational players, spin-offs and the emergence of niche specialists have radically altered the competitive landscape.

According to the latest World Rail Market Study compiled for the European suppliers association UNIFE by Roland Berger (RG 9.14 p125), the total value of the global rail market has increased by 50% in less than a decade, from around €100bn a year in 2006 to €150bn today. The consultants predict further growth averaging 2·7% a year, which would see the annual market passing the €175bn mark by 2019.

From the suppliers' perspective, a key factor is the degree of 'accessibility' to individual markets: whether a country or railway operator is open to buying equipment and services from international suppliers, or restricts the business to domestic companies, as with the 'Buy America' rules in the USA.

Roland Berger estimates that around 68% of the world rail market is currently accessible, adding that this figure has grown in recent years despite emerging indications of greater protectionism in markets such as China and India. It notes that 'emerging markets usually have high accessibility ratios', perhaps reflecting the lack of an established domestic supply base.

Manufacturers such as Plasser & Theurer have been able to develop business in many parts of the world, including substantial orders for the Asian market.

175 €bn

ESTIMATED ANNUAL VALUE OF GLOBAL MARKET FOR RAILWAY EQUIPMENT AND SERVICES BY 2017-19

At present, Western Europe remains the world's largest market, with an annual contract value of around €40bn. Asia-Pacific is currently in second place, and the two regions account for 54% of the total market. With growth rates averaging more than 4%, Asia-Pacific is expected to pass the €50bn mark in the next five years, overtaking Europe to become the world's biggest rail market by volume, if not by accessibility.

A decade ago, Eastern Europe and the CIS region were helping to drive growth in the rail market, but today all eyes are on Latin America and Africa/Middle East, where ambitious investment programmes in Brazil, Saudi Arabia and South Africa are engendering optimism. Both regions have recorded strong growth in recent years, albeit from a small base.

Market sectors

In terms of technology, the largest and most competitive sector is rolling stock, which accounts for more than 25% of the total market value. This covers everything from high speed trains to freight wagons, but the bulk of the business is formed of conventional passenger trains, suburban and metro trainsets, reflecting the dominant role that rail plays in providing urban transport in mature countries.

The market for railway infrastructure is clearly less suitable for international competition, because of the inherent practicalities of building or renewing assets in situ. However, there is still a competitive market for high-value components such as rail and electrification equipment, while the markets for control systems, signalling and communications are equally open. The adoption of broadly off-the-shelf technologies such as ERTMS and CBTC for new-build railways or to replace bespoke legacy control systems will also help to increase competition in this sector.

Supply industry changes

As the market evolves, so too does the supply industry. The big global players such as Alstom, Bombardier and Siemens, which emerged in the 1990s through a series of mergers across the European supply sector, are now being challenged by the likes of CNR and CSR from China (p36), South Korea's Hyundai Rotem and Japan's Hitachi (p32), as well as rapidly-growing European rivals such as Stadler (p28), CAF, Talgo or Pesa.

US builders remain strong in the locomotive sector, with GE Transportation and EMD exporting to many parts of the world, but with these exceptions, North American suppliers do not export much to the international market.

As yet we have seen no sign of a Russian multinational. After dipping into the Western European market, Transmashholding has primarily focused on the huge requirements of Russian Railways, which is now one of its main shareholders, working in partnership with Alstom, while Siemens has signed up with Sinara Electrical Machines to serve the 1520 market. India's indigenous rolling stock sector has been growing slowly, but the established players are in-house subsidiaries of the national railway, and the new entrants are largely focused on the rapidly-growing domestic metro market.

There has to be a question over the future of the big 'systems integrators', who seem to have been marking time in recent years. Some appear to have been distracted by activities outside the rail market; Siemens restructured again in October while Alstom's shareholders are due to vote this month on the sale of its power activities to General Electric. Overcapacity is still a problem in Europe, as companies move more assembly work to subsidiaries or partners in low-cost countries, including Poland, India and China. Mergers and acquisitions continue, with Hitachi submitting a bid for Finmeccanica's AnsaldoBreda and Ansaldo STS businesses on November 17 and China considering a merger of CNR and CSR.

In some ways, these changes reflect the relative decline in returns from train assembly and the greater significance of high-value elements such as design, systems integration and the supply of specialist components and subsystems. This has seen the rise of 'top tier' partners such as ABB, which is providing AC traction equipment for both Stadler EMUs and Vossloh locomotives.

Other notable players in the subsystems sector include Knorr Bremse in the brakes market, Voith for transmissions and couplings, Faiveley for air-conditioning, and GHH-Bonatrans for wheels. These companies have increasingly been expanding their dominance of specific segments through strategic acquisitions of both competitors and complementary businesses. Power and traction technology in particular has attracted strong interest among firms that may be primarily active in other industry sectors.

A possible factor in the market growth since 2006 has been the adaptability and willingness of companies to move into new disciplines, such as monitoring specialist MerMec entering the signalling market, or rolling stock suppliers taking on long-term vehicle maintenance contracts.

Looking ahead

So what will happen to the rail market in the coming decade? Given the relatively slow pace of change and long life-cycles for railway equipment, we would be cautious about radical upheavals, although market globalisation will undoubtedly continue. In our Viewpoint page (p54), Matt McInnes suggests that the concept of Industry 4.0 will radically alter the relationship between high-value design and low-cost manufacturing, which in some ways mirrors the changes that we are already seeing.

Current UNIFE Chairman Lutz Bertling, the President & COO of Bombardier Transportation, warned at the European Rail Summit in November that 'the Chinese are at the gates'. Like most of his colleagues, he wants to see rapid implementation of reforms to smooth the authorisation of rolling stock across Europe, insisting that a strong home market is essential to support competitiveness in the global markets.

Chinese suppliers are poised to enter North America, with CNR selected to supply metro cars to Boston (RG 11.14 p15), and have made progress in markets such as Australia and Latin America. They also enjoy privileged access to parts of Africa through state-supported investment programmes. However, questions remain about the long-term durability of their products, given some high-profile problems in different countries, which must raise questions in the minds of European procurement offices.

Nevertheless, burgeoning markets such as Turkey, Brazil and maybe the MENA region provide opportunities to put a toe in the water, perhaps through partnerships with local suppliers as Hyundai Rotem has done with Eurotem in Turkey.

What does seem clear is that the rail market is open for the next breed of mid-sized multi-disciplinary companies, able to harness their competitive skills and adapt their product ranges. Will the versatility and rapid progress displayed by the medium-sized players in recent years see the break-up or downsizing of the big system houses, as some have suggested? It should certainly not be ruled out. ■

Nose modules for several types of multiple-unit await final assembly at the Stadler factory in Bussnang.