Global Engineering

Sector Review 2011

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Sector Review 2011

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Report

About the report

This sector report was coordinated by the Catalyst Corporate Finance research team on behalf of the international Mergers Alliance partnership. To compile our findings we conducted interviews with our sector experts in each member firm within the Mergers Alliance partnership.

We also surveyed owners and senior executives within engineered product sector organisations and private equity investors worldwide.

Deal Focus

Within each country's Deal Focus we review merger and acquisition (M&A) activity, focusing on key deals and trends within the engineering sector defined as including those businesses with activities involved in the production of engineered products. Engineered products will typically require a high design input, ongoing product innovation and development and will be manufactured to a high level of precision. We also include a table of recent transactions where the target company is located in the country under review.

Additionally, we provide an overview of the engineered product sector as a whole, highlighting the market structure as well as commenting on the key trends and the factors influencing M&A. We end by providing predications for M&A in the sector over the course of the next 18 months.

Introduction

At the time of writing, economies around the world are emerging from the aftermath of the global recession and are on a fragile path to recovery. As you will see from the contributions by our sector experts across the world it is clear that this year and next will bring both opportunities and further challenges for those of us operating in the engineering sector.

In our own specialism of corporate mergers and acquisitions (M&A), engineering transaction levels during the first half of 2010 are showing signs of recovery following a torrid 2009. As trading visibility improves for the larger engineering firms we expect buyer confidence and, in due course, transaction levels to rise.

You will find in our report a great deal of market-leading insight into the key issues facing the sector in 2010 and beyond including: how engineering firms in developed economies have created positions of clear leadership in key sub-sectors, the demand challenges facing engineering firms in emerging economies and the wide ranging implications of recent government policy developments on the engineering sector.

Our work also highlights the key role of the BRIC nations in the globalisation of the engineering sector and in the shaping of M&A strategies of Western buyers.

We also examine how the ownership structure of engineering firms in continental Europe will provide ongoing M&A opportunities for strategic and private equity acquirers.

As the global recovery takes hold, we at Mergers Alliance are ideally placed to help you. Whether you seek growth through acquisition, wish to restructure or realize value in your business, our international advisors are in a unique position to help you – Local knowledge…Global reach. Our member firms have a prominent position in boardrooms across the world and are renowned for delivering award winning partner-led advisory service with seamless international cooperation.

We hope you enjoy reading our report and welcome any thoughts or additions you might like to contribute.

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Sector Review 2011

Report Highlights

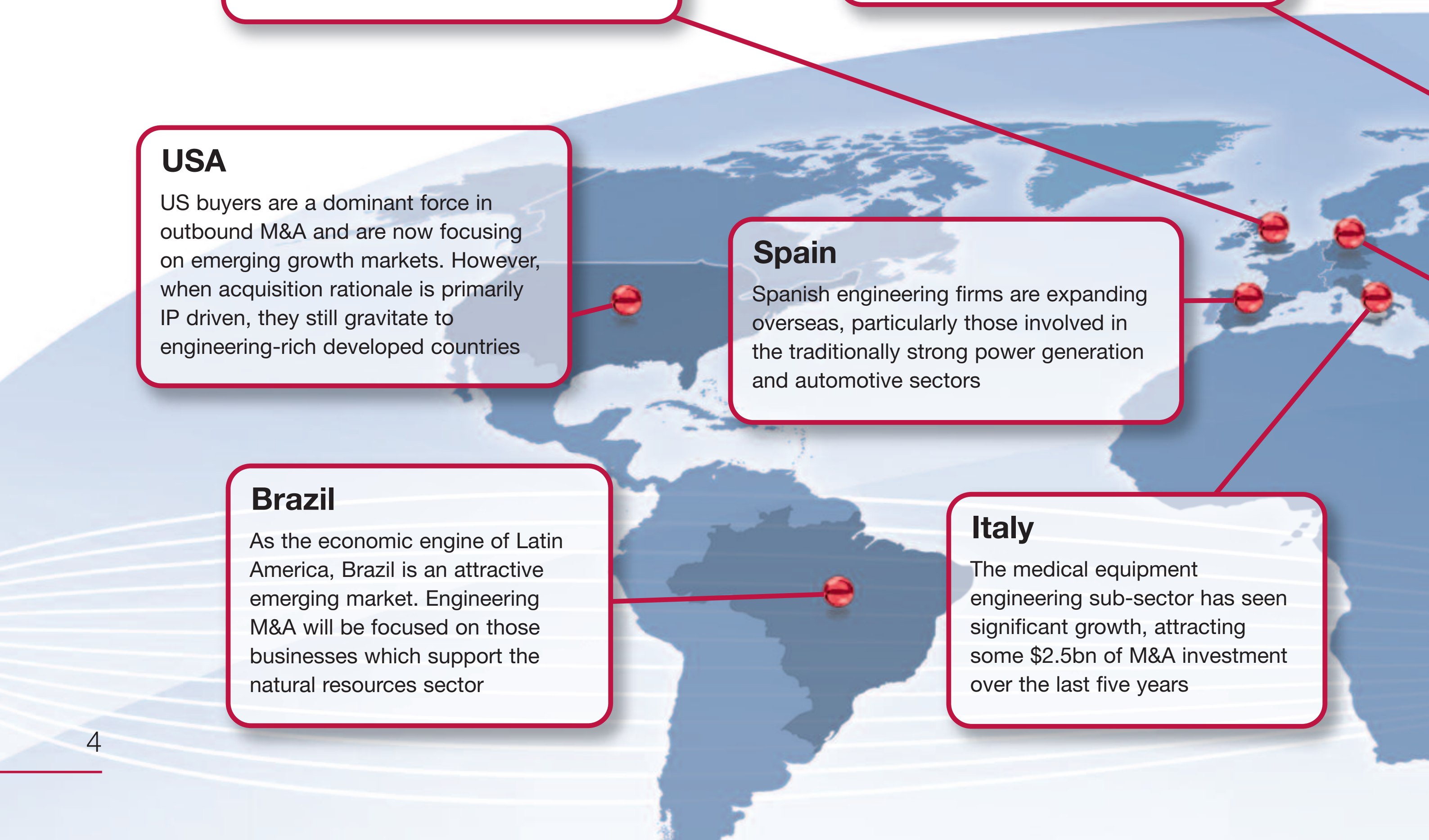
We at Mergers Alliance believe the main factors to shape M&A in the engineering sector over the next five years will be:

Engineering leadership

Engineering firms, particularly those from developed economies, have created positions of leadership in specific engineering sub-sectors. This advantage has been borne out of decades of innovation through R&D, constant refinement of their global supply chains and robust trading track records. Countries which have developed clear engineering leadership include; Germany in industrial machinery, Japan and Spain in automotive, the US in defence and the UK in aerospace.

Globalisation

The globalisation of the engineering sector has resulted in a significant increase in cross-border M&A volumes over the past 20 years. During this period, US companies have been by far the most dominant acquirers of overseas engineering businesses. Acquisitions have been driven by US buyers wishing to access new products and technologies, geographical markets and to gain exposure to higher growth regions.



UK
Over half of all engineering deals have been in sectors where the UK has established significant comparative advantage; aerospace, oil & gas and automotive components

Russia
State-owned engineering firms will be important players in the M&A market as the government seeks further influence in strategically important sub-sectors

USA
US buyers are a dominant force in outbound M&A and are now focusing on emerging growth markets. However, when acquisition rationale is primarily IP driven, they still gravitate to engineering-rich developed countries

Spain
Spanish engineering firms are expanding overseas, particularly those involved in the traditionally strong power generation and automotive sectors

Brazil
As the economic engine of Latin America, Brazil is an attractive emerging market. Engineering M&A will be focused on those businesses which support the natural resources sector

Italy
The medical equipment engineering sub-sector has seen significant growth, attracting some $2.5bn of M&A investment over the last five years

Emerging economies

The growth in the emerging BRIC economies has created a demand for engineering products which cannot be satisfied by local engineering companies alone. Massive public infrastructure investment, growth in the natural resources sector, rapid expansion in consumer spending and booming export markets are all driving demand. To fully capitalize on the opportunities, engineering firms are acquiring new technologies, establishing additional production capacity and partnering with global players.

Infrastructure development

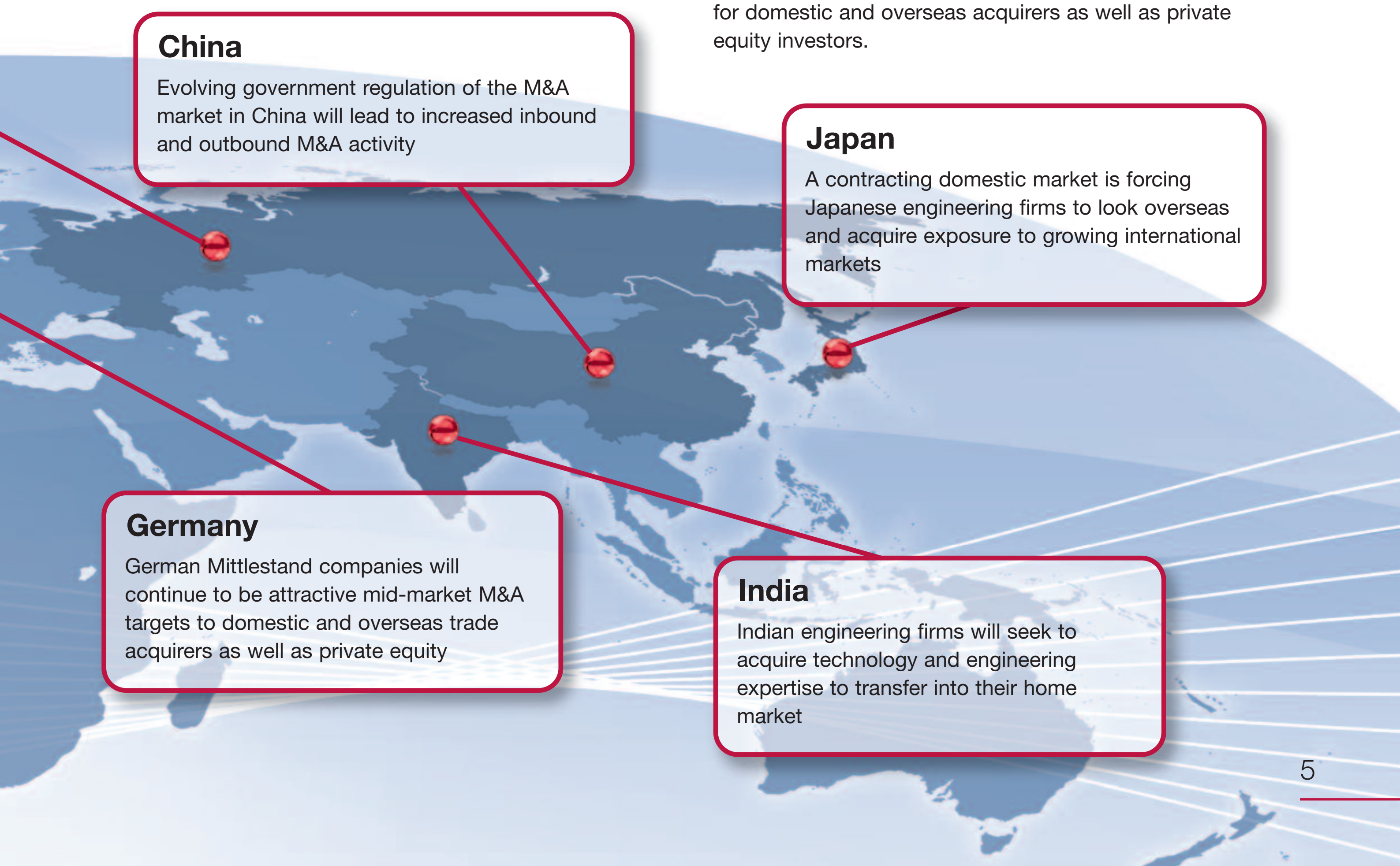
The scale of global infrastructure investment is unprecedented and the engineering industry will be pivotal in the delivery of these projects. In emerging economies, new infrastructure is needed to support development and in developed economies countries there is a pressing need to replace existing, obsolete infrastructure. Around the world engineering expertise is increasingly in demand and is stimulating global M&A across the industry.

Government policy

Following the recession, many countries have emerged with new or chastened governments in office. New policies have been developed to address budget deficits and debt repayment plans, predominantly through austerity measures. Some governments are reverting to protectionist policy in order to defend key sectors, including the use of subsidies, state sponsored consolidation and currency controls to ensure their exporters remain competitive. Policy has also contributed to supporting new markets, especially renewable energy, and almost all governments now have a ‘green’ policy. Whatever the policy direction taken, we see this having an important effect on M&A within the engineering sector.

Ownership structure

Beyond the large engineering conglomerates which serve a number of engineering sub-sectors, the market remains fragmented with a large number of SMEs. These firms are often family owned and focused on a specific engineering niche. This trend is particularly strong in continental European countries such as Germany and Italy, where there are a number of highly attractive M&A targets for domestic and overseas acquirers as well as private equity investors.



Brazil

Capital City: Brasília
Population: 198,739,269
Area: 8,511,965 sq km
Time zone: GMT -3

"Leading Brazilian engineering companies are seeking to expand their global footprints, particularly in Latin American and emerging markets, so we expect to see an upward trend in outbound M&A over the next few years"

Leonardo Antunes, BroadSpan Capital

M&A activity on the rise

M&A activity across the whole of the Brazilian economy is at record levels with over 350 deals announced up to September 2010. M&A activity in the engineering sector has however been modest and is unlikely to reach the peak of 2008 but nevertheless is rising. Despite this lower activity level, valuations finally appear to be on the rise, which is a promising development and likely to impact positively on M&A in the sector over the next year.

Many Brazilian engineering companies have attracted interest from foreign buyers, especially from the US and Western Europe, and as a result almost half of all engineering deals over the last four years have involved overseas acquirers. The acquired companies supply products into a variety of end markets, often the automotive sector but increasingly the oil & gas market. Brazil is rich in resources such as iron ore, bauxite and petroleum and is therefore particularly appealing to international companies who are increasingly seeking investments in resource-rich countries.

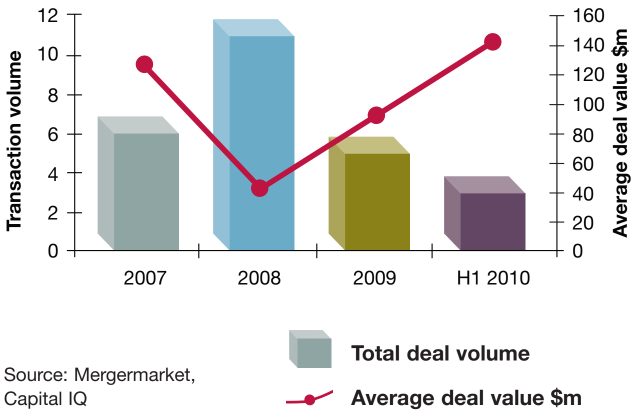
Brazilian engineering expands its geographic footprint

There continues to be interest in outbound M&A with a number of active Brazilian acquirers looking to buy foreign businesses to expand their geographical footprint. This year Brazilian machine tool maker Industrias Romi offered $110m to acquire Hardinge Inc, a tool maker based in New York and owner of the renowned Bridgeport marque. Whilst the approach was rebuffed, Romi CEO dos Santos argued at the time "that a combined company will have the scale to invest in strategic opportunities to expand in emerging markets".

Other buyers include Lupatech, a publically listed producer of industrial valves and micro casting parts for the oil & gas sector. The company has been seeking targets across Latin America to expand its product portfolio. In late 2007, Lupatech, together with French private equity firm Axxon Group, acquired Argentina based Aspro, a supplier of equipment for compressing natural gas for $85m. WEG, another listed Brazilian multinational, producer of electromechanical and electronic systems, is currently looking for targets within the emerging markets and has acquired Instrutech (Brazil), Voltran (Mexico) and Zest Group (South Africa) within the last three months.

This trend for Brazilian outbound acquisitions is likely to continue due to the relative cash strength of Brazilian companies, a booming capital market and the relative strength of Brazilian banks which have opened credit lines for this type of deal.

M&A activity



Source: Mergermarket, Capital IQ

Consumer inclusion driving growth

Brazil is the economic engine of Latin America and accounts for at least half of the M&A in the region. It has been amongst the most resilient of global economies during the downturn as a result of lower levels of corporate and consumer debt, which have allowed companies and individuals to deal better with the effects of the financial crisis.

Brazil's economy has continued to expand in 2010 and is expected to grow by 7% this year. This growth is being driven by domestic consumption and is benefiting from millions of people emerging from poverty to join the consumer classes. Brazil's process of consumer inclusion means that more than 40m people are either joining the consumer base or moving to a higher level of consumption.

Automotive and oil & gas sectors key

Economic development is forcing the country to expand its production capacity especially in sub-sectors such as automotive manufacturing and oil & gas extraction/processing.

Brazil has received substantial investment from automotive manufacturers, particularly from Asia, who have installed production plants to capitalize on the Government's fiscal incentive schemes to increase car sales. This development has directly influenced the recent high growth rates in the autoparts segment.

Growth in the oil & gas sector has been underpinned by recent oil discoveries by Petrobras in the waters off the Brazilian coast. As the main player in the market, Petrobras dictates the shape of growth in the sector and is planning investments of c.$174bn to 2013, representing an annual increase of 55% compared to their previous five year plan. This commitment by Petrobras will result in significant growth for suppliers of engineered products and should ultimately lead to increased M&A in the oil & gas engineering sub-sector.

Recent transactions

Date	Target	Description	Acquirer	Deal Value (US$m)
Jun-10	MWL Brasil Rodas & Eixos	Wheels and axles	Goergsmarienhuette (Germany)	n/d
Jun-10	CanberaPumps do Brasil	Pumps	ITT Corp (USA)	n/d
Apr-10	Eletrônica Selenium	Loudspeakers	Harman International (USA)	n/d
Dec-09	Hiter Industria e Comercio	Valves	Tyco Flow Control (USA)	n/d
Nov-09	Mueller Mineira	Plastic components	Magneti Marelli (Italy)	n/d
Aug-09	Certain operations of ArvinMeritor	Steel wheels	Iochpe-Maxion	180
May-09	Romicron Products	Boring tools	Kennametal (USA)	n/d
Apr-09	Meridian Automotive Brazil	End modules and signal lighting	Citadel Plastics Holdings (USA)	n/d
Jan-09	Flywheel business of Sawem	Flywheels	Brembo (Italy)	4
Nov-08	Vanzin Industrial Auto Peças	Automotive parts	Tuper	n/d

Predictions

- The trend for foreign companies to acquire Brazilian engineering firms is set to continue in parallel with growth of the wider economy
- Overseas investment by Brazilian engineering firms is driven by a desire for geographic expansion, especially in Latin American and emerging markets
- The oil & gas and autoparts segments will remain the most active engineering sub-sectors for M&A in the next two years

Deal Focus

Capital City: Ottawa **Population:** 33,487,208
Area: 9,984,670 sq km **Time zone:** GMT -5

Canada

"In the past, many Canadian engineering firms were considered only as targets for large, international buyers. This trend is expected to reverse as the strength of the CDN$, robust corporate balance sheets and the health of the Canadian credit markets enables domestic acquirers to competitively engage in outbound M&A"

Darren Williams, Solaris Capital Advisors

Consistent transaction volumes

M&A transaction volumes in the Canadian engineering sector have remained resolutely flat over the last three years with 20 to 25 transactions per annum. The average transaction value however has fallen significantly from $50m to just $12m during the first half of 2010 as the sector saw only a handful of very small transactions completed.

The sharp peak and trough in M&A volumes that has characterized the sector in many countries did not occur in Canada. This is partly due to the sector being relatively small in comparison to Canada's primary resources sectors but also due to Canadian corporate fiscal conservatism, which prevented the M&A market over-heating as it did so spectacularly in other economies around the world. Canada's major banks emerged from the financial crisis of 2008-09 among the strongest in the world, owing to the country's tradition of conservative lending practices and strong capitalization.

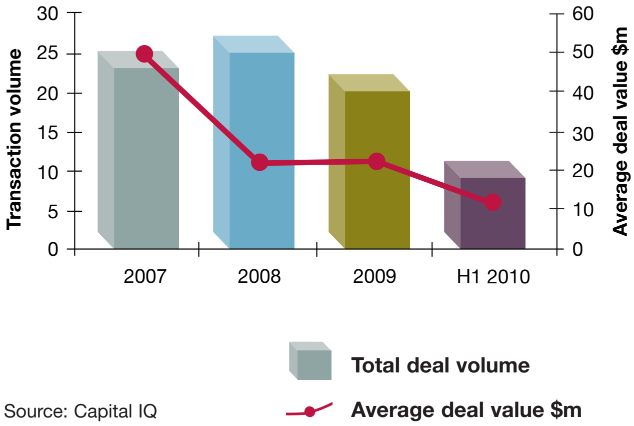
Rich target for US buyers

The majority of transactions were cross-border with international buyers acquiring 43 Canadian engineering businesses in the last three years accounting for 53% of volume and 77% of value. This is explained by the fact that US buyers, despite having similar strategic M&A rationales to domestic Canadian acquirers, are classed as overseas buyers.

In the past, many Canadian engineering firms were considered as targets for large, international acquirers. This trend is expected to reverse as the strength of the CDN$, robust corporate balance sheets and the health of the Canadian credit markets enables domestic acquirers to competitively engage in outbound M&A.

One such corporate is ATS Automation Tooling Systems, a manufacturer of automation products. In March ATS announced the proposed $62m acquisition of German group Sortimat. Based in Stuttgart, Sortimat is a manufacturer of specialized assembly systems for medical products and pharmaceutical dosing devices, achieving revenues of c.$80m in 2009. The acquisition supports ATS' strategy to expand its position in the global automation market and enhances growth opportunities in the key strategic segment of healthcare.

M&A activity



Source: Capital IQ

Economy tied to natural resources

The majority of Canada's GDP is tied to the resources sectors (oil & gas, mining, agriculture and forestry) as the country continues to exploit its enormous reserves of natural resources. Canada is the US's largest foreign supplier of energy, including oil, gas, uranium, and electric power. Given its great natural resources, skilled labour force, and modern capital plant, Canada enjoys a unique position as one of the US's most important trading

partners. However, the specialist equipment and machinery used in these end markets is predominately manufactured by overseas companies, with Italian and German manufacturers monopolizing supply.

The province of Ontario is Canada's leading manufacturing region, accounting for approximately half of total national manufacturing shipments and is also a major centre for the natural resources industry. In March 2010, The Government of Ontario proposed sweeping new legislation to attract investment in renewable energy technology and create new 'green economy' jobs. The proposed bill, the Green Energy Act (GEA), if passed, will provide significant revenue incentives for businesses establishing and growing renewable energy manufacturing capabilities in the province. Firms such as Canadian Solar, Arise Technologies and of course ATS are likely to be major benefactors from this new legislation.

Recent transactions

Date	Target	Description	Acquirer	Deal Value (US$m)
Aug-10	Micro Thermo Technologies	Refrigeration controls	Parker Hannifin (USA)	n/d
Jul-10	G&B Specialities	Rail signal products	Wabtec (USA)	35
Jun-10	Macro Engineering	Components for plastic film industry	Dalian Rubber & Plastics (China)	9
May-10	Motor Business of Von Weise	DC electric motors	Bison Gear & Engineering (USA)	n/d
Apr-10	NSE-Automatech	Machinery and equipment	NSE Aero North America	n/d
Apr-10	Routes AstroEngineering	Aerospace instrumentation	COM DEV International	1.5
Mar-10	Celco Controls	Automated control systems	High Road Capital Partners (USA)	n/d
Feb-10	Arpeco Engineering	Printing machines	Mark Andy (USA)	n/d
Nov-09	Composotech Structures Inc	Composite structures	Oneworld Energy	n/d
Oct-09	Coretec	Printed circuit boards	DDI Corp (USA)	23.4

Dominant global players

Engineering sub-sectors in which Canada does possess world leading capabilities include automotive (Magna International), aerospace (Bombardier) and communications (Research In Motion).

Ontario based Magna International is one of the world's largest and most diversified Tier 1 automotive component suppliers, generating $17bn revenues annually. Magna's success has been built on the diversity of its product offering and the ability to serve OEM clients on a global basis. This success has been supported by strategic international M&A activity. Recent deals include the acquisition of Karmann of Japan (manufacturer of convertible roofs) and Cadence Innovation of the Czech Republic (automotive interior and exterior plastic components and systems). With a net cash position of $1.5bn, Magna clearly has the fire power to continue making acquisitions and has stated its intention to pursue deals in the emerging markets of India, Russia, South America and China over the coming years.

Predictions

- The combination of strong balance sheets, functioning credit markets and a relatively strong CDN$ will enable major corporates to continue be competitive in acquiring overseas
- Many larger, global players have M&A strategies targeting the emerging BRIC economies
- The US will continue to be a major inward investor in Canada across a broad range of engineering sub-sectors

Capital City: Mexico City **Population:** 111,211,789
Area: 1,972,550 sq km **Time zone:** GMT -6

Mexico

"Although the Mexican engineering market is relatively small at the moment, the development of global industries such as automotive and aerospace within the country will ensure the sector scales up by 2020"

Luis Garcia, Sinergia Capital

Deal volumes recover in 2010

As a result of the global crisis and shortage of credit, Mexico like most other countries around the world suffered the effects of the global recession. Engineering transactions remained at a relatively constant level during 2007 and 2008, dipped in 2009 and have recovered in the first half of 2010. With more deals completed in H1 2010 than the whole of 2009, we are expecting a return to pre-crisis levels for the full year. So far however average deal values have remained fairly constant over the period.

Clear interest from Europe and the US

Around three quarters of all deals done in the Mexican engineering sector typically involve foreign buyers. These acquirers have tended to come from developed countries, particularly Western Europe and Mexico's neighbouring country the USA.

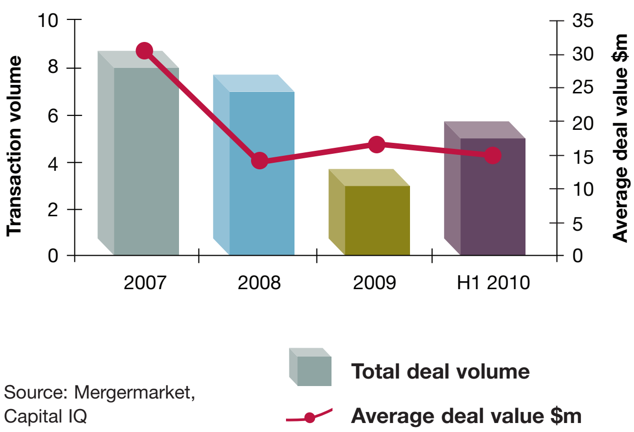
EMTE, a Spanish engineering company specialising in clean-room technology, acquired Eolis América Latina to further consolidate its position in Latin America. With this purchase, EMTE revenue base is now over $60m and it employs a team of 300 people worldwide. Mexico, as well as other Spanish speaking countries in Latin America are clearly attractive markets to Spanish companies like EMTE and hence the high level of inbound M&A from Spain.

US companies are also routine investors in the Mexican market, both at a 'greenfield' level and through acquisition. Thanks to Mexico's membership of NAFTA it is allowed to trade freely with the US and Canada and also has free-trade agreements with more than 30 other countries including members of the European Union and Japan. A key reason underlying much of the foreign investment within Mexico has to do with the country's extensive network of these free trade agreements and double taxation treaties, with respect to corporation tax.

Latin American expansion

The MERCOSUR trade agreement also has a positive bearing on Mexican interaction with Latin America. WEG, a Brazilian engineering multinational, recently invested in Voltran, a Mexican transformer manufacturer, taking a controlling stake of 60% in the business. The partnership between the two companies began in 2006, when WEG acquired a 30% stake in Voltran from the controlling shareholders, the Jimenez family. Voltran manufactures power and distribution transformers and recorded revenues of around $70m in 2009. WEG's CEO claimed "the acquisition brings synergy gains which will allow our progress in the local production of new lines, such as dry transformers and to supply more complex solutions, such as power substations."

M&A activity



Source: Mergermarket, Capital IQ

Auto industry relocating to Mexico

Despite the tough trading conditions within the worldwide automotive industry, the sector remains attractive in Mexico. A number of international OEMs continue to relocate production facilities to Mexico to benefit from a lower cost base. Exports of vehicles from Mexico internationally have increased over the last five years and strategic and institutional investors continue to invest incrementally.

One of the most notable automotive deals was the $75m acquisition of Nugar, a producer of autoparts, by a joint venture between DESC and Spanish firm CIE Automotive in 2007. The transaction allowed the DESC–CIE joint venture to strengthen its position within the industry and take advantage of the gradual relocation of automotive industry suppliers to Mexico. CIE Automotive then acquired the 50% it did not already own from joint venture-partner Grupo Kuo SAB de CV (formerly DESC) for $90m in a deal which ultimately completed in early 2009. In the meantime CIE Automotive made the acquisition of Pintura y Ensamble for $33m, securing its two production plants based in Saltillo and de Ramos Arizpe.

Many of the engineering sector's M&A transactions involve companies supplying into the automotive industry and we believe this will continue over the next two years.

Suppliers to aerospace OEMs

As a result of Mexico's membership of NAFTA and its increasing reputation for quality certified production and cost competitiveness, local aerospace manufactures are now suppliers to major OEMs including Boeing, Airbus and Bombardier. This development means that Mexico now ranks as one of the Top 10 largest suppliers of aerospace products to the US market, above many leading Asian suppliers such as China and South Korea.

Whilst M&A activity in this sector is low at present, it is inevitable that consolidation will occur at some point as firms seek to grow through acquisition or look to eliminate competition.

Recent transactions

Date	Target	Description	Acquirer	Deal Value (US$m)
Jul-10	Eolis América Latinacontrols	Air treatment systems	COMSA EMTE (Spain)	n/d
May-10	Spirax-Sarco Mexico	Steam products and pumps	Spirax-Sarco (UK)	15
May-10	Voltran	Power transformers	WEG (Brazil)	n/d
May-09	CIE DESC Automotive	Automotive parts	CIE Automotive (Spain)	90
May-09	CarMex	Automotive parts	HP Pelzer (Germany)	n/d
Mar-09	Pintura y Ensamble	Automotive parts	CIE Automotive (Spain)	33
Sep-08	Alpe SA	Electric heating elements	NIBE Industrier (Sweden)	25
Jun-08	Clemex Mexico	Engine bearings	MAHLE GmbH (Germany)	n/d
Apr-08	Damy Cambios de Via	Railroad components	VAE Nortrak (USA)	n/d
Nov-07	Hermosillo Plant	Interior auto components	IAC North America (USA)	17

Predictions

- Given the low starting point, it is unlikely that the Mexican engineering sector will generate substantially more M&A transactions in the short term, however the trend is upwards
- We will continue to expect greater inbound M&A than outbound, especially by companies located in the US, the European Union and Brazil
- The growth in the Mexican aerospace and automotive industries will inevitably lead to increased investor interest in the sector, which will translate to some extent into M&A activity

Deal Focus

Capital City: Washington, D.C. **Population:** 307,212,123
Area: 9,826,630 sq km **Time zone:** GMT -5

USA

"The global recession has helped US-centric engineering firms realize the importance of diversifying their markets internationally, thus diminishing their exposure to a single geography"

Horacio Facca, Headwaters MB

A return to pre-crisis M&A volumes

First the good news: after overcoming the worst year for M&A in a long time, 148 engineering deals were announced during the first two quarters of 2010. On a pro-rata basis, 2010 is on track to achieve a similar number of transactions to 2007. It appears we have returned, to some degree, to pre-crisis levels of M&A activity.

However, valuations and average transaction size are entirely another story. The value of engineering M&A in 2010 stands at $8.9bn so far, considerably below the $30.8bn achieved in 2007. Average deal values have fallen by over a third to $162m this year as buyer appetite for larger, riskier transactions has diminished and valuation multiples lowered. This new environment of attractive valuations for buyers and slowly adjusting expectations of sellers has created great opportunities for well-positioned strategic acquirers and opportunistic financial buyers.

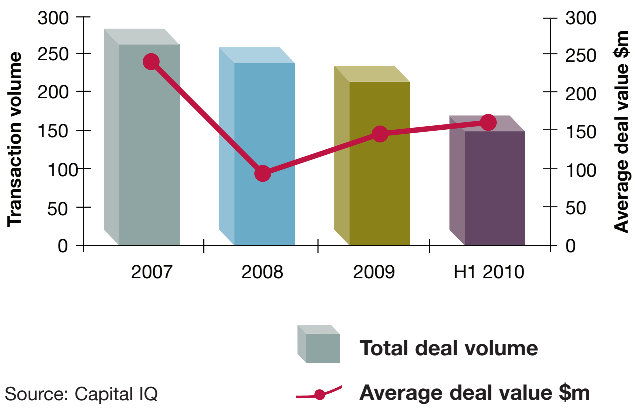
Appetite for aerospace deals

In March, Triumph Group bucked the trend for smaller deals by announcing 2010's first mega-deal, the $1.6bn acquisition of Vought Aircraft from private equity investor The Carlyle Group. Vought is a leading global manufacturer of aero structures for commercial, military and business jet aircraft and generated revenues of $1.9bn in 2009.

Vought's customer base is comprised of the leading global aerospace OEMs and over 80% of revenue is from sole source, long-term contracts. The integration of Vought with Triumph will create a leading Tier 1 capable supplier with strong positions in commercial and military platforms.

From 1995 to 2010 aerospace sector multiples averaged 11.5x EBITDA, peaking in 2007 at 14.3x. Since then, valuations have come down substantially. The Vought transaction closed at 5.8x EBITDA, which is consistent with the trend for substantially lower multiples across the wider US engineering sector.

M&A activity



Source: Capital IQ

Private equity in exit mode

The number of transactions involving private equity as proportion of total US engineering transactions has diminished steadily since 2007. Around 24% of acquisitions in 2007 were completed by financial investors compared to 8% in the first half of 2010. Restricted conditions in the credit markets and continuing economic uncertainty have been the driving factors behind this sharp fall.

US private equity firms have hundreds of billions in committed but uncalled capital that needs to be invested in the next three years or returned to investors. General Partners are deeply incentivized to put this capital to work, so we expect private equity activity to pick up in the next year. However, as strategic buyer appetite returns, recent data suggests that the second quarter of 2010 was the most active three month period for US private equity exits in nearly two years.

One such private equity exit was DLJ Merchant Banking Partners sale to Goodrich of DeCrane Holdings (Cabin Management Assets) for $280m. Goodrich paid just under 8x EBITDA. Going forward, we expect Goodrich to continue to be interested in M&A opportunities particularly as OEM production rates accelerate, Goodrich's out of warranty installed base grows and aftermarket demand rebounds.

Geographic diversification an imperative

Historically US acquirers have been the dominant force in outbound M&A. The global recession has helped US-centric engineering firms realize the importance of diversifying their markets internationally, thus diminishing their exposure to a single geography. Many are now also focusing on politically-stable, Western-friendly countries with compelling demographics, such as Eastern Europe, Brazil and India. When the M&A rationale is primarily driven by the need to access intellectual property, US firms tend to gravitate more towards engineering-rich countries such as the UK, Germany and Japan.

Government policy will impact engineering sector

Highly-engineered products and processes account for about 35% of the US GDP. Virtually all key engineering sub-sectors have dominant, large, well-known US players, ranging from Boeing in aerospace and Exxon Mobil in oil & gas to Raytheon in defense. Current government policy will have an impact in all these sectors.

In 2009, 30 Defense programs were cut yielding an estimated $330bn in future budget savings. Despite these cuts, the US will remain the number one Defense spender in the world, accounting for 41% of the top 15 world defense spenders worldwide.

The American Recovery and Reinvestment Act of 2009 claims to be distributing $787bn across multiple US geographies and industries with the twin objectives of generating employment and revamping decaying US infrastructure. The two sub-sectors that appear to benefit most from the legislation are construction and energy, including nuclear power. Finally, the ban on offshore drilling, which is due to expire at the end of November will inevitably have an effect on the oil & gas engineering sector.

Recent transactions

Date	Target	Description	Acquirer	Deal Value (US$m)
Aug-10	Godwin Pumps of America	Pumps	ITT Corp	585
Jun-10	Vought Aircraft Industries	Aerostructures	Triumph Group	1,600
Jun-10	K-TEK	Level detection devices	ABB (Switzerland)	n/d
May-10	Ralph A. Hiller	Nuclear actuators	Rotork (UK)	8
Mar-10	Equipment Technology	Produces aerial lifts	Palfinger AG (Austria)	25
Mar-10	Eagle Tool & Machine	Precision machined tools	Heroux-Devtek (Canada)	34
Dec-09	Quincy Compressor	Air compressors	Atlas Copco (China)	190
Sep-09	Hi-Shear Technology Corp	Pyrotechnic devices	Chemring Group (UK)	132
Sep-09	Axsys Technologies	Precision components	General Dynamics	643
Jul-09	Certain assets of Vought	Aerostructures	Boeing Co	1,002

Predictions

- Surplus cash on corporate balance sheets in the US, combined with compelling valuations point to rebounding domestic M&A activity especially if the US market turns more optimistic about the global economic outlook
- Inbound M&A is expected to continue, as favorable valuations give overseas acquirers extra motivation to establish or expand their North American footprints
- The volume of private equity acquisitions is expected to increase as committed capital is put to work over the coming year

China

Capital City: Beijing **Population:** 1,338,612,968
Area: 9,596,960 sq km **Time zone:** GMT +8

"Chinese companies will increasingly look aboard to acquire engineering technology and expertise which can be transferred back into their domestic market"

Keith Pickering, Catalyst Corporate Finance

Engineering M&A to reach record levels

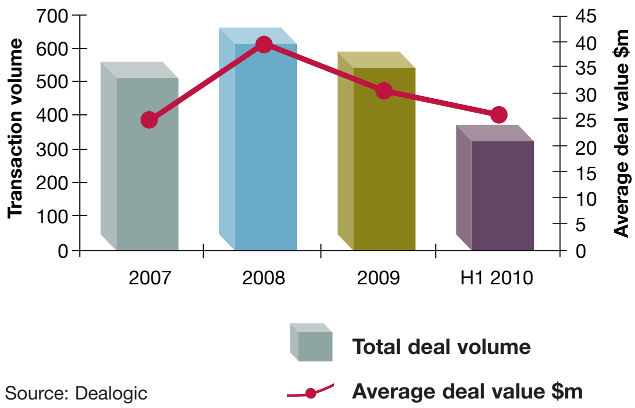
Transaction volumes in the Chinese industrials / engineering sector have rebounded strongly during the first half of 2010 following a fall of 10% in 2009. On the basis of H1 2010, engineering M&A on a pro-rata basis, is forecast to achieve record levels in 2010, representing approximately a third of all M&A activity in China. The moderate fall in M&A activity in 2009 and strong start to 2010 reflects how well the Chinese economy has navigated the global recession.

M&A activity in China has historically been driven by domestic acquirers given the regulatory challenges international buyers faced when entering the Chinese market. Domestic consolidation is particularly prevalent among engineering firms which provide equipment to support China's huge public infrastructure development programme. However, as the regulatory burden lessens, inbound M&A from overseas acquirers in the engineering sector has been on the rise, now accounting for a fifth of all transactions. Overseas buyers are primarily attracted by the opportunity to acquire exposure to China's staggering GDP growth which has grown at a compound annual growth rate of 10% over the past decade.

Investment in renewable energy

Transactions have occurred across all sub-sectors of the Chinese engineering sector. However, the long term growth potential in power engineering and renewable energy has attracted significant recent interest. The Chinese wind power sector is forecast to grow rapidly over the coming decade, in line with the government's plan to increase the total installed wind power base from 12 GW in 2008 to 150 GW by 2020. Recent deals include, Hong Kong based private equity firm Affinity Equity Partners' $200m buy-out of Beijing Leader & Harvest Electric Technologies, and Galaxy Semiconductor's $127m acquisition of Chengde Ruifeng Renewable Energy.

M&A activity



Source: Dealogic

Acquisition of technology and brands

Outbound M&A activity by Chinese engineering firms is primarily focused on acquiring technology and engineering expertise which can be transferred back into their domestic market. Chongqing Machinery & Electric Co's acquisition of UK based Holroyd Precision, a manufacturer of precision tools, is a prime example of how mid-market companies are being acquired for their engineering know-how. Another interesting example was China International Marine Containers' (CIMC) acquisition of TGE Gas Engineering, a Luxembourg based specialist in bulk storage of refrigerated gasses for $50m. A deal that was clearly beneficial to CIMC in terms of capturing intellectual property and expertise and also to TGE by gaining access to the valuable Far East commercial market of CIMC.

The acquisition of respected global brand names is another important driver of large, outbound M&A. A recent example was Chinese car maker Geely Auto's acquisition of Volvo from Ford for $1.8bn.

Continuing economic growth

Following the implementation of a two year, $586bn economic stimulus package in 2008, the Chinese economy sustained impressive growth during the global downturn. The stimulus package delivered tax cuts and vastly increased spending on public infrastructure projects including roads, railways, schools and hospitals. The stimulus package is widely expected to end in 2010 as planned. The Chinese government is now taking measures to limit bank lending and dampen a rapidly over heating property market in an effort to control inflation.

China's continued expansion through the recession has acted as a lifeline to many engineering exporting countries. China's demand for engineered goods to support the massive infrastructure build out and the continued growth in the country's natural resources sector has taken up the slack of reduced demand from developed economies. At a macro level, imports to China increased to $1trn in 2009, giving a ten year compound annual growth rate of 20%.

Regulatory regime remains a hurdle

The regulatory environment for both inbound and outbound M&A in China is evolving. In years gone by, regulation had been designed to restrict, even block, international investors in favor of domestic acquirers / investors. The government has now implemented a number of initiatives to ease the regulation of the M&A market. Firms engaging in outbound M&A can now benefit from government subsidies and less restrictive regulations when trying to securing acquisition financing. However, the regulatory burden remains significant, large outbound deals still require Chinese government approval from five different government departments (six if the business is a state-owned enterprise).

One area in which the regulatory burden has eased is for foreign private equity firms. Regulations have evolved to encourage foreign private equity firms to operate yuan-denominated investment funds. Funds representing domestic investors face fewer regulatory obstacles compared to overseas funds and this has translated into a sharp increase in fund commitments during the first half of 2010 which we expect to translate into deal flow in 2011.

Recent transactions

Date	Target	Description	Acquirer	Deal Value (US$m)
Apr-10	Chengde Ruifeng Renewable Energy	Wind turbine blades	Galaxy Semiconductor	127
Apr-10	Hukai Electric	High voltage breakers	LS Industrial Systems (South Korea)	n/d
Feb-10	Tau Energy Products	Heat exchangers	Danfoss District Energy (Denmark)	n/d
Dec-09	Tieben Steel Co	Metal components	Jinsong Special Steel	104
Nov-09	Jiangsu Tieben Iron and Steel	Iron products	Changzhou Jiajiang Material	29
Nov-09	Shenzhen Anytone	Power supplies	New Energy Systems	24
Oct-09	Division of Best Solar	Crystal solar modules	LDK Solar Co	21
Oct-09	Beijing Leader & Harvest Electric	Motors and wind turbines	Affinity Equity (Hong-Kong)	200
Oct-09	Changzhou Marine Cable	Marine cables	Zhongli Science And Technology	22
Sep-09	High-Voltage Cable Factory	High-voltage cables	Nkt Cables (Denmark)	26

Predictions

- Chinese engineering M&A activity is expected to continue at a similar level, especially for businesses connected to the country's infrastructure build out
- As regulatory hurdles soften over time, we expect that inbound M&A will grow as a proportion of overall M&A
- Chinese companies will be selective over overseas acquisition focusing on companies with leading technologies or recognised brand names

Deal Focus

Capital City: New Delhi **Population:** 1,166,079,217
Area: 3,287,590 sq km **Time zone:** GMT +5:30

India

"With a GDP growth rate in excess of 8% in 2009 and 2010, we have seen the emergence of several $50-$100m companies across the engineering, power and mining sectors. These companies present good consolidation platforms for global players and there is growing acceptance of the merits of such alliances by these domestic mid-sized businesses"

Sapna Seth - Singhi Advisors

High levels of M&A again in 2010

The Indian engineering sector continues to be buoyed by robust internal consumption, which has encouraged both inbound as well as outbound cross border M&A. Inbound acquisitions were generally made by European and US buyers, however there are a number of Indian engineering corporates such as Mahindra & Mahindra who continue to acquire both at home and abroad.

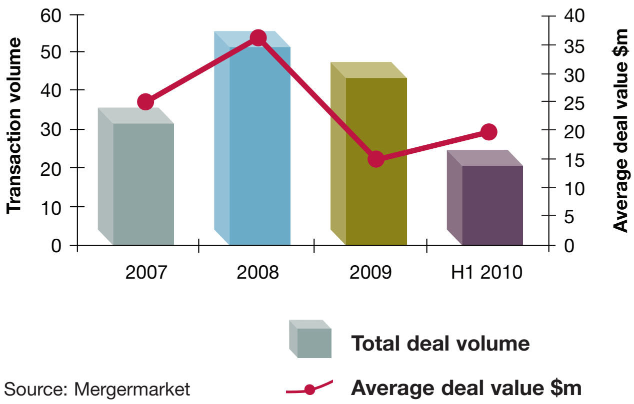
Deal volumes and values in 2010 are expected to be in line with 2009 levels, although it appears that the average transaction values are on the rise, currently around $20m for disclosed deals.

Accessing growth markets a priority for overseas buyers

One of the more notable transactions of early 2010, and the largest to date, was the acquisition by Prysmian SpA, an Italian firm and one of the world's leading cable producers, of a majority stake in Ravin Cables for $37m. Based in Mumbai, Ravin is one of India's leading cable manufacturers and a key supplier to the power industry.

India is planning to add over 100 GW of capacity before 2017 and Prysmian was clearly positioning itself to capitalize on this infrastructure build-out. We expect further significant inward investment through acquisition (and JVs) across the power sector over the next three years especially of engineering businesses with interests in transmission equipment such as cables, switchgear and transformers.

M&A activity



Source: Mergermarket

Going abroad

Whilst the Indian engineering sector is clearly full of opportunities for growth, local firms face a number of challenges in capitalizing on them. Larger foreign multinationals operating in India are often better equipped to respond. Local firms may have little experience in executing large scale projects or may lack technological or process know-how. This has prompted several Indian companies to acquire overseas to address these weaknesses.

Equally, the larger Indian corporates are seeing opportunities for growth beyond India, often in the emerging markets of Asia, Africa and South America and to a lesser extent in the developed economies. Mahindra & Mahindra, Crompton Greaves and Ashok Minda are prominent Indian engineering companies which have made a number of acquisitions in the automotive, power and aerospace sectors in recent years. Depressed valuations due to the recent recession in the developed world have increased the attractiveness of an outbound acquisition strategy.

Engineering is a national focus

The Indian engineering sector accounts for c.12% of India's economy and it has been growing at a steady pace over the last decade. Long dominated by heavy engineering it is highly structured and technology driven.

An important feature of the engineering industry has been its ability to spring off a whole sector of small and medium enterprises, which become an important part of the supply chain due to their contribution to cost competitiveness and employment generation. Despite the global recession, the engineering sector continues to grow and the growth momentum is expected to continue for the next few years primarily on account of the government's increased emphasis on infrastructure and industrial development as well as engineering-led exports.

The Ministry of Commerce sponsored EEPC INDIA (Engineering Export Promotion Council) sets ambitious targets for the total level of Indian engineering exports, and helps Indian engineering businesses penetrate new or expand existing export markets. This emphasis on greater integration into the global marketplace has clear implications for overseas M&A in the years to come.

Next decade of investments – energy, mining and ports

The planned infrastructure spending for the five year plan ending in 2012 has been targeted at $500bn, which is likely to be doubled to $1trn in the following planning period. This planned infrastructure spending is across all core sectors which directly influence the engineering sector.

In the previous decade substantial investments have been made in core infrastructure like roads, airports, oil & gas supply and telecom networks. Private equity investments alone in the past three years in infrastructure have amounted to over $3bn.

The next decade however is expected to see substantial investment flowing into energy (generation, distribution and transmission), mining, water and waste treatment and ports infrastructure. We have begun to see this reflected in the recent trends in M&A and private equity investment in these sectors.

Recent transactions

Date	Target	Description	Acquirer	Deal Value (US$m)
Jun-10	Parixit Industries	Agriculture irrigation systems	Emtelle Holdings (Netherlands)	n/d
Jun-10	Kartik Steels	Castings	Manoir Industries (France)	n/d
Jun-10	Valves division of Mazda	Vacuum pumps and valves	Circor International (USA)	n/d
May-10	Reva Electric Car	Electric car manufacturer	Mahindra & Mahindra	n/d
May-10	Valeo Minda Electrical Systems	Automotive components	Valeo (France)	n/d
Mar-10	RPG Cables	Power and telecom cables	KEC International	25
Mar-10	Pump business of Larsen & Toubro	Petrol and LPG dispensing systems	Gilbarco Veeder-Root (USA)	30
Jan-10	Sanfield	Structural protection systems	Maurer Sohne (Germany)	n/d
Jan-10	Standard Electricals	Electrical distribution equipment	Havells India	26
Jan-10	Ravin Cables	Power cables	Prysmian Spa (Italy)	37

Predictions

- The next decade in Indian engineering sector belongs to power and energy, mining, water and sewage treatment and port infrastructure. These sub-sectors will witness an increase in both domestic and cross-border M&A activity
- Inbound transactions will continue to dominate the total M&A deal activity. There will also be significant joint venture opportunities for technical and operational collaboration for large global players from the developed nations
- Average deal values will continue to increase due to the incremental future opportunity. Companies with the ability to participate and deliver mega projects will attract higher valuation multiples

Japan

Capital City: Tokyo **Population:** 127,420,000
Area: 377,944 sq km **Time zone:** GMT +9

"A shrinking domestic market is forcing Japanese engineering businesses to consolidate their position at home while seeking exposure to international growth markets"

Tetsuo Yamazaki, IBS Securities

Stable M&A volumes

Despite the effects of the global recession, the Japanese engineering sector has enjoyed stable levels of M&A in recent years, with full year 2010 transaction volumes expected to be similar to those of 2009. This sustained level of activity has been due, in part, to larger firms restructuring, and mid-market firms acquiring to gain additional scale to survive in Japan's highly competitive domestic market.

Average deal sizes have on the other hand been falling rapidly, with 2010's average value being nearly five times less than in 2009. This decline can be attributed to expedited consolidation by SMEs and larger groups making smaller infill acquisitions, rather than engaging in risky, larger transformational deals.

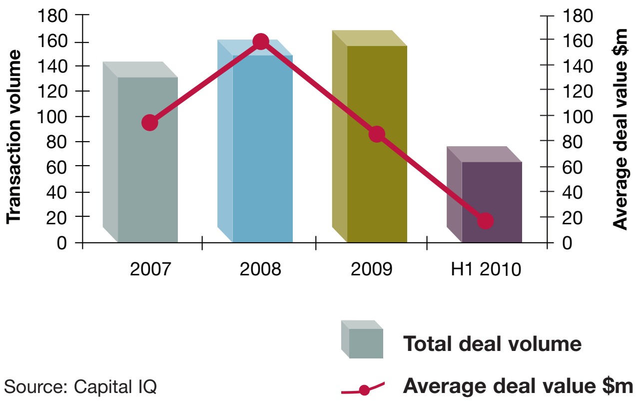
Cultural differences limit cross-border activity

Japan has traditionally seen very low levels of inbound M&A from foreign trade buyers or financial investors – typically less than 10% of total volumes. This low level of activity is due to a number of issues, primarily the persistent economic malaise often referred to as 'Japan's lost decade', but also due to perceived differences in cultural and business practices. These issues can often lead to business integration and operational challenges for the acquirer, which ultimately erodes value.

A recent notable exception to this trend was the $222m acquisition of Hoya Corporation's hard disk glass media manufacturing business by US firm Western Digital Corporation in April. This deal was Western Digital's first acquisition outside the US and provides them with access to new R&D capabilities and exposure to key Asian markets.

Asian buyers, particularly from China and India, have been interested in Japanese engineering firms, typically looking to gain access to their product technology, which is often industry leading. Japan is considered more attractive than the US, as fears of a double-dip recession continue there, and more attractive than Europe, which is troubled by ongoing sovereign debt issues.

M&A activity



Source: Capital IQ

Private equity investment on the rise

Historically the engineering sector has seen a consistently low level of private equity involvement, however, so far in 2010, 10% of deals in the sector have been completed by private equity buyers. This increase is attributed to greater trading visibility for funders and improving credit conditions in Japan. There is also a lack of viable exit options for private owners and therefore they are prepared to sell stakes to private equity firms, releasing some equity immediately.

One private equity firm of particular interest is China based CITIC Capital Partners, who have been actively investing in Japanese companies for a while. CITIC are focused on mid-market investments in manufacturing companies which have strong brands and technology, and can benefit from greater access to the Chinese market. CITIC recently acquired a 67% stake in the Japanese container and packaging manufacturing company Tri-Wall K.K for an estimated $66m.

Engineering has strong roots in Japan

Japan prides itself on being known as a “mono tsukuri” or “making things” culture and from a wider perspective, the engineering industry in Japan covers a broad range of sectors including automotive, machinery and electronics. Surprisingly, engineered products in Japan account for only 11% of the country’s GDP, contrasting starkly with services which contribute to more than 75%.

Driven by the strong Yen and shrinking market due to the declining population, companies in the sector have continued to expand abroad. Domestically, lower tier companies have been consolidating in an attempt to counter the effects of the low cost competition from abroad, especially Asia.

Mid-sized Japanese engineering firms, particularly in certain niche sectors such as small electric motors, have been active in acquiring businesses globally. Such companies include Minebea and Nidec, whose acquisitions include Sole Motors, an Italian manufacturer of motors for household appliances.

Key sectors are transforming

There has already been significant consolidation in the Japanese automotive parts industry over the past twenty years. The Renault-Nissan alliance, which was established in 1999, started a review of automotive parts companies with several major mergers forming the first tier supplier companies of Calsonic-Kansei and Jatco. Much of the current M&A in this sector is among second and third tier suppliers, who are hoping to gain new business and cut costs.

Outside of Japan, the component manufacturers tend to follow the assemblers in setting up new overseas production facilities, either acquiring local part makers or in most cases making greenfield investments. Total sales of the 82 member firms in the Japan Auto Parts Industries Association declined 17% in 2008 with operating profit declining 92%.

The heavy machinery industry, which includes companies such as Mitsubishi Heavy Industry (MHI) and Kawasaki Heavy Industries have diversified into new areas such as aerospace, renewable energy technologies and transportation systems, while divesting non-core businesses. In 2008, MHI sold its paper manufacturing machinery business to Metso of Finland, and in 2007 sold its turbo molecular pump business to Shimadzu Corp for $26m.

Recent transactions

Date	Target	Description	Acquirer	Deal Value (US$m)
May-10	Marktec Corp	Testing equipment	CCH5	47
May-10	RK Japan	Automotive parts	Kilang (Malaysia)	10
Apr-10	Hoya-Hard Disk Media	Hard disk manufacturing	Western Digital (USA)	233
Feb-10	EXCEL Inc	Solar batteries	Ishi Hyoki	19
Dec-10	Nikko Electric	Automotive parts	Ningbo Yunsheng (China)	13
Nov-09	Sony Mfg Systems	Measuring instruments	Mori Seiki	66
Nov-09	Panasonic	Electric motors	Minebea	n/d
Oct-09	Sanyo Energy	Batteries	FDK Corp	70
Aug-09	Nippon Muki	Filters and equipment	Daikin Industries	53
Aug-09	EvatechCo	LCD manufacturing	A-Power Energy (China)	50

Predictions

- Globalization is still the key for large Japanese engineering groups. Those with significant surplus cash can be expected to be more aggressive in outbound M&A in 2011
- Mid-sized Japanese companies will seek new growth markets, especially in Asia and emerging markets
- Consolidation will continue in the Japanese domestic market amongst the second and third tier suppliers, for a long as the strong yen places them at a cost disadvantage compared to foreign competitors

Capital City: Pretoria (exec.) **Population:** 49,052,489
Area: 1,219,912 sq km **Time zone:** GMT +2

South Africa

"Higher risk, capital scarcity and investor caution has led to subdued M&A activity. This scenario is forecast to persist through 2010 and post-recession trends suggest a shift away from an outward M&A focus towards maintaining strong balance sheets"

Pieter Venter, Bridge Capital Advisors

Some encouraging signs from the sector

There have been relatively few engineering transactions in South Africa in recent years if compared to other western countries with simular populations, such as the UK. Engineering firms have remained conservative in their approach toward M&A investment. The poor record of economic stability over the last few years has not helped and this has had a negative effect on concluding deals.

Improved liquidity and easier access to funding was sustained through H1 2010 and has led to a slight growth in M&A activity across all sectors if compared to H1 2009. Whilst the overall level is still low, we are seeing some encouraging signs for engineering in 2010, with a number of smaller transactions having already been completed. Transactions have included Hudaco's acquisition of Filter & Hose for $37m and Germany-based Becker Mining Systems acquisition of EMIS Sales, which are both mining engineering deals.

Interest from overseas in SA

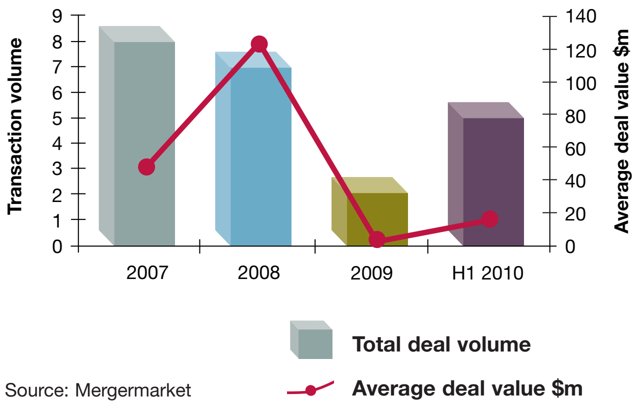
Since the start of 2007, more than a third of acquisitions have involved foreign buyers. A significant proportion of these deals occurred in 2007, where almost two thirds of the companies were acquired by buyers from countries such as the US, UK and Germany.

This interest in South Africa is due to the opportunities for growth which it presents to those firms from developed countries, which have already largely exhausted the market in their home countries. Emerging markets on the whole have seen higher levels of M&A in 2010, partly as these countries have rebounded quicker post-recession than their developed market counterparts, giving rise to greater investor confidence.

Private equity participation low

Despite South Africa being home to a number of large private equity firms, including Ethos Private Equity and Pamodzi Investments, there have only been three private equity transactions in the engineering sector over the last three years, all of which occurred in 2008. The largest of these deals was the $698m buyout of the major electrical engineering group Actom SA, by a consortium led by UK private equity firm Actis Capital. Although Actis are UK based, they have been primarily focused on emerging market opportunities and have been investing in countries including Brazil, Egypt, Malaysia and India.

M&A activity



Source: Mergermarket

'Companies Act' to facilitate M&A

The new South Africa Companies Act, which is due to come into effect by the end of 2010, will alter the current Scheme of Arrangement clauses. These clauses are a popular method of implementing takeover transactions through a court approval process, when 75% of shareholder approval is reached.

Under the new act, court approval will only be required in limited instances thus simplifying the approval process and making takeover transactions much easier to complete where there are no objections. This change should promote increased deal flow in all sectors, despite increasing the personal liability of the directors.

Economic conditions remain subdued

A slow-down in engineering activity post-World Cup is expected in H2 of 2010, although to some extent the effects have been mitigated by the recent interest rate cuts (to a 30-year low) alongside improved consumer fundamentals. Additionally, easing inflationary pressures have reduced debt servicing costs.

The general decline in economic activity shows signs of having bottomed out now, although it is expected that private sector investment will remained slightly depressed for the next 12 months.

Government infrastructure spending is key

The resumption in government infrastructure spend will continue to remain a key factor for the South African engineering industry. Reduced industrial and mining activity; limited private sector commercial investment; delays to the Eskom power program; delays and disruption to the Gautrain Project; trading conditions in the steel reinforcing sector; as well as the ongoing strength in the SA Rand and higher costs of financing have all impacted on the industry and intensified competition.

Opportunities will in all likelihood emanate from public infrastructure contracts, private and renewable power projects and concessions as well as recovery in traditional mining, real estate and civil works markets.

Recent transactions

Date	Target	Description	Acquirer	Deal Value (US$m)
Jun-10	Filter & Hose	Mining machinery	Hudaco	37
Apr-10	Braybar Pumps	Pumps	Kirloskar Brothers (Netherlands)	2
Mar-10	Wegezi Power	Transformers and switch gear	Invicta	n/d
Mar-10	Cryoshield	Cryogenic process equipment	PSV Holdings	n/d
Feb-10	Emis Sales 2002	Electrical mining equipment	Becker Mining Systems (Germany)	n/d
Dec-09	Phoenix Power Cables	Wire and cable manufacturer	General Cable (US)	n/d
Aug-08	ACTOM	Power generation parts	Actis Capital (UK) and Old Mutual	698
Mar-08	Aard Mining Equipment	Mining machinery	Nedbank Capital / Matasis Investment	16
Jan-08	Astore	Specialised pipe fittings	Hudaco	16
Dec-07	CH Warman Pump	Slurry pumps	The Weir Group (UK)	233

Predictions

- Based on historical trends, the engineering sector is likely to maintain relatively low levels of M&A activity given the limited number of players
- M&A activity is however expected to gain some traction in 2011, as companies which have built up strong balance sheets and cash flows start to target acquisitive growth companies in niche sectors
- Growth in public sector infrastructure spending and a recovery in the traditional mining and real estate markets will help the engineering sector as a whole