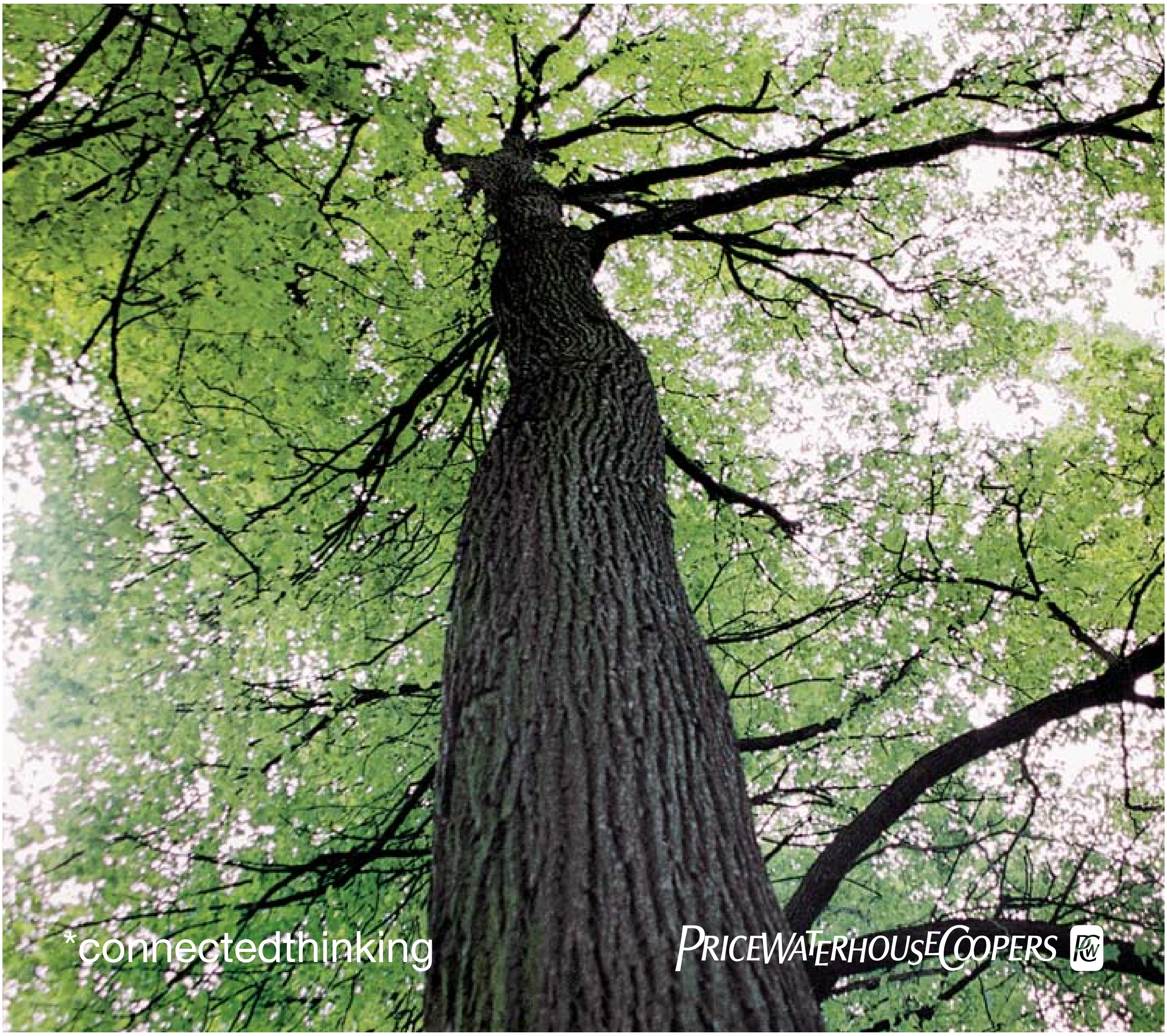
Industries
Forest, paper & packaging

Branching out

Global deal activity in the forest, paper & packaging industry

April 2007

Review of 2006, the last four years and a look ahead



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01 Welcome

In this, our first report on deal activity worldwide in the Forest, Paper and Packaging (FPP) industry, we examine the rationale behind overall deal trends, as well as regional and sectoral factors which are influencing deal flow. In doing so, we have focused on 2006, taking also a closer look at some of the key individual deals. In our first review, we have aimed to give last year's activity some perspective, by reviewing trends over the last four years. The starting point of 2003 is deliberate as it represented the last low point in global FPP deal flow.

The global forest, paper and packaging industry continued to face a period of great upheaval and a number of challenges in 2006. Macro-economic factors affecting the industry included foreign exchange fluctuations, increased energy and transportation costs, lacklustre demand at best in North America and Europe and the impact of emerging markets on global competition.

Despite some relief on pricing, the pulp and paper industry in traditional producing regions continues to battle to earn its cost of capital. Some radical measures have been taken to better align supply and demand, but these do not go far enough. The industry remains too fragmented regionally and globally to take measures that would be more decisive in achieving an equilibrium that increasingly needs to be played on a global stage.

Unsurprisingly in these circumstances, traditional value chains are undergoing a transformation and that is causing the break-up of vertically integrated providers, a phenomenon that is fuelling M&A activity. Companies are selling off underperforming and non-core businesses and the leading players are also seeking to extend their reach globally, whether the driver is growth, lower cost inputs, or both - and of course, ultimately, shareholder value.

In this report, we reflect briefly on how the value chain for leading producers could look in the future and also on how non-traditional investors, most notably private equity, are coming to play a key role in this transformation.

To date, the transformation has not happened on a significant scale - which is probably why deal levels although on the rise, remain relatively subdued compared with other industry sectors facing similar challenges. Hence 2006 can be viewed as a solid, rather than a vintage year for deal activity.

Looking ahead, the fundamentals for deal activity remain strong, with a sound economic environment, low interest rates and large pools of liquidity in global markets. The question is whether the industry itself has the confidence to make the bolder moves which the forces of global competition and consolidation seem to demand.

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02 Last four years in highlight

Deal values and volumes recover as globalisation takes hold

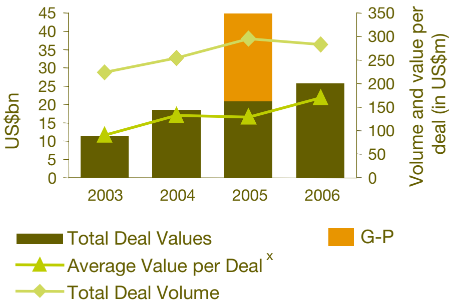
Global deal values in Forest, Paper and Packaging (FPP) reached a peak in 2000, when transactions worth US$72 billion were executed with the US being the main theatre for a spate of large market consolidation activities. Since then, deal values have slumped in line with the wider bear market, but also because companies focused on repairing their balance sheets.

We have tracked deal activity in detail over the last four years, since values bottomed at US$11.3bn in 2003. In headline terms this shows:

- 1,057 deals worth US$98.6bn have been transacted in the global FPP sector since January 2003.
- Deal values and volumes climbed steadily between 2003 and 2005, while in 2006, 283 deals worth US$25.7bn were transacted.
- Average deal size has increased from US$90m in 2003 to US$169m in 2006, a good indicator of growing or recovering deal confidence.

2005 was the most active year for the sector with 296 deals worth US$43bn transacted, but the statistics were heavily skewed by the massive US$22bn acquisition of Georgia-Pacific (G-P) by Koch Industries in the US. This is by far the largest single deal ever executed in the FPP sector and we have chosen to ringfence this transaction when looking at deal trends.

Figure 1: Global FPP Deal Trends



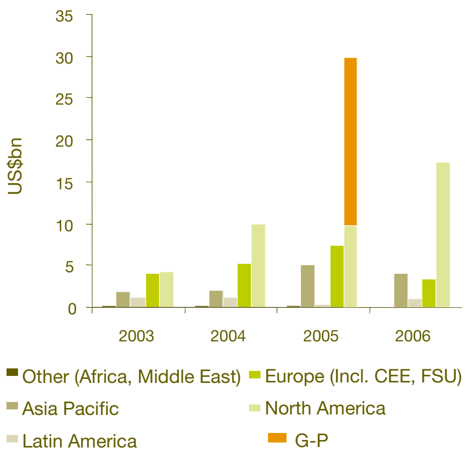
x excl G-P and deals with no value disclosed

Source: Dealogic, PwC Analysis*

Regional highlights – last four years

A look at the regional deal pattern shows that North America has remained at the forefront of M&A activity in the last four years, with Europe lagging.

Figure 2: Regional Deal Analysis



Source: Dealogic, PwC Analysis*

- Transactions involving North American targets have surged from US$4.2bn in 2003 to US$17.4bn in 2006, after adjusting for the skew effect of Georgia-Pacific in 2005.
- Altogether the North American share of global deal values has been rising, reaching 67% of total deal values in 2006 and over 60% of deal values in the sector since January 2003.
- Although European M&A in the FPP sector has accounted for more than 40% of global volumes since 2003, the dollar proportion has been only 20%.

- Deal volumes in the Asia-Pacific region more than doubled over the four years, but with average deal sizes remaining small – US$58m – this has yet to translate into significant dollar value.

Emerging markets have become a valuable source of M&A deals as FPP becomes a truly global industry. In the last two years, transactions have been executed in Brazil, China, India, Malaysia, Mexico, Poland and Russia.

Sector highlights – last four years

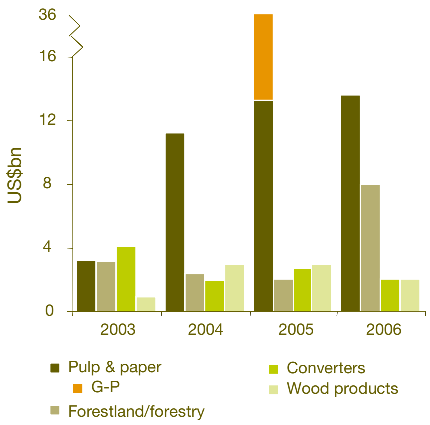
Pulp and Paper dominates

- 479 acquisitions of pulp and paper production businesses have been transacted worth US$41.3bn since January 2003, representing 54% of deals by value (US$63.2bn and 64% including Georgia-Pacific).
- M&A activity among pulp and paper production companies has risen year-on-year from US$3.2bn in 2003 to US$13.6bn in 2006 (excluding Georgia-Pacific).

Forestland M&A surges as divestments accelerate

- Forestland and forestry targets have been the subject of 134 deals worth US$15.7bn in the last four years, making it the second largest sector in terms of dollar value.
- Deal volume has remained steady every year, with the continued divestment of forestlands by integrated producers being the dominant trend

Figure 3: Sector Trends



*Source: Dealogic, PwC analysis**

Converters hit M&A wall

- Converting targets stole the show in 2003 with deals at US$4.1bn or 35% of global deal values in an otherwise dull year. Since then, although transaction volumes have been maintained at around 100 deals per year, values have slumped and steadied at half their 2003 value.

Wood Products stays steady

- From a low of US$0.9bn in 2003, deal values for wood products targets have risen to over US$2bn per annum in each subsequent year with a steady volume of deals.

**Source: PricewaterhouseCoopers analysis based on published transactions from the Dealogic "M&A Global" database, December 2006*

03 Review of 2006

Deal values up 20% on 2005

The FPP sector saw 283 deals with a combined value of US$25.7bn executed in 2006.

- Both volumes and values fell from 2005, when US$43bn worth of deals were struck. However adjusting for Georgia-Pacific, values were well up more than 20% on the US$21.1bn in 2005 - as was average transaction size at US$169m versus US$128m. Volumes however stuttered, falling by 4%.

North America dominates

- The regional picture was mixed. Values were down in all regions except North America (adjusted for Georgia-Pacific). Overall, North America dominated with US$17.3bn, or 67% of dollar value, and the five largest individual transactions.
- Deals in Europe slumped from US$7.3bn in 2005 to US$3.3bn, equivalent to only 13% of global deal values last year, as companies scaled back in Europe and sought investment opportunities in the emerging markets. The drop in deal volume was less dramatic, down from 136 to 107.
- In Asia-Pacific, M&A was ahead of Europe at US$4bn, but down from US$5bn in 2005, despite a strong rise of 18% in volume.

Pulp and Paper and Forestland deals up; Converting and Wood Products down

- Adjusted for Georgia-Pacific, activity was slightly up (from US$13.3bn to US$13.6bn) in Pulp and Paper and well up in Forestland and Forestry (from US$2.1bn to US$8.0bn). However, dollar values were down in Converting and Wood Products.

Figure 4: Top ten global deals in 2006

Deal Value US$m	Date	Target	Target Country	Acquiror	Acquiror Country
5,000	Dec 06	International Paper Co (3.8m acres of forestland, Southern US/0.4m acres, MI)	United States	Resource Management Service, Forest Investment Associates, and other investors	United States
3,300	Aug 06	Weyerhaeuser Co (Fine Paper business & Related Assets)	United States	Domtar Inc	Canada
1,400	Jul 06	International Paper Co (Coated & SC Paper Business)	United States	Apollo Management LP	United States
1,130	Dec 06	International Paper Co (0.9m acres of forestland in LA, TX and AR)	United States	TimberStar	United States
1,040	Jun 06	Smurfit-Stone Container Corp (Consumer Packaging Business)	United States	Texas Pacific Group	United States
990	Oct 06	Carter Holt Harvey Ltd (275,000 hectare forestry estate)	New Zealand	Hancock Timber Resources Group	United States
650	Oct 06	Ilim Holding SA (50%)	Russia	International Paper Co.	United States
550	Sept 06	Celulose Beira Industrial - Celbi SA	Portugal	Altri	Portugal
540	Nov 06	Portucel Industrial SA (25.7%)	Portugal	Investor Group	Various
500	Dec 06	International Paper Co (beverage packaging business)	United States	Carter Holt Harvey Ltd	New Zealand

Source: PricewaterhouseCoopers analysis based on published transactions from the Dealogic "M&A Global" database, December 2006

2006 top deals and dealmakers

- International Paper raises US$11bn in disposals
- Domtar acquires Weyerhaeuser's uncoated woodfree papers business in US$3.3bn deal
- Graeme Hart's Rank Group becomes a major force in consumer packaging
- Private equity makes further inroads
- Financial investment in forestlands surges

The world's largest forest products company, International Paper, accounted for a heady 40% of global deal-flow in 2006, featuring in five of the ten biggest deals.

In July 2005, International Paper announced a US$8bn to US$10bn divestiture programme in order to focus on uncoated woodfree papers, industrial packaging and selected consumer packaging (and retaining North American merchanting), with the proceeds to be used to reduce debt, returned to shareholders and for strategic investments – either enhancing core assets in its traditional markets or investing in platform capacity in the emerging markets.

The main International Paper deals in 2006 can be categorised as:

- The disposal of virtually all of its remaining North American forest resource realised mainly through two major sales to Timber Investment Management Organisations (TIMOs) of 6m acres (2.4m hectares) of US forestlands for around US$6.6bn. Thus, North American forestlands, which had peaked at around 12 million acres in the immediate aftermath of the Champion International acquisition in 2000, were reduced to not much more than 0.5m acres (0.2m hectares) by the end of 2006.
- Divesting non-core assets. The major disposals were its US coated papers business and Arizona Chemicals to private equity, its Brazilian coated papers business to Stora Enso, its Southern US sawmills to West Fraser Timber and wood panel mills to Georgia-Pacific and its beverage

packaging business to Carter Holt Harvey (Rank Group). These divestments and various smaller disposals, on top of the more than US$1bn proceeds raised in 2005, brought total proceeds to over US$11bn, more than was originally targeted.

- Further investment in emerging markets:
  - In Russia, it already owned the Svetogorsk mill, near the Finnish border but in October 2006, it radically increased its footprint when it announced plans to acquire 50% of Ilim Pulp, Russia's largest pulp and paper company. The valuation attributed to Ilim Pulp is around US$1.3bn. In March 2007, completion of this deal is still pending.
  - It formed a joint venture in China with Sun Paper to produce coated consumer board.
  - Announced an asset swap with Votorantim Celulose e Papel (VCP) in Brazil, which completed in February 2007, giving it one of the lowest cost uncoated woodfree paper mills in the world.

In short, International Paper rapidly overhauled its traditional vertically integrated business from forest through to a broad spectrum of pulp and paper, wood products and fibre-based chemicals businesses to become a product specialist with an increasingly global reach, focused on uncoated fine papers and packaging.

The major consolidation in 2006 was the US$3.3bn merger of Domtar, a Canadian forest products company, with the uncoated woodfree papers business of Weyerhaeuser, a US integrated forest products company.

The deal highlighted some of the forces at play in the sector. Domtar was being adversely affected by the strong Canadian dollar, while Weyerhaeuser wanted to sell its uncoated fine papers division as part of a restructuring.

The "New Domtar" brings together the number two and number three players in the North American market to create a clear market leader with combined capacity in uncoated fine papers of around 5.0 million tonnes. "New Domtar" and International Paper together will control over 60% of North American capacity. As such, the deal can be viewed as defensive, enabling costs to be rationalised as the operations are combined and capacity to be more effectively managed as North American demand for uncoated woodfree paper continues its secular decline.

Following this deal, speculation continues about Weyerhaeuser's next move. It remains North America's largest vertically integrated player focused very much on regional markets. At the time of writing, Weyerhaeuser was coming under mounting pressure to restructure and, in particular, as the largest remaining corporate owner, to unbundle its near 6 million acres of North American forestland. On the other hand, Domtar wasted no time in making its next move - it announced in December that it was to sell its 50% stake in Norampac, a packaging joint venture with its Quebec neighbour, Cascades, for Can$560m (US$476m) in cash, in a deal intended to reduce gearing in "New Domtar". For Cascades, it represents consolidation in one of its chosen product grades.

In 2005, Graeme Hart's Rank Group acquired International Paper's 50.5% stake in Carter Holt Harvey (CHH), a vertically integrated forest products business based in Australasia. Until then, this successful and very private New Zealand entrepreneur and dealmaker had not been active in the FPP industry. In a series of further steps completing in H1 2006, the minority was acquired, in a deal costing the Rank Group altogether a reported NZ$3.3bn (around US$2.1bn). Since then, Rank Group has been highly active in the sector, the biggest deals being the sale of the majority of CHH's New Zealand forestlands to Hancock Timber Resource Group for a reported NZ$1.55bn (around US$990m) and acquiring International Paper's beverage carton business for around US$500m.

This latter deal is also highly significant in that previously, Graeme Hart's business interests had focused on the Australasian region, but now his Rank Group gained major North American exposure with a business with sales of circa US$900m producing liquid packaging board and cartons, with no obvious synergies with CHH.

Before completing that deal, in December 2006, the Rank Group decided to extend its international reach further when it entered a takeover battle for Swiss-listed SIG Holding. After bid and counterbid, in March 2007, the Rank Group decided to up the pace, acquiring a substantial stake in SIG on the market and increasing its bid to 435 Swiss francs per share, valuing the group at about 2.8bn Swiss francs (US$2.3bn). This increased offer was recommended by the SIG Board.

SIG is a distant number two to a globally dominant Tetra Pak (Sweden) in aseptic beverage cartons with a strong presence in West and East Europe, a growing presence in Asia and with sales of EUR1.35bn (circa US$1.77bn). The beverage carton market is highly concentrated, with the leading players providing not just product but complete packaging systems and solutions. As a result, they exercise significant influence over the downstream value chain, creating barriers to new entrants. It is also an attractive area due to above average growth prospects for the FPP industry.

SIG complements Rank Group's International Paper acquisition and the combination will create a consumer packaging business with significant global reach. Elopak (Norway) with private equity house CVC Capital Partners, was the rival bidder for SIG, and had been aiming to create a more powerful rival to Tetrapak.

04 Deal drivers

Transformation of value chains

The transformation of traditional value chains in forest, paper and packaging is the central driver to M&A activity.

Figure 5: Historical Forest & Paper Value Chain

Forest resource	• Company owned forestlands • Large tracks of land • Harvest pushes logs into the value chain
Pulp processing	• Produced strictly for paper mills • Dependant on external energy providers • Long-cycle pricing trends • Capacity location close to fibre supply
Paper mills	• Capacity close to pulp mills and fibre supply • Long-cycle pricing trends
Sawmills	• Small production facilities • Log sort and allocation performed largely at production site • Rigid production schedules and cut profiles based on costs and log sorts • Integrated or closely located to sawmills / plywood facilities
Engineered wood products	• Non-core business • Speciality products with limited market acceptance

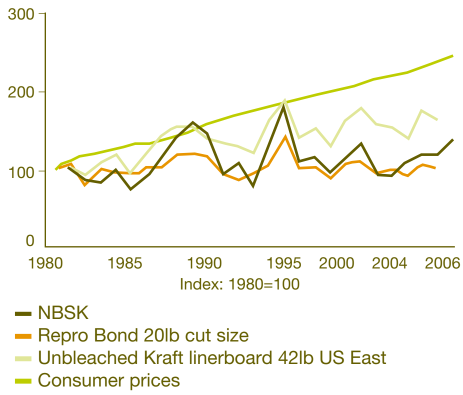
Fragmented Vertically Integrated Industry

Source: PricewaterhouseCoopers, 2006

Historically, the value chain (Figure 5) consisted of regionally-focused vertically -integrated industry players seeking to maximise fibre value at all stages of the value chain, from forestlands through pulp, paper and wood products production and conversion and often through to distribution.

In response to growing product commodisation and supply chain deflation (Figure 6), a process of local and regional consolidation during the 1980s and 1990s took place, as companies sought to increase scale in order to influence pricing and drive down supply chain costs. However, in the main, traditional business models were retained. Despite these rounds of consolidation, which peaked in the late 1990s, regional markets remained relatively fragmented on the whole.

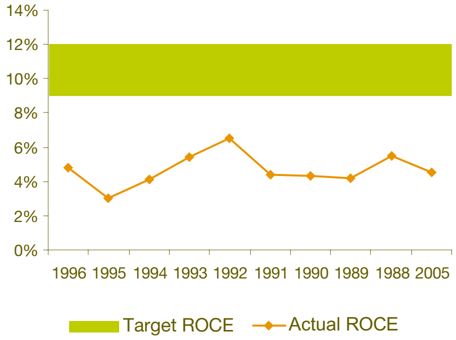
Figure 6: US consumer prices and Producer prices for Pulp and Paper



Sources: Consumer prices-US Government; Pulp and Paper prices-Pulp & Paper Week

At best, these strategies brought temporary relief. Good returns had been made when cycles were on the up, but the downswings were becoming more protracted, locking the industry into a trough of consistently poor returns (Figure 7).

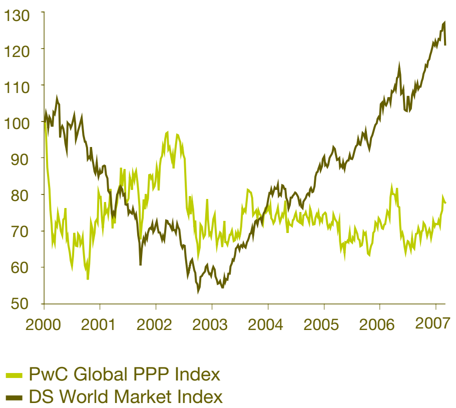
Figure 7: PwC FPP Top 100 - Return on Capital Employed (ROCE)



Source: PwC Global Forest, Paper & Packaging Industry Surveys

However over time, the industry was not only fighting supply chain deflation, but slowing and increasingly erratic demand for its products, as growth in paper demand either uncoupled from GDP growth or as industrial manufacturing relocated to the lower-cost emerging markets. Investors turned away from integrated industries yielding poor returns in the search of higher investment returns elsewhere, which in turn hit the stock prices of major pulp and paper companies (Figure 8).

Figure 8: PwC Global PPP Index v Datastream World Market Index
1 January 2000 - 2 March 2007



Source: Thomson Datastream / PricewaterhouseCoopers

Further impacting the landscape has been the rise of the emerging markets. Demand from markets such as Asia, especially China, and cheap fibre supply from Latin America and Asia are twin factors changing the face of the industry. Traditional producers in North America and Western Europe are becoming displaced from both their export markets and, especially in North America, in their home markets also, by the new cheaper capacity in the emerging regions, as, amongst other matters, distance to market has become less of a barrier and as geopolitical risk has reduced.

Technology has also been a factor, as for example, low-cost short fibre from the Southern Hemisphere has become able to displace higher-cost Northern Hemisphere long and short fibres in most applications and as world-class paper machine technology has become available to companies with the necessary capital. Through globalisation, access to capital has become easier in the emerging regions.

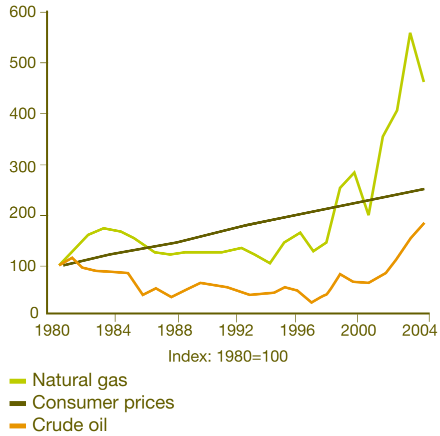
Faced with these forces of globalisation, continued fragmentation and slow growth, once-strong regional champions have been forced to reassess their value chains and fundamentally re-evaluate their strategies.

On the one hand, further rounds of consolidation and the rationalisation of existing asset bases have become necessary. Companies have sought to exit operations with little prospect of yielding acceptable returns, to concentrate on product areas where they can gain competitive edge either through cost leadership or in specialist areas where they can add value.

On the other hand, soaring demand in emerging markets such as China and Russia has forced traditional players to develop a global offering through foreign ventures, both greenfield and brownfield. At the same time, new industry players are emerging in the growth markets of Asia and the Southern Hemisphere.

Whilst traditional players have sought to adjust, cost pressures in the supply chain have remained relentless. Notable has been the ending of cheap energy (Figure 9), as first rises in oil and related energy costs have spiralled. In Europe especially, the cost of carbon regulation under the Emissions Trading System has had to be borne by the industry, either directly or, and much more significantly, as it has lifted the prices charged by energy suppliers.

Figure 9: US consumer prices and Producer prices for Oil and Gas



Source: US Government

Through the twin process of consolidation and rationalisation of assets, capital has begun to be reallocated, and will continue to shift, to the emerging higher yield markets, thereby hopefully enabling mature markets at home to reach the correct equilibrium of production to allow for profitable operation. M&A is a key enabling tool as the regional champions divest those businesses reassessed as non-core and as they seek to become product specialists with true global reach.

04 Deal drivers

Figure 10 portrays how the future forest and paper value chain may shape up, where vertically integrated value chains within regions are replaced with value chains that are consolidated horizontally and globally across stages in the value chain. International Paper's transformation is a prime example of this major shift and in the Pulp and Paper and Converting sectors, several players are well down the road in making this transformation.

In Wood Products, the globalisation influence, whilst evident, is providing less of an imperative than in paper value chains. Strategies to shed the old vertically integrated models have driven the uncoupling of forestlands and pulp and paper assets to enable focus on wood product specialisms and building scale in their chosen areas on a regional rather than a global basis. Canfor, Norbord and Louisiana-Pacific provide examples of these strategies. This, however, can be expected to change as the forces of globalisation in the wood products value chain continue to strengthen.

All-in-all, this value chain transformation has driven, and will continue to drive, M&A activity.

Figure 10: Forest & Paper Value Chain in the Future

Source: PricewaterhouseCoopers, 2006

The entry of non-traditonal investors

At the same time, as valuations of quoted FPP companies have been allowed to fall relative to the market, investment in the upside potential has become attractive to private equity and other non-traditional investors. Further fuelling the private equity purchase mandate has been the fall in acceptable returns driven by the high levels of liquidity in the marketplace. This new money is in effect entering the vacuums created as traditional players realign their value chains, hoping to maximise returns in the new niche markets created.

There are two broad categories of non-traditional investors in FPP:

- Alternative investment classes, comprising:
  - Classic private equity houses using leveraged buy-out strategies who are looking for capital gain-based returns, typically over a 3 to 5 year time horizon. These players normally take controlling stakes so that the investee's strategy can be shaped to drive the required return, including the exit route.
  - Hedge funds, which also typically apply leverage in order to drive potentially higher capital gains. Hedge funds mainly invest in publicly quoted companies and will often build sufficiently sizeable stakes so that they can agitate for the changes that they believe will drive up value. They can also support classic private equity funds in buy-outs. Investment time horizons vary as, unlike buy-out funds, they are not limited by investable funds with finite lives.
  - Real estate investment vehicles specialising in forestlands. These investors are most prevalent in North America where they comprise either Timber Investment Management Organisations (TIMOs) or Real Estate Investment Trusts (REITs). These investors are looking for lower risk, stable, but improving cash flow returns typically over periods of 15 years or even more and therefore attract investors looking for annuity-type returns.
- New strategic investors. Koch Industries (Koch) is the most notable example. Koch is one of the largest family-owned companies in the US. It has long been a strategic investor in the energy sector and made two small acquisitions of pulp mills, both ironically divested by Georgia-Pacific before its mega US$22bn public-to-private acquisition of the same company in December 2005. As a family company, its strategy vis-à-vis Georgia-Pacific is not on public record, but based on its activities in the energy sector, we have assumed it fits the strategic billing. We also include Graeme Hart's Rank Group in this category.

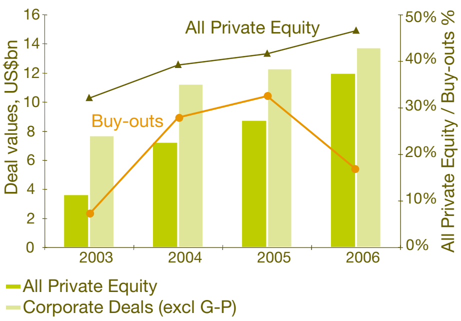
Looking forward, we can anticipate that the drive to generate renewable energy from woody biomass, both bioenergy and biofuels like ethanol, will drive M&A in the sector in future. To date investment has entailed either new build or modification of existing production assets, but has already attracted a diverse range of players into the sector. As the renewables field grows, we can also anticipate new categories of strategic, and possibly also financial, investor to enter the sector via M&A.

05 Non-traditional investors

Private equity

Financial investors, comprising buy-out funds and forestland investors (TIMOs and REITs) have certainly made their mark being involved in at least one side of 15% of the deals transacted in FPP over the past four years. In dollar terms, their significance has been even greater at 48% or US$12bn of deals in 2006 (Figure 11). Further, financial investor involvement has been consistently above 30% and rising in dollar terms over the last four years. At this level, therefore, the penetration by alternative investment classes seems to be higher than most other industries.

Figure 11: Private Equity Investment



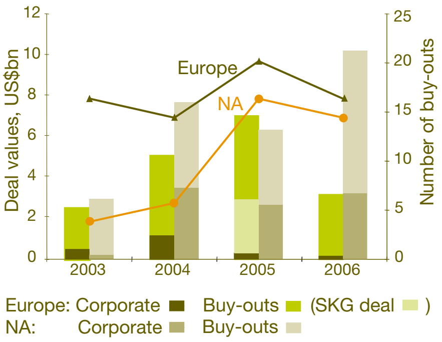
*Source: Dealogic, PwC Analysis**

Figure 12 traces the penetration of these investor classes on a combined basis, as well as buy-out activity separately. This shows buy-outs at 19% of deal values in 2006, down on the 33% in 2005, but at 23% of total deal value (Georgia-Pacific adjusted) over the last four years it is above the global cross-industry average (20% in 2006). This activity has been concentrated in Pulp and Paper and Converting businesses; there has been limited activity to date in pure Wood Products businesses. Although buy-out funds have been looking at deals in Wood Products, no major buy-outs of pure Wood Products businesses have happened, probably due to the particular risks of that segment. We do however expect that to change.

Buy-outs

On a regional basis, buy-out activity has been concentrated in North America and Europe (Figure 12). Buy-out volumes have been steady in Europe and rising in North America. The stark difference is in average deal size over the last four years - US$515m in North America and US$225m in Europe, with the latter reducing to US$111m, adjusting for the skew effect of the Jefferson Smurfit acquisition in 2005 of Kappa Packaging in a deal valued at US$3.2bn.

Figure 12: Buy-out trends in North America and Europe



Note:
1. To facilitate comparison, forestland deals and the G-P acquisition have been excluded
2. SKG = Smurfit Kappa Group

*Source: Dealogic, PwC Analysis**

Buy-outs in Europe have centred on divestments of small non-core businesses of major corporates, players in small but growing niches and small companies in family hands or in financial difficulty. Whilst these categories have also featured in North American buy-outs, private equity moves have been bolder and they have played a pivotal role in facilitating the restructuring of the value chains of the major producers.

This differentiation between North America and Europe is not confined to FPP - it is evident in other traditional manufacturing sectors as well. Although private equity has been in Europe for more than two decades, their entrenchment varies significantly by territory. It is an arguable point, but it is an indication of structural factors that have not yet enabled private equity to play the transformational role it has in North America. These factors include, a lesser degree of maturity in private equity models in Europe, the shortage of sizeable targets with so much of European industry remaining in closely controlled hands or simply, that major European players have not yet felt the same imperative to divest at prices which make targets attractive to private equity (or indeed anyone else).

Further the FPP industry is not an obvious target for buy-out funds, with its commodity cycles and potentially high capital intensity. Nevertheless, perceiving the glass half full, rather than half empty, private equity has seen the opportunities hidden behind poor returns from public companies, the potential value creation opportunities through a sharper and more disciplined approach to the business and, in some situations, more creative management teams. The low cost of debt has also helped to make deals attractive financially.

**Source: PricewaterhouseCoopers analysis based on published transactions from the Dealogic "M&A Global" database, December 2006*

Figure 13: Top Buy-outs in 2006

Deal Value US$ m	Date	Target	Target Country	Acquiror	Acquiror Country
1,400	Jul 06	International Paper (Coated & SC Paper Business)	United States	Apollo Management LP	United States
1,040	Jun 06	Smurfit-Stone Container (Consumer Packaging Business)	United States	Texas Pacific Group	United States
487	Dec 06	Tarkett AG (45%)	Germany	Societe d'Investissement Familiale SA*	United States
434	Nov 06	Kimberley-Clark de Mexico (Industrial Products division) (60%)	Mexico	Eton Park Capital Management LP/ Impulso de Desarrollos Estrategicos SA de CV	United States Mexico
350	Nov 06	Field Container Co	United States	Texas Pacific Group	United States
295	Dec 06	WII Components Inc	United States	Olympus Partners LLP	United States
268	Nov 06	Packaging Dynamics Group	United States	Kohlberg & Co	United States
159	Nov 06	American Fibre Resources/Great Lakes Pulp	United States	SFK Pulp Fund	Canada

** KKR's acquisition was effected by a 50% stake in the French investment company, Societe d'Investissement Familiale, which acquired the outstanding shares in Tarkett.*

Source:
PricewaterhouseCoopers analysis based on published transactions from the Dealogic "M&A Global" database, December 2006

In 2006, six of the eight largest buy-outs were in North America:

- Apollo Management's US$1.4bn buy-out of International Paper's North American Coated and Supercalendared papers business led the way. With US capacity of around 2 million tonnes per annum and annual sales of around US$1.6bn, it makes Apollo via CMP Holdings, one of the leading producers of these grades in North America. For International Paper, it marks a complete exit from these product grades, and for Apollo their first significant deal in the industry.
- Texas Pacific Group's (TPG) US$1.04bn buy-out of Smurfit-Stone's consumer packaging business also marks a first significant move by TPG into the sector. The business was renamed Altivity Packaging and subsequently bolted on Field Container for US$350m, a family-owned company producing folding cartons. For Smurfit-Stone, the deal marked its total exit from the consumer packaging business enabling it to concentrate on corrugated packaging where it is the clear market leader in North America.
- Kohlberg & Co's packaging company, Thilmany LLC, performed a US$268m consolidation roll-up by acquiring Packaging Dynamics, a producer of laminates and value added converted paper, foil and film products. Kohlberg & Co specialises in mid market buy-outs and has been active in the Pulp and Paper and Converting sectors previously.
- In a US$159m exit deal, Cerebrus Capital Partners sold two de-inked pulp mills to SFK Pulp Fund, a Toronto listed income trust which owns one of Canada's largest market pulp mills.

Although just outside the top eight deals, Third Avenue Management LLP, a New York hedge fund built up a 38% stake in Catalyst Paper, a British Columbia (BC) based newsprint producer that had produced losses for several years. The effective change in control was initiated in an attempt to drive costs out of the business and generate a resulting increase in share price. Subsequent to the closing of this deal, Catalyst Paper's CEO and CFO announced their resignation paving the way for the appointment of a new CEO selected by the new Board of Directors, which is now comprised of a majority of non-executives hand-picked by Third Avenue.

Outside North America, the two largest deals were:

- KKR's acquisition of a 50% interest in Tarkett, one of the world's leading branded producers of wooden and other resilient floor coverings. Although classified as a Wood Products business, its activities are well downstream in that sector.
- Eton Park Capital Management, along with Impulso de Desarrollos Estrategicos SA of Mexico (IDESA), acquired 60% of PIMSA, the industrial products division of Kimberly-Clark de Mexico (KCM) in a transaction valued at US$434m. PIMSA, to be renamed Grupo Papelero Scribe, produces a range of branded paper products, including educational products and notebooks for the Mexican market and in which it has high market shares. Eton Park is a New York-based multistrategy fund set up in 2004, mixing hedge fund and buy-out approaches to investing; IDESA is a local investment fund. For KCM, the locally listed subsidiary of Kimberly-Clark, the move is seen as the first step towards an exit from the business in order to focus on hygiene and personal care products. This deal was the largest acquisition of any type in FPP in Latin America last year.

Numerous private equity groups have been active, ranging from small leveraged buy-out funds to some of the largest. Whilst some funds may have an industry focus, most, and especially the largest, tend to diversify. Apart from the generalist nature of most private equity houses and buy-out funds, diversification mitigates risk, by avoiding undue exposure to any one sector. Amongst the largest houses, Texas Pacific Group and Apollo Management have gained significant exposure with their deals last year; Cerebrus Capital Partners has invested in and out of smaller FPP businesses in the past, but its current main holding is New Page, one of the largest North American producers of coated papers. Although not active in any major deals in the sector in 2006, Madison Deaborn Partners, based in Chicago, continues with the largest exposure to the sector, with acquisitions in North America such as Boise Cascade, Buckeye Cellulose, Graphic Packaging Corporation and Packaging Corporation

05 Non-traditional investors

of America. It is also the main shareholder in Irish-based Smurfit Kappa Group, Europe's largest industrial packaging group, which went public in March 2007.

Outside North America, the largest private equity investor in the sector is London-based CVC Capital Partners. In Europe, its two main sector acquisitions have been the Dutch-based Kappa Group, since rolled up into Smurfit Kappa, and Lecta, a group that combines three leading coated wood free papers producers in Spain, France and Italy respectively. Last year, via its Asian arm, CVC Asia Pacific, a joint venture with Citigroup, it almost sealed a 30% stake in Shandong Chenming, China's largest paper company, in the form of US$623m of new equity for expansion.

In the emerging markets, the major opportunities for private equity arise from businesses requiring capital for expansion and growth, rather than through traditional value chain restructuring.

Figure 14: Top Forestland Transactions in 2006

Deal Value US$ m	Date	Target	Target Country	Acquiror	Acquiror Country
5,000	Dec 06	International Paper Co (3.8m acres of forestland, southern US/ 0.4m acres, MI)	United States	Resource Management Service, Forest Investment Associates, and other investors	United States
1,130	Dec 06	International Paper Co (0.9m acres of forestland in LA, TX and AR)	United States	TimberStar	United States
990	Oct 06	Carter Holt Harvey Ltd (275,000 hectare forestry estate)	New Zealand	Hancock Timber Resources Group	United States
140	Jul 06	Mining Assets (500,000 Acres of Timberlands in Nova Scotia, Canada), part of Neekah Paper	Canada	Wagner Forest Management Ltd	United States
90	Jun 06	Soterra LLC (56,000 acres of timberland), part of Glatfelter	United States	Plum Creek Timber Co Inc	United States

Source:
PricewaterhouseCoopers analysis based on published transactions from the Dealogic "M&A Global" database, December 2006

Forestland investors

Since its peak in around 1980, when integrated forest products companies represented the largest ownership category of non-public managed forestland in the US, there has been a near role reversal with financial investors taking their place, as producers have disavowed the virtues of land ownership to ensure fibre security. Of the few who retain significant holdings, none seems likely to maintain the full integrated model, with all look set to unbundle their forestlands voluntarily or under pressure.

Going into 2007, Weyerhaeuser, MeadWestvaco, Longview Fibre and Temple-Inland were the only significant integrated producers remaining. Since then, Longview has been acquired by Brookfield Asset Management in a deal valued at around US$2.1bn, Temple-Inland has decided to unbundle its forestlands and MeadWestvaco has announced plans to sell around 300,000 acres (121,000 hectares) or about one-third, of its remaining US forestlands. At the time of writing, Weyerhaeuser, which still owns more than 6m acres (over 2.4m hectares), is known to be looking at its strategic options.

Producers have been replaced by TIMOs and also REITs, with the producers typically entering into long-term wood supply agreements at market prices with the new owners in order to secure fibre supplies. TIMOs are privately-owned forestland investment structures, typically established as private equity limited partnerships. Notable TIMOs include Hancock Timber Resources Group, Wagner Forest Management, The Forestland Group and Forest Capital Partners, all with their headquarters in New England, US.

REITs are often publicly quoted and usually have their origins as integrated forest products producers which have sought to enhance shareholder value by concentrating on forestland investment and management and to do so have converted to REITs. The largest REIT is Plum Creek, which owns close to 9m acres (3.6m hectares) of US forestland.

Both TIMOs and REITs enjoy tax advantages compared with traditional corporate investors in real estate and this has helped boost the returns they can generate. However as a consequence, they are subject to rules that require them to distribute most of their annual income and are most suited to institutional investors seeking annuity type returns. Apart from the tax advantages, returns by these investors have been enhanced through using higher and better land use options, essentially selling land for higher-value development, such as for residential purposes.

The rush of non-traditional investors into US forestlands has driven up land prices and created fears of an "asset bubble". However, ultimately, the value of forestlands is constrained to the end use product, namely wood products and pulp. In recent years, demand for wood products has benefited from a buoyant US housing market, although the tide turned sharply in 2006, causing US wood prices to fall to their lowest levels for several years by H2 2006. Turning into 2007, these trends in wood markets had not caused any appreciable capital flight out of US forestlands, but it's clear that matters remain finely balanced at the time of writing.

Looking ahead, wood-based energy and biofuels may offer a significant alternative route to monetising wood fibre and capital is flowing in to exploit these opportunities. However, it is still early days.

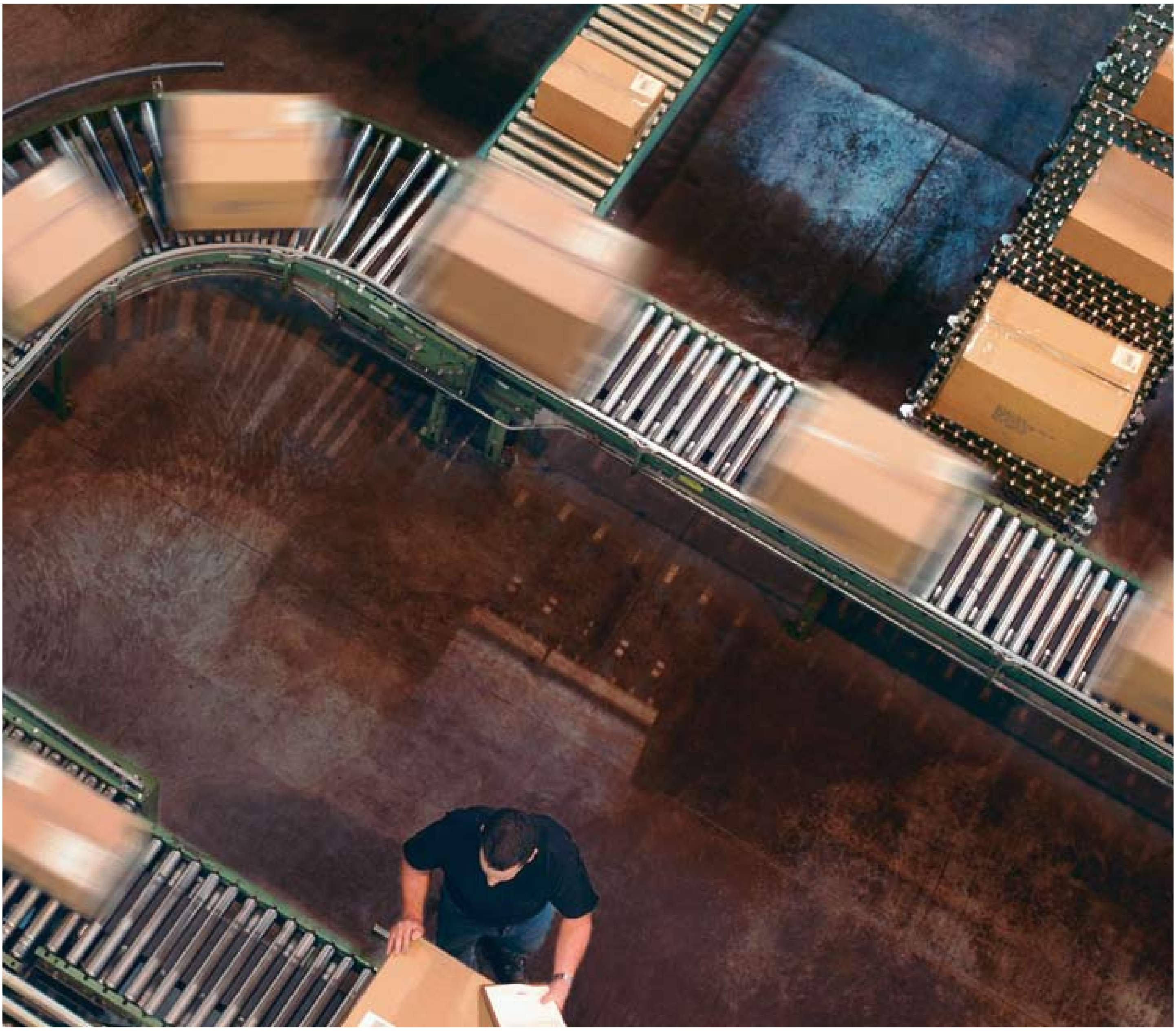
The largest TIMOs have ceased to be wholly dependent upon North American forestlands by extending their reach into Australasia and Latin America, with other regions also being eyed up. Overseas investment can be expected to take an increasing share of investment money, thereby offering investors greater regional diversification.

The reported value of forestland divestments to financial investors hovered around US$2bn per annum between 2003 and 2005. Needless to say the massive divestment by International Paper caused deal values to shoot up in 2006 to US$7.7bn and their divestments to TIMOs represented the two largest transactions last year.

Resource Management Service (RMS) led the consortium that acquired 4.2m acres (about 1.7m hectares) of mainly US South forestlands for around US$5bn, with RMS retaining more than half. Although RMS is one of the oldest TIMOs, it had been fairly small until this deal. Timberstar, the TIMO which acquired 0.9m acres (about 360,000 hectares) for around US$1.13bn is believed to have acted alone.

One non-North American transaction featured amongst the top deals, this being Hancock Timber Resources Group's acquisition of most of CHH's New Zealand forestland estate of 275,000 hectares (about 680,000 acres) with a reported deal value of around US$990m.

In Europe also, institutional investment has been attracted to forestland. However, direct ownership of forestland by European producers has always been on a much less significant scale than for their US counterparts. In the main, European forest and paper companies that own forestland have tended to retain these assets; a notable exception is Stora Enso, which divested majority ownership of its forestland holdings in Finland and Sweden between 2002 and 2004 to Nordic-based financial institutions.



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North America

North America has led the way in regional consolidation in the pulp, paper and converting sectors as domestic players have built up scale by merging with or acquiring rivals.

US firms have completed the biggest deals, with a wave of major mergers and acquisitions in the run up to the new century: Georgia-Pacific buying Fort James, International Paper buying Champion International and Union Camp, the merger of Stone Container and the US arm of Jefferson Smurfit to create Smurfit-Stone, Weyerhaeuser snapping up Willamette Industries and the merger between Westvaco and Mead. These were all deals individually valued in the range of US$5-11bn. As a result, the top five producers moved from a combined share of about 25% of the total North American market to close to 40%, a significant advance but still relatively fragmented given the maturity of markets.

There was a cost however. Many carried a heavy debt burden into the weakening markets of the new century and many of the deals left acquirers with sprawling portfolios of assets across a wide range of forest product sectors. In short, many of these deals didn't pay their way and investors lost interest.

Since then, the industry has been tasked with transforming its value chain with the non-traditional investors into the sector facilitating the way. And consolidation has continued with the result that in most grades, the North American market is now more, and in areas such as containerboard, far more consolidated than in Europe.

At the time of writing, the US$2bn plus merger of Bowater and Abitibi-Consolidated is pending clearance by the competition authorities. If approved, this would create the world's largest newsprint producer, with some 40% of the North American market and also with a high share of the market for uncoated magazine grades. This is a defensive move, linking the top two North American producers giving the opportunity to manage capacity downwards as the market for newsprint continues to decline.

Canadian companies have had special difficulties, with a soaring Canadian dollar, which has hit exports to its southern neighbour especially and the government has supported the industry with subsidies.

Figure 15: Top deal in North America in 2006

Deal Value US$m	Date	Target	Target Country	Acquiror	Acquiror Country
5,000	Dec 06	International Paper Co (3.8m acres of forestland, southern US/ 0.4m acres, MI)	United States	Resource Management Service, Forest Investment Associates, and other investors	United States
3,300	Aug 06	Weyerhaeuser Co (Fine Paper business & Related Assets)	United States	Domtar Inc	Canada
1,400	Jul 06	International Paper Co (Coated & SC Paper Business)	United States	Apollo Management LP	United States
1,130	Dec 06	International Paper Co (0.9m acres of forestland in LA, TX and AR)	United States	TimberStar	United States
1,040	Dec 06	Smurfit-Stone Container Corp (Consumer Packaging business)	United States	Texas Pacific Group	United States
500	Dec 06	International Paper Co (Beverage Packaging business)	United States	Carter Holt Harvey Ltd	New Zealand
476	Dec 06	Norampac Inc (50%)	Canada	Cascades Inc	Canada
350	Nov 06	Field Container Co LP	United States	Texas Pacific Group	United States
325	Nov 06	International Paper Co (13 lumber mills)	United States	West Fraser Timber Co Ltd	Canada
296	Dec 06	WII Components Inc	United States	Olympus Partners LLP	United States

Shaded deals involve private equity
Source:
PricewaterhouseCoopers analysis based on published transactions from the Dealogic "M&A Global" database, December 2006

This has not stopped widespread capacity closures. In wood products, these difficulties were compounded in 2006 by the slump in the US housing market. Eastern Canada is currently the highest cost producer in the world and its leading companies are in difficulty.

For timber producers, some respite has been provided by the settlement of the long running softwood lumber trade dispute with the US, which has resulted in Canadian-based wood exporters receiving around US$4bn in compensation. For some, this provides the opportunity for debt alleviation- for others, it provides the opportunity to enhance competitiveness with select acquisitions. West Fraser Timber is a case in point, acquiring International Paper's sawmills in the Southern US for US$325m thereby strengthening its sourcing and supply base in one of the lowest cost regions of North America and gaining access to new customers. This deal propels West Fraser Timber into the number two slot in sawn wood production in North America behind Weyerhaeuser.

Despite the slump in US housing demand, North America remains by far the largest market worldwide for construction-grade wood products, and it is reasonable to assume that the current downturn is cyclical. The market remains highly fragmented, so there is plenty of scope for further significant regional consolidation in wood products. In consequence, the rationale for leading producers to acquire or set up operations overseas is less compelling.

In contrast, for the major paper and packaging producers, growth must come from overseas and in the emerging markets especially. Ironically, many of the leading producers recognised the opportunity of the emerging markets at an early stage and set up operations there. However, few have grown their presence and, indeed, some have exited. With consolidation now becoming well advanced in most grades, the opportunity for major acquisitions in North America has reduced. Amongst the largest producers, International Paper for one has set its eyes firmly on growth in the emerging markets in its chosen product categories.

Europe

Europe is a story of two halves. Although generally less mature than North America, Western European markets are showing similar pains; in contrast, Central and Eastern European markets are growing strongly.

Western Europe

For Western European producers, it has been a benefit to have growth markets next door, providing new markets for product and investment. However, this has not been enough to haul producers from the trough of low returns suffered by their North American counterparts.

Over the past four years, although M&A volumes have remained fairly steady, dollar values have dwindled and at US$3.3bn in 2006, they were under a third of their value in 2000. The major European players have been busy with operational improvements, including adjusting capacity downwards to better align with demand. Apart from mill and machine closures, there have been many smaller size disposals and acquisitions, including buy-outs.

Some of the larger investment budgets were devoted to building capabilities in emerging markets-from plantations through to production. Otherwise, investment budgets have become more modest, with money at home being spent on improving core asset quality and performance. This has included a big focus on energy costs, increasing the share of renewables and reducing energy usage- apart from the knock on effects of higher oil and gas prices, producers had to contend with the pass through costs of carbon regulation under the EU Emissions Trading Scheme. Indeed, spiralling energy costs have been the death knell of many marginal mills; Rottneros Bruk (Sweden) went further, announcing recently that it planned to dissemble and relocate its modern CTMP market pulp mill from Sweden to South Africa for this reason.

An issue to challenge producers is the appreciation of the Euro versus the US dollar. Despite cuts, capacities still assume that Western European producers can export their surplus. This is looking less sustainable with the strength of the euro and with Asian producers becoming more competitive in Western European producers' traditional export markets.

Looking at the larger deals last year, the two biggest were in Portugal. Stora Enso (Finland) sold its Celbi eucalyptus market pulp mill to Altri, a local holding company which has been building up its interests in the Portuguese pulp and paper sector in a deal worth EUR428m (about US$550m). The deal allows Stora Enso to concentrate on building up its pulp interests in South America.

The second was the seasoned equity offering by the State of Portugal of its remaining 25.7% stake in Portucel, the country's largest pulp and paper company and one of the largest producers of uncoated woodfree paper in Europe. The tender offer to private investors raised EUR415m (about US$540m).

Figure 16: Top deals in Europe in 2006

Deal Value $ million	Date	Target	Target Country	Acquiror	Acquiror Country
650	Oct 06	Ilim Holding SA (50%)	Russia	International Paper Co.	USA
550	Sep 06	Celulose Beira Industrial-Celbi SA	Portugal	Altri	Portugal
540	Nov 06	Portucel Industrial SA (25.7%)	Portugal	Investor Group	Various
487	Dec 06	Tarkett AG (45%)	Germany	Societe d'Investissement Familiale SA	France
430	Sep 06	Aker Kvaemer ASA (Pulping and power business)	Norway	Metso	Finland
120	Dec 06	Demolli Industria Cartaria SPA (75%)	Italy	Sonoco Products	USA

Shaded deals involve private equity
Source:
PricewaterhouseCoopers analysis based on published transactions from the Dealogic "M&A Global" database, December 2006

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In another sizeable deal, Metso, the world's largest pulp and paper machinery builder, acquired Kvaerner's pulping and power machinery business in a deal valued at around EUR335m (about US$430m). The deal enables Metso to extend its technology and service offering in chemical pulping, chemical recovery and pulp process-related power generation. To comply with an EC competition authority ruling, certain parts of the business were resold.

There were no other deals approaching these in value, reflecting the paucity of the FPP deal market in Europe last year. There had been expectations that conglomerate Anglo American, the natural resources group, would demerge Mondi, its paper and packaging business, in autumn 2006 - but the transaction, likely to involve a dual listing in London and Johanesburg, is now scheduled for mid-2007. Valuation estimates range - with most centring on an equity value of around £4bn (US$7.8bn).

The absence of significant deals in recent years is something of a surprise. Of course, the European industry has never been as heavily invested in forestlands as its North American counterparts, but otherwise the essential conditions that have driven the larger transactions in North America are present in Europe, not least a relatively fragmented industry structure and a large pool of private equity money.

Western Europe ten years ago was ahead of North America in terms of market consolidation, but has since been overtaken, with the top five European producers now controlling less than 40% of regional capacity and with a long tail of smaller producers. By major product grade, North America is ahead or well ahead of Western Europe in consolidation, except in magazine papers.

The pattern of smallish deals is consistent with a deal market lacking in confidence, which is certainly not consistent with the M&A market in Europe as a whole. Instead it indicates there are organisational and institutional barriers that are preventing or at least delaying the flow of major deals.

That said, as a dull year drew to a close, some sparks were provided by Georgia-Pacific's announcement, later withdrawn, that it was reviewing the options for its sizeable European tissue business and the US$2bn plus bidding battle for SIG Holding described earlier.

Further, as the battle for SIG drew to a conclusion in March 2007, the scene continued to heat up with the IPO of private equity-backed Smurfit Kappa Group (SKG), listing in Dublin and London, in a float valuing the equity at around EUR3.4bn (US$4.5bn) and giving an enterprise value of around EUR7.7bn (US$10.2bn). Proceeds raised by way of new shares of EUR1.3bn (US$1.7bn) are to be used mainly to repay debt.

With Mondi's IPO also pending, there is expected to be a feast of new public equity in the sector in Europe, something that hasn't happened for very many years.

Also in March 2007, SCA (Sweden) announced it will be acquiring Procter & Gamble's (P&G) European tissue operations in a deal valued at EUR512m (US$680bn). Tissue is one of the higher growth areas in Western Europe and this deal will consolidate SCA's market-leading position in that segment in that region with the potential to extend its reach in both branded and private label products. For P&G, it marks a strategic exit from a region where its market share was small to concentrate on North America.

In the first three months of 2007, the acquisitions of SIG Holding and P&G Europe together with Pfleiderer's (Germany) SEK2.73bn (US$390m) acquisition of laminated floorings producer, Pergo (Sweden) with a combined value of almost US$3.4bn is greater than the total value of transactions in Europe for the whole of 2006. This is an indicator perhaps that confidence is growing stronger and 2007 will produce a much stronger deal flow.

Eastern Europe - Russia

Russia is starting to emerge as a key region in the globalisation of FPP based on its vast forest resources. Comparatively low labour costs and low energy costs (for the moment at least) are other pluses. Further, although not on par with oil & gas, forestry, pulp and paper is clearly an industry of growing strategic importance as evidenced by the recent revisions to the country's Forest Code and recent increases in export tariffs on unprocessed timber. It is also becoming increasingly attractive as an end consumer market.

Unlike other "emerging" markets, Russia has an established forest products infrastructure, which dates from the Soviet era. Given the dufficulties associated with greenfield, investment in pulp and paper has tended to focus on upgrading the ageing asset base and related infrastructures where economic. Indeed, this has been the strategy of the two largest FPP acquirers into Russia to date, Mondi and International Paper.

Further, with the concentrated ownership structure of much of Russian industry and the long tail of poor quality assets that it is uneconomic to upgrade, quality acquisition targets are in short supply. This is reflected in the small scale of deal activity in the past four years, where typical transactions have involved the acquisition of logging contractors with timber concessions by Scandinavian and Far Eastern businesses seeking to strengthen their wood supply chains.

The introduction of a series of steep increases in export duties on unprocessed timber starting from April 2007 is designed to encourage investment in local value-added processing. This could mean that some of the many greenfield schemes under discussion will eventually come to fruition.

Somewhat bucking the above trend is International Paper's planned acquisition of a 50% interest in Ilim Pulp. Assuming the transaction completes, it will provide immediate access to the most extensive vertically integrated paper products value chain (sawmills are excluded from the deal) in the country. Further, it could provide potential for significant further growth as signalled by the related announcement of plans to invest US$1.2bn in Ilim Pulp's four mills over the next five years or so.

Asia Pacific

Asia Pacific is a diverse region ranging from the mature Japanese and maturing Australasian markets to the huge and fast-growing Chinese market and other fast growth markets of South and South-East Asia. Deal drivers in this region are therefore equally diverse.

Japan

Significant consolidation has already occurred and in all the main paper grades, the top five players, all domestic, control between 70% and near 100% of the market. However, this has not been enough to boost performance and measures to solve overcapacity have been limited, even as the problem has been made more acute by the steady erosion of domestic and regional market share by Chinese producers. In effect, a position of near stalemate had developed as the major players watched and waited for their competitors to make the first move.

All major Japanese companies, quite often through the giant trading houses, have used overseas markets to secure fibre supplies for many years. However, moves to build or acquire paper production overseas, and hence secure new sources of growth, have been more limited. In short, the Japanese pulp and paper companies have played a limited part as the global FPP industries realign.

In 2006, Oji Paper, the market leader, sought to break the stalemate with an almost unprecedented attempt at a hostile takeover of Hokuetsu Paper Mills, Japan's sixth largest producer. Its US$1.4bn takeover bid failed, as a series of defensive measures came into play, which in effect preserved the status quo. These measures accounted for some of the largest completed deals in Japan last year.

Hokuetsu issued new shares to the giant trading house Mitsubishi for Yen30.4bn (US$265m) giving Mitsubishi a 24.4% stake at a price which undercut Oji Paper's offer and making it the largest shareholder in Hokuetsu. The support of Nippon Paper Group, Japan's second largest paper producer, was also enlisted, buying an 8.85% stake in Hokuetsu, for US$133m. Nippon Paper Group also offered Hokuetsu a friendly alliance and a ceiling of 10% on its stake - a loose operational alliance was announced towards the end of 2006.

Figure 17 Top deals in Asia Pacific in 2006

Deal Value $4m	Date	Target	Target Country	Acquiror	Acquiror Country
990	Oct 06	Carter Holt Harvey Ltd (275,000 hectare forestry estate)	New Zealand	Hancock Timber Resources Group	United States
355	Jun 06	Carter Holt Harvey Ltd (14.3%)	New Zealand	Rank Group Investments Ltd	New Zealand
265	Aug 06	Hokuetsu Paper Mills Ltd (23.7%)	Japan	Mitsubishi Corp	Japan
261	Dec 06	Sabah Forest Industries Sdn Bhd (97.78%)	Malaysia	Ballarpur Industries Ltd|JP Morgan Securities (Asia Pacific) Ltd	India
220	Jun 06	PT Kiani Kertas	Indonesia	United Fiber System Ltd	Singapore
190	Nov 06	Tokushu Paper Mfg Co Ltd	Japan	Tokai Pulp & Paper Co Ltd	Japan
140	Mar 06	Shandong Sun Paper Co Ltd (Coated paperboard manufacturing business)	China	International Paper Co	United States
133	Aug 06	Hokuetsu Paper Mills Ltd (2.47%)	Japan	Nippon Paper Group Inc	Japan

Shaded deals involve private equity
Source:
PricewaterhouseCoopers analysis based on published transactions from the Dealogic "M&A Global" database, December 2006

The Hokuetsu situation triggered a number of smaller defensive cross-shareholding moves, which all-in-all suggest the Japanese paper industry remains unprepared to fundamentally realign.

One consolidation move, however, which did succeed was in speciality paper with Tokushu Paper acquiring Tokai Pulp & Paper in a Yen22.6bn (US$190m) deal.

China

In a relatively short space of time China has become the world's biggest paper and packaging market behind the US and it has become central to the strategy of major players.

The increased supply of paper, packaging and wood products is primarily export driven with huge investments in world-class production facilities having been made and continuing. In some areas, especially low cost labour for producing joinery products, furniture and certain speciality papers, China has been playing to its strengths, but otherwise enjoys limited natural advantages for FPP production.

Indeed, capacity has been expanded to the point where in 2006, China became a significant net exporter of paper products, with the potential to significantly disrupt established trade flows in the region and more widely. Many in the industry are holding their breath and hoping that capacity expansion in China will slow to allow domestic demand to catch up.

With the emphasis on new build (and forest planting), deal activity has focused on fund-raising and joint-venturing rather than conventional M&A. With only a trickle of smallish deals occurring in 2006, in the near future, this pattern seems unlikely to change.

Many international players who are not in China already are waiting to see how the market shapes up, in anticipation that there will be casualties from over-investment.

The headline transaction last year was the IPO in Hong Kong of Nine Dragons Paper (Holdings). The IPO valued Nine Dragons at around HK$13.5bn (around US$1.8bn) with HK$3.4bn (around US$438m) being raised, equivalent to 25% of its enlarged equity. Funds raised were used to reduce

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the sizeable debts it had accumulated to fund its phenomenal growth. The float excited considerable interest and was significantly oversubscribed.

Nine Dragons Paper exemplifies the cut and thrust of paper production in China. Just over ten years ago, its business in effect comprised the import of waste paper. Since then, it has grown to become the largest China mainland producer of containerboard with a share of around 20% and ambitions for further major domestic expansion.

South and South-East Asia

Asia, other than Japan and China represents a huge population of mainly good growth markets and which is seeing significant investment in capacity for wood processing and pulp and paper production. Indonesia and to a lesser extent Malaysia are the fibre baskets for the region, although plantation developments linked to wood products and pulp/paper production are taking place across the region. All of this is driving a good volume of smaller sized deals.

In India, demand is growing fast, with a rapidly increasing middle-class, urbanisation, growing literacy, industrial and service sector growth and movement towards organised retailing – all key drivers of growth for forest products. However, the shortage of native wood fibre, along with prevailing regulations on plantations, is a potential limiting factor.

This was a major driver behind Ballarpur Industries' acquisition of Lion Forest Industries' controlling interest in Sabah Forest Industries for US$261m -a deal for which Ballarpur, India's largest papermaker, teamed up with JP Morgan Securities (Asia Pacific).

This was the first overseas acquisition of an integrated pulp and paper business by an Indian company. The acquisition included a long-term lease from the State Government of Sabah (Malaysia) of 289,000 hectares (around 710,000 acres) of forestland. The deal expands Ballarpur's presence in the region, and the company believes that the forest concession will support growth, with suggestions that the site could support a large new pulp mill in the future, to go towards meeting Ballarpur's growing fibre needs.

In another transaction centred on fibre supply, United Fibre System (UFS), a Singapore listed investment company, with interests in forestry and property and plans for pulp investments in Kalimantan (Indonesia) took over management of the Kiani Kertas pulp mill in East Kalimantan in July 2005 with a view to acquisition. The Kiani Kertas mill had been troubled from its inception and had been unable to operate anywhere near its 525,000 tpa design capacity. In February 2006, UFS reported that it had entered an agreement to acquire the mill from its Indonesian owners. However, no deal was executed and in December 2006, UFS released an update statement explaining that "the Company continues to review the various alternatives to move forward with the acquisition and that the funding for the proposed acquisition remains in place". In the meantine, it is understood that UFS continues to provide working capital, but in the absence of any further announcement, it is assumed that the deal, reported to be valued at US$220m, remains on ice.

Latin America

Due to the high availability of quality, fast-growth fibre, Latin America has seen significant greenfield investment.

The region is dealing with many of the same issues as their counterparts around the world, with increases in fuel prices and other input costs also affecting their business. The main producing countries are also facing appreciation of their currencies versus the US dollar. Nevertheless, they remain among the lowest-cost producers.

Brazil has been the biggest magnet for major investment by domestic and international companies in plantation-based forestry with forward integration into pulp and wood products production and with a strong focus on export markets, from North America to Europe and even as far as China. Investment in paper production has been more muted but is increasing as the local market becomes more interesting in its own right.

Chile's leading producers and also the largest forest products companies in the region - Arauco and CMPC - have continued to invest principally in domestic pulp and wood products businesses again with an eye to export markets, and also in production in neighbouring countries.

Uruguay is now witnessing a surge of mainly inward investment offering, as it does, an attractive environment for plantation forestry and forward processing. In particular, the Metsa-Botnia 1 million tpa bleached eucalyptus pulp mill jointly owned by UPM and Metsaliitto, both of Finland, on the River Uruguay (scheduled to open later this year at an investment cost of around US$1.2bn), represents Uruguay's largest ever industrial project.

Given the large volume of greenfield investment, conventional M&A volumes in the sector to date have been modest. However the average deal sizes, where reported, have been a good size and running close to the global average. In years prior to 2006, many of these featured Brazilian pulp and paper companies repositioning their local portfolios.

In 2006, the largest deal was the asset swap between International Paper and local producer, VCP, although no value has yet been reported for that transaction. Under the terms of the deal, International Paper exchanged its in-progress pulp mill at Tres Lagoas in Mato Grasso do Sul (with around US$1.15bn in pre-funded project costs) and surrounding plantation forests for VCP's Luiz Antonio uncoated paper and pulp mill and adjacent plantations in the state of Sao Paulo. International Paper plans to expand uncoated paper capacity at the site and the deal enables VCP to increase its focus on pulp.

The next largest deal in Brazil also featured International Paper, this time selling Vinson Industria de Papel Arapoti and Vinson Empreendimentos Agricolas to Stora Enso. Located in the southern state of Parana, the deal valued at US$420m comprised South America's only coated mechanical papermill, together with a sawmill and approximately 50,000 hectares (about 120,000 acres) of land of which 60% is planted mainly with pine. The deal provides Stora Enso with a strong platform from which to develop its regional presence in one of its core grades, offering also the potential for export. Since doing that deal, Stora Enso has been looking at options in regard to the sawmill along with related wood supply arrangements, as this asset does not fit with its strategy in Latin America.

Arauco was at the centre of another large deal in the region, buying Cementos Bio Bio's forestry assets located in Chile comprising pine plantations and a sawmill. In a deal valued at US$135m, this represents a further consolidation of the export-oriented forestry sector in Chile, where Arauco and CMPC together dominate forestry operations in the country.

With the growth, strong financial performances and competitive positions of the major Latin American producers and the increasing reach of their products into global markets, it would be unsurprising if at least one did not emerge as a truly global player in the coming years.

Figure 18: Top deals in Latin America in 2006

Deal Value US$m	Date	Target	Target Country	Acquiror	Acquiror Country
434	Nov 06	Kimberly-Clark de Mexico SA de CV (Industrial Products Division) (60%)	Mexico	Eton Park Capital Management LP / Impulso de Desarrollos Estrategicos SA de CV	United States
400	Sep 06	Vinson Industria de Papel Arapoti Ltda / Vinson Empreendimentos Agricolas Ltda	Brazil	Stora Enso Oyj	Finland
135	Apr 06	Cementos Bio Bio SA (Pine tree plantation, sawmill and manufacturing plant, Chile)	Chile	Celulosa Arauco y Constitucion SA	Chile

Shaded deals involve private equity
Source:
PricewaterhouseCoopers analysis based on published transactions from the Dealogic "M&A Global" database, December 2006

07 The success of deals

Despite growing deal activity, consolidation deals in the FPP sectors have not been an unqualified success. Earnings and stock prices of companies in the FPP sector have continued to lag and generally have failed to create much in the way of shareholder value

The huge challenge of making acquisitions add value beyond an initial rise in share price is not confined to FPP. Research from PricewaterhouseCoopers, consistent with similar studies, shows half of all mergers since 1990 have eroded shareholder value primarily due to poor integration planning. Acquisitions rarely fail due to a flawed strategy; rather failure is most often a result of not executing the strategy in a timely fashion. Successful integration must happen fast and systematically – the first 100 days are crucial.

In its keenness to execute a deal, an acquiring company does not always consider all of the integration issues that will prove crucial to a deal increasing shareholder value. Issues particularly relevant to the FPP sector are the traditional values of its companies; its ageing workforce; and its entrenched business procedures and supporting technology. Due diligence is often limited to financial and operational risks with little or no focus on differences in corporate cultures, operating philosophies and management practices. These factors can be among the most challenging aspects of an integration effort.

Industry leaders also recognise the challenge. Indeed, PricewaterhouseCoopers 10th Annual Global CEO Survey, which surveyed the views of 1,100 CEOs across all industries, revealed that three quarters of FPP CEOs felt that cultural issues were an obstacle in completing deals, especially cross-border, compared with 45% of their peers.

Successful integration efforts are run as a project with a Steering Committee, or equivalent, empowered to establish a vision of integration success, to make decisions and to allocate resources. Integration teams consisting of employees from each of the legacy companies should be established well before the deal closes to develop and implement detailed integration plans. Engagement of employees in these teams generates morale and builds momentum and support for the integration effort.

Effective evaluation of integration success is often neglected. Synergy targets need to be identified as part of the planning process so that the key value drivers of the deal are incorporated into the integration plans and ownership for achievement of these targets can be identified. Progress against the vision of success and measurement against synergy targets must be evaluated on a regular basis in the post-merger period, and shortfalls immediately addressed to ensure the benefits of the merger are not lost or diminished. This is a key learning from successful serial acquirers.

08 Looking forward

Despite recent nervousness in the capital markets, the broad fundamentals for a good deal flow remain in place – a sound economic environment, low interest rates, plenty of liquidity, most notably with private equity. In FPP too, the conditions are there to drive activity – continued underperformance, the need to realign portfolios, to consolidate and extend reach into the emerging markets. Indeed continued underperformance must act as a spur for the major players at least to remodel and reposition themselves in the changed environment of global competition.

Deal sentiment within the FPP industry is also strong. PricewaterhouseCoopers Annual Global CEO Survey revealed that 27% of FPP CEOs were planning a cross-border merger/acquisition versus 15% amongst the peer group.

North America will continue to be a centre of deal activity. More mergers can be expected to consolidate market positions – the exit from forestlands will continue as will moves towards a more singular focus on core products.

The downturn in the US housing market could act as a spur for consolidation in wood products as the stronger players sweep up their smaller competitors or even pair up bigger players in what remains a highly fragmented marketplace. Canadian sawn timber producers armed with funds from settlement of the softwood lumber dispute might be expected to be key players.

In Europe, deal flow so far in 2007 has been much stronger than in 2006. However will the momentum be maintained? The major players have choices. Do they seek to consolidate market positions in Europe or do they focus on the emerging markets? In reality, they will need to do both. Whilst it is clear that organic growth or low cost inputs will come from the emerging markets, the fragmentation in home regions cannot be ignored whatever barriers need to be overcome. In turn, both strategies will likely entail the largest players shedding businesses to focus on fewer product areas.

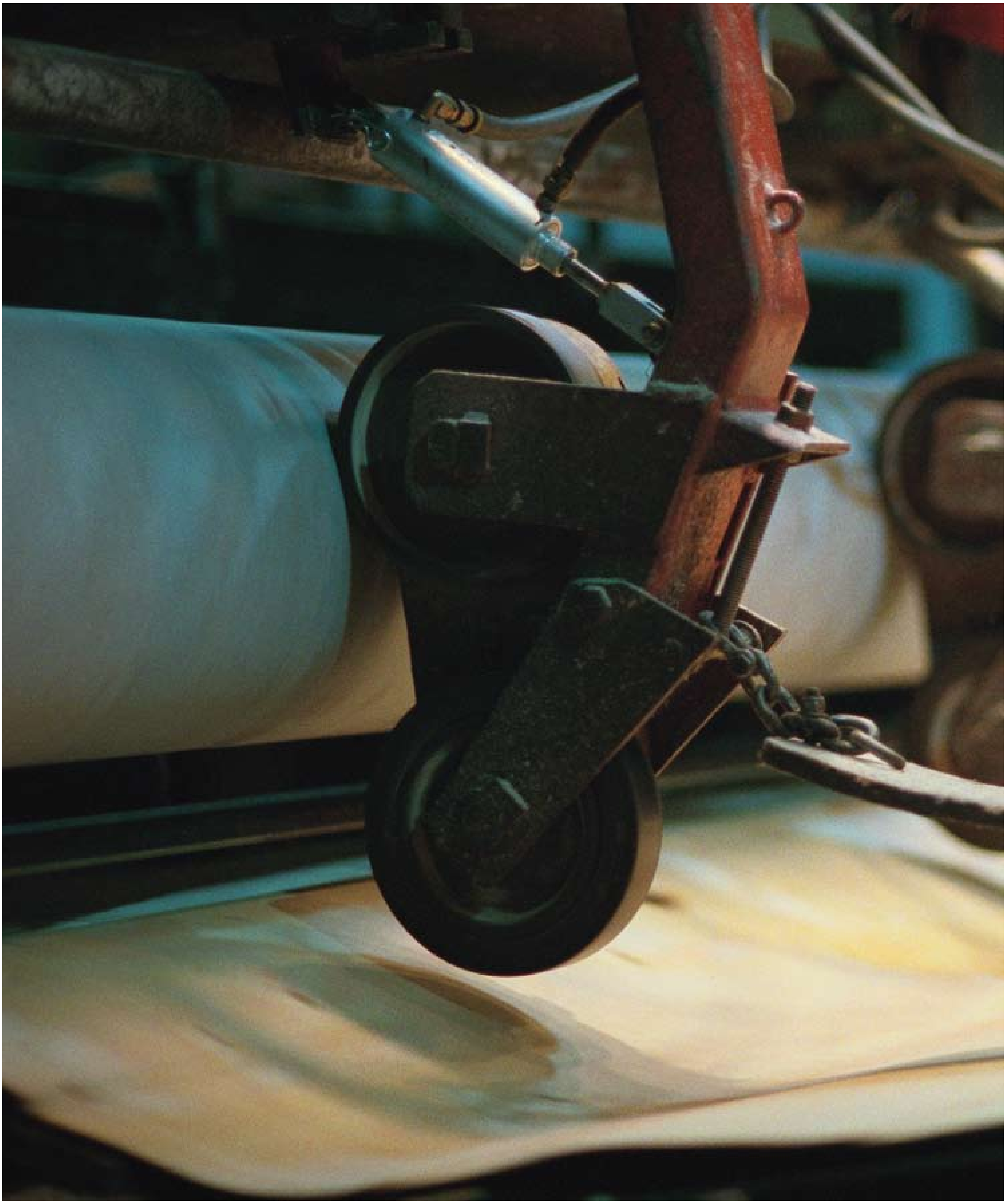
In the emerging markets, major deal flow cannot be expected in the near future. However at some stage, we can expect a process of portfolio restructuring and consolidation to gain sway.

And what role will private equity play? A poll of North American buy-out fund managers earlier this year revealed that the vast majority are looking to do more deals in Europe and the emerging markets. Whilst North America can be expected to remain a favourite hunting ground, the higher levels of private equity penetration, the greater competition for deals and the need to diversify to keep risks at acceptable levels, mean that it makes sense to be looking elsewhere. A similar pattern can be expected in FPP.

Private equity can be expected to remain a pivotal player in North America. In Europe, their role can be expected to enlarge if the consolidation and product focus moves that need to happen do take place. Indeed, they could become the prime movers. In the emerging markets, their opportunities will be fewer; however with their ability to execute quickly, they can be expected to be key actors where acquisition opportunities arise. In the meantime, private equity could become a source of growth capital to emerging market players.

Although unlikely to be a driver of major deal flow in the short-term, the moves towards greater renewable energy (including biofuels) from woody biomass, will drive deals in due course. Indeed, some FPP players are already adopting strategies to establish energy generation as discrete business units. The shape of deals can only be a matter of speculation at this juncture, but in the early stages, co-ventures between FPP companies and both new and established energy players can be expected. In the short term however, the main impact of the push to renewable energy will be greater competition for wood fibre, as is already being witnessed in many parts of Europe. This is turn will add pressure for FPP companies to restructure.

2007 is already off to a strong start with almost US$9bn of deals reported in the first three months, well up on the same period last year. Featuring significantly in the first quarter have been Brookfield Asset Management’s acquisition of Longview Fibre, the agreed combination between Bowater and Abitibi Consolidated and Rank’s recommended bid for SIG Holding $2.3bn, deals with a combined value of around US$5.5bn. If this is the tone of things to come, 2007 could turn out to be busier than last year.



09 Our transactions expertise

PricewaterhouseCoopers Transaction Services and Corporate Finance teams bring unparalleled strength – in people, knowledge and services – to ensure your deal decisions are informed ones and your investments are successful. Our financial, operational, strategic, structuring and corporate finance specialists work alongside our other specialists within the firm including tax M&A, pensions, valuation, IT and environmental.

Transactions Services

Within our Transaction Services team, our FPP capability comprises consultants, accountants and experienced industry practitioners with first-hand knowledge of the FPP industry. We also connect directly with our global network to access local knowledge and contacts across the world. Our team has deep functional experience and a breadth of skills that enable you to extract maximum value from your business before, during, or after a transaction.

Due diligence has increasingly become an exercise not only in preserving value, but in identifying and testing the upside opportunities that may be contained within the business which may be crucial to winning the deal. Our integrated service combines financial, operational, and commercial due diligence and can help you interrogate and justify your vision for a deal.

We can provide a single report that provides a 360-degree perspective of the state of the business today, its future prospects, and the prospective shape of the business and its marketplace. Alternatively, you can choose to benefit from individual elements of our experience and expertise.

Our Operations team can help identify value in the pre-deal phase and capture that value in the post-deal 100-day planning phase of the transaction. In addition, our industry specialists bring with them the experience and knowledge of having handled international manufacturing plant transfers in a range of environments.

Our Strategy team can help you to develop acquisition, disposal and growth strategies by considering key everyday issues including market drivers and the impact of the economy, new market opportunities, reviewing performance across a business portfolio and diagnosing drivers of underperformance.

Our exit support and vendor assistance services help clients avoid the pitfalls of going to market under-prepared. Value can be lost if the vendor has not anticipated or cannot articulate the strategic, operational, or financial analysis needed to satisfy bidders' requirements. Poorly prepared disposals often fail to generate auction tension, with today's bidders keen to apply an uncertainty discount if information is inconsistent or incomplete.

Corporate Finance

Within our Transaction Services team, our FPP capability can help you access new markets, assets, technologies, personnel, intellectual property and sources of finance. We can also help you to restructure the asset base of your business by disposing of underperforming assets or non-core parts of the business. We provide advice to public and private organisations, management teams and private equity houses on valuation, deal structuring and implementation.

We provide creative solutions for disposals, fund raising, IPOs, private equity and M&A deals, as well as project finance & Public Private Partnerships. We also deliver expert valuation and rigorous financial, economic and strategic advice on your business, brand, products, services, customers and markets.

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PricewaterhouseCoopers Global Forest, Paper & Packaging practice is comprised of a network of industry professionals located in over 30 countries around the world.

Other publications and articles

CEO Perspectives - Viewpoints of CEOs in Forest, Paper & Packaging Companies Worldwide

The publication summarises the thoughts of 17 CEOs in the forest, paper & paper-based packaging sectors around the global on key issues facing the industry. The thoughts of the CEOs, from North America, South America, Europe, Russia, China, India and South Africa, are drawn from face-to-face and telephone interviews.

Global Forest, Paper & Packaging Survey 2006

Comprises an analysis of the financial results of the PwC Top 100 – the 100 largest forest, paper and paper-based packaging companies in the world, ranked by sales revenue. Also includes an overview of the 19th Annual PricewaterhouseCoopers Global Forest and Paper Conference held in May 2006 in Vancouver, Canada.

China Risks & Rewards – Paper & Packaging Industry

Presents an overview of the impact of China on the paper and packaging sectors including an in-depth look at some key issues of particular importance to companies operating – or looking to invest - in the Chinese marketplace.

Risks & Rewards - Forest, Paper & Packaging in Russia

Addresses the state of the industry in Russia and reflects on the key considerations anyone thinking of investing in the sector there should make. Sets the scene on the background of the Russian marketplace, the regulatory environment and its “forest wars”; provides analysis sector by sector (forestry and logging; processed wood products; pulp, paper, and paperboard; paper/non-paper packaging); and explores the risks and rewards of doing business in Russia.

Global Investment Trends – A Call for Action in North America

Looks at the declining competitiveness of the North American Industry, as well as opportunities for enhancing the competitiveness of the industry in that region.

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