

Forest, paper & packaging

Branching out

Global deal activity in the forest,
paper & packaging industry

2008 Edition

Review of 2007, Q1 2008 and commentary on key regions, trends and drivers



*connectedthinking

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01 Welcome

Last year, we published our first edition of *Branching Out* which looked at deals trends in the forest, paper and packaging (FPP) industry over the past few years. This year's report focuses on the main trends we observed emerging in deals in 2007, as well as the regional and sectoral factors which are influencing deal flow.

We also take a brief look at some of the emerging investment themes in or around the sector – forestland, forest carbon, biomass-based energy and waste – all linked by the common theme of sustainability, reflecting the fact that this industry is at the heart of the drive towards sustainable development. All of these emerging themes pose a challenge, to a greater or lesser degree, to established business models in the industry – yet they provide opportunities as well.

FPP companies continue to operate in a challenging, and rapidly shifting, sector. As in recent years, macro-economic factors affected the industry, particularly increased fibre and transportation costs, soaring energy prices, lacklustre demand at best in North America and Europe and the impact of emerging markets on global competition. In addition, the weakness of the US dollar versus other key currencies such as

the euro, the Brazilian real and the Canadian dollar had a substantial impact on the industry – Canadian players have been particularly hard hit, due to their dependence on the US market. The shift in currency ratios globally has played havoc with many FPP companies' planning and supply chain configurations – and is likely to have a noticeable influence on deal-making going forward.

In recent years, many of the largest FPP companies have radically altered their business models, moving from vertically-integrated conglomerates to more product-focused models, with International Paper as the most prominent example. While this trend continues to play out to some extent in deals in North America, a second strategy has also become apparent. Some companies, particularly those based in Scandinavia, have retained vertically-integrated supply chains. This type of structure is starting to be vindicated by the need to secure fibre resources, which have come under increased pressure. Failing to focus on one core business, however, can also indicate a reluctance to restructure and consolidate, and consolidation is the necessary starting point for addressing the continued imbalance between supply and demand in the European market place.

Total deal values increased in 2007, despite a lower average deal size, due to a greater number of deals. Deal values also continued to grow during

the first few months of 2008. Private equity (PE) again played a key role, particularly in North America. New dealmakers emerged on the scene, such as New Zealand's Rank Group. However, the main deal story is the lack of significant – and urgently needed – consolidation deals in Europe.

While FPP deal levels involving PE held up relatively well in 2007, these slowed down in the first quarter of 2008, particularly in the pulp and paper sector. More generally, although financial buyers were involved in fewer deals overall in Q1 2008, some private equity firms have substantial funds awaiting deployment.

Looking ahead, the trend for the rest of 2008 is unclear. On the one hand, developments in financial markets are making for a tougher deal-making environment – on the other, 2008 could still emerge as a record-breaking year, if long-overdue consolidation in Europe takes place. Looking even further ahead, we also expect to see the emerging investment themes we highlight in this report driving more deal activity.



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02 Recent activity

Continued strength – deal values and numbers up

At US\$27.6bn, 2007 total reported deal values have increased around US\$1.9bn from 2006, continuing the trend towards increasing deal activity that has characterised the past several years¹ (see Figure 1). Total deal values were on track for a further increase in Q1 2008, with deal values already reaching US\$11.8bn, although the outlook for the rest of 2008 is more uncertain.

Deal numbers were up sharply, with 370 deals of record, versus 280 in 2006. More deals were seen in all sectors except Pulp and Paper, where deals numbers were down by almost 50%. This trend continued in Q1 2008, with 77 deals announced, only 12 of which were in the Pulp and Paper sector.

Average deal size fell from US\$169m in 2006 to US\$135m in 2007. Pulp and Paper led with an average deal size of US\$288m (US\$200m 2006), followed by Forestland/Forestry at US\$188m (US\$535m 2006), Converting at US\$70m (US\$49m 2006) and Wood Products at US\$40m (US\$74m 2006). Deal size was up again in Q1 2008, reflecting International Paper's acquisition of Weyerhaeuser's Containerboard, Packaging and Recycling business for US\$6bn.

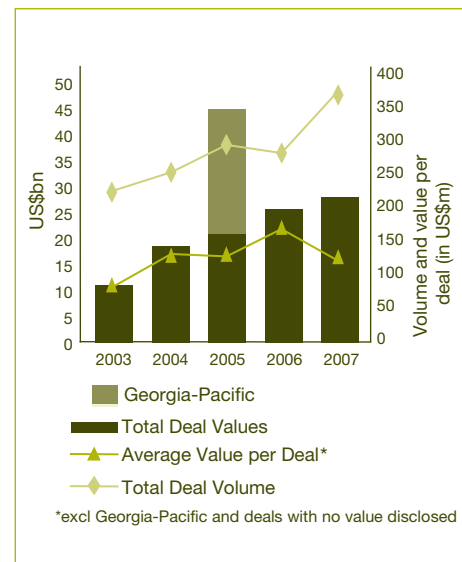
North American domination eases; Europe rebounds somewhat; Latin America and Asia Pacific decline

In 2007, North America continued to dominate, with US\$17bn in transactions accounting for 62% of total deal values (see Figure 2). This represented a decline from 2006, when North American transactions made up 67% of total deal values. 2006's strong showing was largely driven by International Paper's forestland divestitures in 2006, which alone accounted for around 40% of 2006 deal values. The International Paper/Weyerhaeuser deal in Q1 2008 helped push North American deal values to US\$9.6bn for the quarter – an impressive 81% of total deal values.

After a very weak 2006, Europe rebounded somewhat, with over US\$6bn in deal values – substantially up from last year's US\$3.3bn, but still down from the US\$7.3bn of deals seen in 2005. Activity picked up slightly in Q1 2008, with just under US\$2bn in transactions. This fairly modest level of deal-making fails to reflect the urgent need for consolidation. Pressures such as steep Russian tariffs on exported roundwood and competition for fibre from other users are weighing heavily on the supply picture in Europe and are factors compounding the delays in getting deals done in the region.

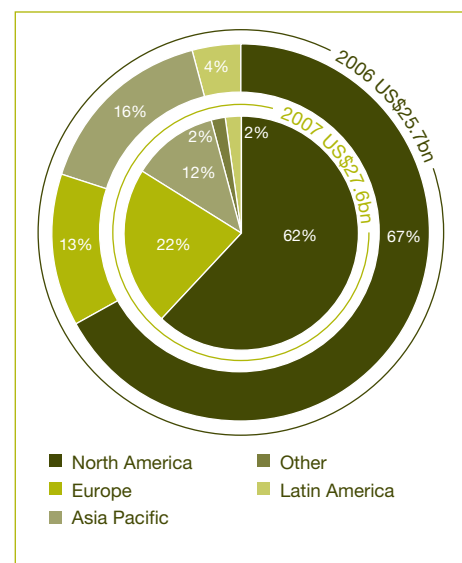
Activity in Asia Pacific declined, making up only 12% of deal values in 2007. Latin America deal activity also decreased – at US\$530m, deals in Latin America were down 50% from 2006 and represented just 2% of overall deal activity. Deals in other regions were also around half a billion in 2007. Deal activity in all regions other than North America and Europe was negligible in Q1 2008, with only US\$225m transacted.

Figure 1: Global FPP Deal Trends



Source: Dealogic, PricewaterhouseCoopers analysis

Figure 2: Regional Deal Analysis

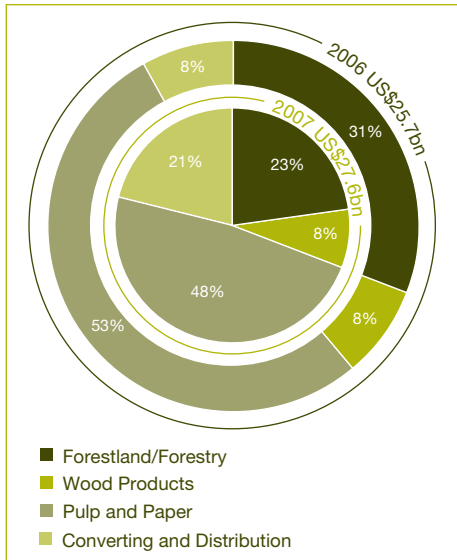


Source: Dealogic, PricewaterhouseCoopers analysis

1 As with previous years, a significant number of deals (45% of total number of deals versus 46% in the prior year) have not been reported with deal values. The vast majority of significant deals, however, have been reported – we therefore expect that the majority of remaining deals consist of smaller transactions (< US\$20m).

2 Forestland/Forestry comprises interests in forestland, operation of forest concessions, nursery, silvicultural, harvesting, log transportation and trading activities; Wood Products comprises sawn timber, engineered wood and higher value-added timber processing activities; Pulp and Paper comprises pulp, primary paper and paperboard making activities, whether based on virgin or recovered wood fibres; Converting comprises the conversion of primary paper and paperboard into finished paper-based products, such as packaging, tissue and hygiene and speciality products; it also includes the sale and distribution of paper based products.

Figure 3: Sector Deal Analysis



Source: Dealogic, PricewaterhouseCoopers analysis

The Pulp and Paper sector continues to drive deal activity, but numbers are down

As in previous years, the Pulp and Paper sector drove deal activity in 2007, with US\$13.2 or 48% of total deal values (see Figure 3). The largest deal in this sector was the US\$4.2bn merger of Abitibi-Consolidated and Bowater. While deal values remained robust, deal numbers were down in 2007. This decline reflects the significant rationalisation which has already occurred in this sector over the past few years, particularly in North America. The decline in deal volume continued into 2008, but this did include the US\$6bn International Paper/Weyerhaeuser tie up.

Continued activity in this sector is still likely to drive future deal values, however the geographic focus will probably shift. In North America, as noted, substantial rationalisation has already occurred and the industry is now better aligned to market demand. West European producers will need to follow suit and rationalise their asset bases.

Divestitures continue in the Forestland/Forestry sector

As in 2006, Forestland/Forestry was the second largest sector with deals of US\$6.4bn or 23% of total deal values (2006: US\$8.0bn/31%). This is a decline from 2006, when timber deals were boosted by International Paper's sale of US\$6.1bn of forestlands in the US – however, 2007 levels still reflect robust activity. The transfer of forest assets from integrated forest companies to forest investment funds continued with the sale of Temple Inland's forest assets to the Campbell Group for some US\$2.4bn, representing the third largest deal of the year. Another major deal, Hancock Timber Resource Group's acquisition of a portfolio of US South forestland assets from iStar for US\$1.7bn, got 2008 off to a strong start in this sector – however, in contrast to the major corporate sell offs we have featured previously, this was a secondary deal between forestry investment funds.

Deal values up in Converting sector, remaining steady in Wood Products

2007 saw a large increase in the Converting and Distribution sector deal values, dominated by the activities of Graeme Hart's Rank Group, which we examine in greater detail later in this report. Q1 2008 also showed continued strong activity in this sector. Deal numbers were up in the Wood Products sector in 2007 and continued to climb in Q1 2008, but overall values remained modest, reflecting the large number of small players in this sector.

More activity in public markets

After a few years of relative quiet, 2007 marked a year of renewed activity in public markets, with significant listings in a number of regions. In Europe, Anglo American spun-off Mondi in order to create an independent player in the paper and packaging market. Private equity owned Smurfit Kappa Group also went public, giving the company access to additional equity in order to pay down debt. In Asia Pacific, the Hong Kong based tissue group, Vinda, and Malaysia's Samling Global took advantage of buoyant equity markets with IPOs on the Hong Kong Stock Exchange.

In North America, unperturbed by the more volatile market conditions from the second half of 2007 onwards, several private equity owners sought staged exits by way of IPOs. At the date of this report, Boise Cascade had already spun-out their paper and packaging activities in a major deal which we discuss in more detail later in this report. In May 2008, US-based NewPage filed for an IPO, while competitor Verso Paper completed its public offering. These two latter deals are briefly reviewed later in this report. Public market activity also continued in Asia Pacific, with China's Shandong Chenming completing an IPO on the Hong Kong Stock Exchange in June.

03 Key trends and dealmakers

Consolidation in North America

Much of the major activity in North America in 2007 was driven by consolidation, with significant activity happening in both the graphics papers and packaging sectors. The year's biggest deal, the merger of Abitibi-Consolidated and Bowater (see Figure 4), created the world's largest newsprint producer, and a market giant in North America, controlling nearly half of the region's capacity. This deal can be characterised as a defensive move, allowing the region's two largest producers to manage capacity adjustments more effectively, as demand for newsprint continues to slide. Immediately following the completion of the merger in October 2007, AbitibiBowater announced its initial strategic review, which included the closure of 1m tonnes of newsprint and other mechanical papers capacity (over 10% of total capacity) and annual cost savings of US\$375m by end 2009. AbitibiBowater faces challenging times



Figure 4: Top ten global deals in 2007

| Date | Deal Value \$(m) | Target | Target Nationality | Acquirer | Acquirer Nationality |
|--------|------------------|---|--------------------|---|----------------------|
| Jan-07 | 4,262 | Abitibi-Consolidated Inc | Canada | Bowater Inc | United States |
| Sep-07 | 2,520 | Stora Enso North America Inc | United States | NewPage Holding Corp | United States |
| Aug-07 | 2,380 | Temple-Inland Inc (Timberland) | United States | Campbell Group Inc | United States |
| May-07 | 2,319 | SIG Holding AG (Bid No 2) | Switzerland | Rank Group Holdings Ltd | New Zealand |
| Feb-07 | 2,139 | Longview Fibre Co (95.38%) | United States | Brookfield Asset Management Inc | Canada |
| Jul-07 | 1,750 | Altivity Packaging | United States | Graphic Packaging Corp | United States |
| Sep-07 | 1,625 | Boise Cascade LLC (Paper, Packaging & Newsprint segments) | United States | Aldabra 2 Acquisition Corp | United States |
| Nov-07 | 1,052 | Advance Agro pcl (99.9997%) | Thailand | Private Investor (Yothin Damnerncharnwanit) | Thailand |
| Mar-07 | 674 | Procter & Gamble Co (European tissue operations) | United Kingdom | Svenska Cellulosa AB - SCA | Sweden |
| Jul-07 | 520 | Map Merchant Group Ltd | United Kingdom | Sequana Capital SA | France |

Source: PricewaterhouseCoopers analysis based on published transactions from the Dealogic "M&A Global" database, December 2007



and a more comprehensive strategic review is due to be announced in the Q2 2008 and is expected to include further capacity closures and cost reduction measures.

In 2006, private equity investor Texas Pacific Group (TPG) purchased Smurfit-Stone's consumer packaging business. The business was renamed Altivity and smaller packaging company Field Container Co. was subsequently purchased and bolted-on. In July 2007, publicly-held Graphic Packaging Corporation announced a merger with Altivity in an all share deal valued at US\$1.7bn (net of US\$1.1bn debt in Altivity). The deal creates a company with pro-forma sales of US\$4.4bn (2006) and becomes the largest producer of coated recycled board in North America. At the time of the deal announcement, Graphic Packaging estimated deal synergy savings of

around US\$90m annually, to be achieved by 2011. Clearance from the competition authorities was received in March 2008, conditional upon the disposal of two board facilities thereby reducing the enlarged company's share of the North American coated recycled board market from over 40% to around one-third. The deal also represents a strong exit strategy from their privately held investment in Altivity for TPG. As the largest shareholder in Altivity, TPG will hold in excess of 20% of the newly merged entity.

In another consolidation story, Stora Enso sold its North American coated papers (magazine and fine) operations to NewPage, thereby making NewPage the largest producer of coated papers in North America. This move helped Stora Enso to rationalise its core asset base, and strengthen its balance sheet with the injection of cash (US\$1.5bn).

03 Key trends and dealmakers

Europeans exit North America

The NewPage/Stora Enso deal also illustrates another trend emerging in 2007 – the departure of European majors from the North American scene. Stora Enso exited the coated paper-making market in North America via the transaction, although retains a 19.9% shareholding. In a smaller deal, SCA similarly sold off its North American packaging operations to Metalmark Capital LLC, a private equity player. The trend may continue, as UPM-Kymmene announced the permanent closure of its Miramichi magazine paper mill in Canada in early 2008.

Institutional acquisitions of corporate forestland continue

The attractiveness of forestland assets continued to drive deals, with the institutional acquisition of US corporate-owned forestlands driving two of the five largest deals in 2007. In the largest, Temple Inland disposed of its entire US forestland estate – freehold and leasehold – of 1.55 million acres (around 630,000 ha) to the Campbell Group, a Timber Investment Management

Organisation (TIMO) as part of a broader strategy to enhance shareholder value by unbundling its different businesses. In December 2007, Temple Inland also completed the spin-off of its real estate and financial services entities, in order to focus solely on corrugated packaging and building products.

US-based Longview Fibre Co's acquisition by Canadian infrastructure asset management firm Brookfield Asset Management Inc. for US\$2.1bn was primarily driven by Brookfield's interest in consolidating Longview's 588,000 acres (238,000 ha) of timberland in Washington and Oregon with 635,000 acres (257,000 ha) in British Columbia it bought from Weyerhaeuser in 2005. The deal positioned Brookfield as one of the top five timberlands owners and operators in North America, with a total of 2.6m acres (1.05m ha) of timberlands under management.

Rank Group remains on the offensive

Rank Group, a company controlled by New Zealand entrepreneur and



dealmaker Graeme Hart, continues to emerge as a major deal force in FPP. Rank Group entered the FPP arena in 2005-6 via its US\$2.1bn step acquisition of Carter Holt Harvey (CHH). The company subsequently disposed of the majority of CHH's forest asset portfolio in 2006 for US\$990m. In 2007, it also put CHH's wood products and building materials businesses (based in Australasia) on the block, with an estimated price tag of around US\$1.6bn – however, in a change of tack, in May 2008 it announced the acquisition of Weyerhaeuser's wood products manufacturing and distribution businesses in Australia for an undisclosed sum. Rank Group therefore seems to be pursuing a flexible strategy in this area, judging that a combination of the two businesses represented a better strategy before any further disposition of the wood products business.

Rank Group looks to be eyeing a strategy for becoming a major player in the packaging industry. In addition to retaining CHH's packaging operations and acquiring International Paper's North American drink carton business in

2006, Rank Group made two additional acquisitions in 2007 – SIG, the world's second largest producer of drink cartons after Sweden's much larger Tetra Pak (15% and 80% market share respectively), for US\$2.3bn. Rank Group also purchased North American carton producer Blue Ridge Paper Company for an additional US\$338m. In 2008, Rank began to expand its packaging activities outside of paper packaging with the acquisition of Alcoa's non-fibre packaging and consumer businesses for US\$2.7bn.

As an ardent dealmaker, the Rank Group is regularly associated with potential transactions. At the time of writing, a possible alliance or merger between Rank Group's corrugated and paper businesses and Amcor's paper packaging assets, both strongly focused on the Australasian markets, is being widely discussed – although there could well be regulatory difficulties in making such a deal happen.



03 Key trends and dealmakers

Private equity sees further opportunities

Private equity's influence on the industry remained strong in 2007 – over US\$10.4bn in deals, or around 38% of deal values, included some private equity participation (see Figure 5). The Pulp and Paper and Forestland/Forestry sectors demonstrated even higher levels, with private equity participation at 45% and 46% of deal values respectively. Deal values were dominated by North America, with 92%, or US\$9.6bn, of total sums stemming from this region. We look at some of these transactions in more detail in our discussion of North America.

International Paper continues on the deal trail

In 2005, International Paper (IP) embarked on an ambitious programme to restructure its business. The company's deals since then have shifted it from a traditional vertically integrated

forest, paper and packaging business to become a product specialist with an increasingly global reach, focused on uncoated fine papers and packaging.

Although announced in 2006, it took most of 2007 for IP to complete probably its most ambitious deal to date, namely a US\$650m investment in a joint venture with the owners of Ilim Pulp, Russia's largest pulp and paper company. The JV company called Ilim Group, in which IP's interest is 50%, has announced plans to spend US\$1.5bn on modernising and upgrading equipment. The deal does not include Ilim's wood-products business – those were folded into a separate holding company that will be the largest producer of timber in Russia. IP's existing Russian assets, notably the Svetogorsk pulp and paper mill, are not included in the new JV.

IP has stayed on the deal trail, announcing the acquisition of Weyerhaeuser's containerboard (and packaging) business for US\$6bn in

cash in March 2008. This deal, once completed, will make IP the largest producer of containerboard in North America with a market share of around 30%. Whilst the acquisition is in line with IP's chosen core sector focus and marks a major step in consolidating the market, it represents a reverse shift in the balance of IP's portfolio back to North America and away from the higher growth emerging markets.

IP has been by far the most active large industrial player in deal making in recent years. Its activities are a prime example of a company streamlining its business model to get "back to basics" and cut its cost base. Whilst these deals may be judged shrewd moves strategically, the market has yet to respond positively, as its share price has underperformed the market (as represented by the Dow Jones Industrial Index) over the period of its business transformation.

Figure 5: Top ten Private Equity deals in 2007

| Date | Deal Value \$(m) | Target | Target Nationality | Acquirer | Acquirer Nationality |
|--------|------------------|--|--------------------|-------------------------------|----------------------|
| Sep-07 | 2,520 | Stora Enso North America Inc | United States | NewPage Holding Corp | United States |
| Aug-07 | 2,380 | Temple-Inland Inc (Timberland) | United States | Campbell Group Inc | United States |
| Jul-07 | 1,750 | Altivity Packaging | United States | Graphic Packaging Corp | United States |
| Sep-07 | 1,625 | Boise Cascade LLC (Paper, Packaging & Newsprint segments) | United States | Aldabra 2 Acquisition Corp | United States |
| Aug-07 | 400 | MeadWestvaco Corp (228,000 Acres of Forestland & 95,000 Acres of Under Long-term Timber Contracts) | United States | Wells Timberland REIT | United States |
| Jan-07 | 400 | SCA North America | United States | Metalmark Capital LLC | United States |
| Jun-07 | 338 | Blue Ridge Paper Products Inc | United States | Rank Group Holdings Ltd | New Zealand |
| Jul-07 | 224 | Nord Est SA (79.4%) | France | 21 Centrale Partners SA (MBO) | France |
| Aug-07 | 185 | Central Lewmar LLC | United States | International Paper Co | United States |
| Jul-07 | 128 | Attends Healthcare Inc | United Kingdom | Rutland Partners LLP (IBO) | United Kingdom |

Source: PricewaterhouseCoopers analysis based on published transactions from the Dealogic "M&A Global" database, December 2007

Timberland: A burgeoning asset class

Historically, forestland assets rarely featured in institutional investment portfolios. In the past decade or so, many US industrial players (forest products producers) have chosen to sell these assets in order to improve their own financial performance. This sell-off triggered a massive upscaling of institutional investment in the US via Timber Investment Management Organisations (TIMOs) and Real Estate Investment Trusts (REITs) specialising in forestland property. TIMOs are privately owned forestland investment structures, typically established as private equity limited partnerships (in contrast with REITs which are publicly-listed).

Although TIMOs had been around beforehand, they emerged in the 1980s as a vehicle for institutional investment. They have ballooned in size since 1990, moving from around US\$1bn to over US\$25bn in assets under management by the end of 2007. Timberland investment has become an established, albeit still small, element in balanced portfolios, such as pension funds and university endowments.

Published data shows that historic returns from US forestland investment have been attractive – for example, returns on US South forest investment compared favourably with US equities (S&P 500) over the ten years to the end of 2006 and showed less volatility.

So what's next? The big sell off by US industrial players is probably over. Weyerhaeuser is the sole remaining large industrial player that has so far chosen to retain (most) of its forest interests, with holdings extending to more than 6m acres (over 2.4m ha).

Further, although TIMOs/REITs are estimated to hold no more than 8% of total US forestland, expert sources suggest that this already comprises a large proportion of the investable area, so further large-scale investment opportunities may slow.

Despite the favourable historic returns, there is now pressure to maintain the good performance, particularly given the current softness of US wood products markets. A variety of strategies have already emerged to maximise non-timber revenues, including property development for the highest and best use of forestlands and the sale of conservation easements – new sources being explored include the potential for renewable energy sourcing ranging from ground floor cultivation of energy crops, to collecting more harvesting residues, to sites for wind energy production.

There will probably be an increase in secondary deals in North America between TIMOs, as these entities look to reshuffle their portfolios in the wake of the big sell off by industrial players.

US TIMOs are likely to move further overseas (an estimated 20% of assets are already offshore) to generate better returns and to diversify risk.

At the same time, non-US investors are also becoming more interested in forestland, often seeing this asset class as a suitable medium for environmentally sustainable, as well as profitable, investment for well-balanced portfolios. For example, in 2006, The Phaunos Timber Fund (Phaunos) was launched, followed by Cambium Global Timberland in 2007, with both investment companies listed on the UK

AIM market and with mandates to invest in timberland opportunities globally. Phaunos has completed two funding rounds, raising close to US\$500m and recently announced plans to raise a further US\$1.6bn in 2008. Cambium raised US\$200m on its initial listing.

At the time of writing, there were other fund-raising plans afoot in Europe, all of which will broadly target a similar pool of investable assets around the world as the US TIMOs. Most geographies have experienced institutional timberland investment, with the Southern Cone of South America and Australasia so far being the favoured locations, but with increasing interest in Asia and Africa. Opportunities are being keenly sought in Europe, despite the barriers created by its traditionally fragmented forestland ownership structures.

Deals in these newer timberland investment regions are expected to be sourced from sell offs by (or joint ventures with) industrial players, privatisations of publicly-owned assets, as well as from the secondary timber investment market. Some of these new TIMOs are also looking at establishing new assets through reforestations or afforestations – higher risk activities which require even longer term planning.

In summary, timberland investment over the next few years will almost certainly drive substantial levels of transaction activity over a broad geographic range. We expect to see more institutional investment into forestland, as well as higher levels of trading of existing institutionally owned assets as portfolios are realigned.

03 Key trends and dealmakers

Bio-energy – redefining the industry?

FPP players around the globe have come to realise that they cannot take wood fibre availability for granted. Wood fibre security has become of increasing concern to producers and wood prices have risen sharply in most regions. There is more than one factor at work, but one which has been felt especially strongly in Europe has been the demand from energy producers who are beginning to see biomass, including forest biomass, as an important energy source. This shift has been encouraged by European Union (EU) target-setting on renewable energy sourcing and various country-level financial incentives. The impact has been both direct and indirect – for example, some pulp and panel producers in Central Europe have faced direct competition for the same fibre. In addition, all market players have been impacted indirectly as wood energy demand pushes up costs, with some analysts starting to see some correlation between wood and oil prices.

What is certain is that there is a current imbalance between demand and supply of wood in Western Europe. Various future scenarios such as attempts to increase wood harvest volumes sustainably, increase wood imports, or shift to other renewable (or at least non fossil) energy sources could take more of the slack – however all solutions to increase supply have pitfalls and none would seem to satisfactorily meet the combined demands of all wood users.

This is clearly a challenge for the FPP industry. In all likelihood, the feedstock challenge in Europe will be repeated in other geographic theatres in due course. However could it be an opportunity as well?

Many seem to think it could be. The broad opportunities for FPP companies

span from supplying or aggregating forest biomass, to producing wood-based energy (heat and power) to producing wood-based transport fuels and value-added chemicals and other materials, as technology could make these commercially viable. For some, it may be seen as an extension of existing wood procurement activities and those with control over significant wood resources would seem to be well positioned – for others, it may come from control over “bio transformation”, notably refitting existing pulp plants by drawing upon related infrastructures, processes and product knowledge and know-how. FPP players with both wood resources and pulp activities would therefore seem to be very well positioned.

However, the forest products companies with strong assets in these areas will not have the deep knowledge of these new markets (energy, transport fuels, chemicals etc) – nor will they have the related transmission, logistics and distribution capabilities. They lack the experience of operating in highly regulated markets, a skill energy producers have come to acquire – nor do they have ready access to the capital sources that many other players in the value chain may have, with balance sheets, credit ratings and above all their core businesses under strain. Even though many forest products producers have existing production infrastructure, capital investment will be needed.

As a beginning, partnerships are being formed which pair forest industry players with oil and gas companies to leverage the expertise of both parties in order to explore bio fuel options – some examples include Stora Enso

with Neste Oil, UPM with Carbona and Weyerhaeuser with Chevron. However, important moves are also being made by associations which do not include established forest products companies, for example, Group Wood Holdings/ Prenergy (wood-based energy), Range Fuels (biorefinery) and Choren (Daimler, VW, Shell JV – biorefinery) – these businesses are focused on developing and exploiting the potential of converting wood (and other) biomass materials into energy and/or fuel. In addition, several established energy producers have moved into biomass energy either through co-firing or standalone wood energy plants.

The development of wood biomass as a renewable energy source is more complicated than many other renewable sources (non-wood biomass notably is excluded here), if only because of the inherent competition with established product value chains. There are many uncertainties, with decisions to be made on competing technologies and the threat that alternative renewable sources will be more commercially attractive. Energy, oil, chemical companies and others with vested interests in fossil-sourced material value chains have shown interest and can be expected to continue to do so. New entrants will be unconstrained by any vested or legacy interests – these alternative players will hire or acquire the competencies (and funding) needed to compete. These players may pose a greater threat as they will also likely have greater flexibility to adjust their business model as the environment changes.

The potential for wood-based energy and other new biomass-sourced products to significantly transform

traditional fibre supply/value chains, and hence the current forest products industry, looks substantial. Companies cannot afford to be complacent about their chances of competing in this emerging scenario. It is also too early to predict the winning strategies, although promising positions rest with those controlling significant volumes of forest biomass. A winning attribute will be flexibility and for FPP players, it will mean being unafraid to exit existing businesses and assets in order to switch resources to areas where there are better prospects.

Deals in the (wood and agricultural) bio-energy area have started to pick up, although most transactions to date involve co-ventures and start ups. Preliminary analysis by PwC shows that deals globally in bio-energy increased around sevenfold to nearly US\$7bn in 2007, with deals concentrated in North America, followed by Asia-Pacific and Latin America. None of the larger deals involved forest products companies. Whilst the growth looks impressive, deal activity in bio-energy was dwarfed by wind, where total deal value amounted to around US\$26bn in 2007.

Across the renewable energy spectrum, acquisition activity was led by existing utilities who were behind nearly 40% of all deals by value. However, alternative energy providers led in terms of number of deals and financial buyers also featured strongly. One certainty is that there will be more deals in the future and that the forest products industry will feature.



04 Regional focus

North America

Transaction levels remained strong in North America in 2007, with around US\$17bn in deal values traded. As in recent years, deal activity was marked by strong participation from private equity. Currency considerations were also an important factor. North America continued to dominate deal values in Q1 2008, with US\$9.6bn driven by two mega-deals.

US paper demand was steady in 2007. Bolstered by capacity rationalisation, consolidation and a better pricing environment, the US paper industry generally showed an improved performance. However, with the economy weakening, 2008 is already providing more challenging conditions. The same cannot be said of wood products producers, who were hammered by the downturn in housing starts and weaker repair and maintenance markets, contributing to several mill closures.

For Canadian producers, with their main markets south of the border, conditions were dire as the Canadian dollar continued gaining in strength against the US dollar. Conditions were inevitably worst for wood products producers, given the slump in demand and US dollar prices, even before the

strength of the “loonie” had a significant effect. Many mill closures, permanent or temporary, were announced.

The weakness of the US dollar produced at least one important benefit, namely increasing the international price competitiveness of US producers in several products and grades. Provided cost effective shipping capacity could be found, then US producers found profitable export markets in grades such as linerboard and newsprint. In pulp, the cost competitiveness of US South producers was also enhanced by currency effects. Over the medium- to long-term we may even see additional investments in modernising or increasing capacity in the US as a result of the dollar’s decline relative to other major currencies such as the Canadian dollar or euro.

Figure 6: Top deals in North America in 2007

| Date | Deal Value \$(m) | Target | Target Nationality | Acquirer | Acquirer Nationality |
|--------|------------------|--|--------------------|---------------------------------|----------------------|
| Jan-07 | 4,262 | Abitibi-Consolidated Inc | Canada | Bowater Inc | United States |
| Sep-07 | 2,520 | Stora Enso North America Inc | United States | NewPage Holding Corp | United States |
| Aug-07 | 2,380 | Temple-Inland Inc (Timberland) | United States | Campbell Group Inc | United States |
| Feb-07 | 2,139 | Longview Fibre Co (95.38%) | United States | Brookfield Asset Management Inc | Canada |
| Jul-07 | 1,750 | Altivity Packaging | United States | Graphic Packaging Corp | United States |
| Sep-07 | 1,625 | Boise Cascade LLC (Paper, Packaging & Newsprint segments) | United States | Aldabra 2 Acquisition Corp | United States |
| Aug-07 | 400 | MeadWestvaco Corp (228,000 Acres of Forestland & 95,000 Acres of Under Long-term Timber Contracts) | United States | Wells Timberland REIT | United States |
| Jan-07 | 400 | SCA North America | United States | Metalmark Capital LLC | United States |
| Aug-07 | 355 | Smurfit-Stone Container Corp (White Top Linerboard & Bleached Board Mill) | United States | Georgia-Pacific Tissue LLC | United States |
| Jun-07 | 338 | Blue Ridge Paper Products Inc | United States | Rank Group Holdings Ltd | New Zealand |

Source: PricewaterhouseCoopers analysis based on published transactions from the Dealogic “M&A Global” database, December 2007

North America has continued to lead the deal flow with 62% of total reported deal value in 2007 initiated in North America. Of the top ten deals, ranked by value, six (including six of the top seven) have been North American deals, including the year's biggest transaction, the merger of Canadian Abitibi-Consolidated and US-based Bowater.

Key private equity deals

Private equity continues to be a major influence on the North American market, with six of the top ten North American deals involving private equity participation and transactions spanning the entire deal spectrum, including IPOs, acquisitions, and divestitures (see Figure 6).

In 2007, Boise Cascade split off its total paper, packaging and newsprint businesses and sold the assets for US\$1.6bn to Aldabra Acquisition Corp, a private equity vehicle created specifically for the acquisition of the Boise assets, part of an asset rationalisation programme instituted under the guidance of its private equity owner, Madison Dearborn Partners. Boise Cascade had already disposed of forestlands in 2005, so following this sale, the company emerged as a pure wood products and building materials distribution player. By selling the paper and packaging business at a profitable point in the cycle, Boise Cascade was able to further reduce debt and create a leaner company with a more competitive position in the wood products and building materials market.

After the deal was finalised in February 2008, the new paper and packaging company, with proforma revenues of over US\$2bn, was renamed Boise Inc. and listed on the New York Stock Exchange, with Boise Cascade retaining a 49% interest in the new entity. In February 2008, Boise Inc. described the company's strategy to investors as three-fold: shift capacity to packaging-driven grades (including converting newsprint operations to packaging

Waste not, want not? The future of recycled fibre streams

The waste management industry has received a major boost from the many measures aimed at increasing waste recovery and recyclability and reducing waste to landfill. There has been significant deal activity in the waste management sector, with handsome premiums often paid by companies seeking to enter into or grow in the sector. It has now been realised that waste constitutes a potentially valuable resource stream.

The European paper industry, with around 50% of its fibre feedstock being sourced from recovered paper, is fully aware of this. Bundled waste paper now makes long distance journeys to countries short of quality waste, as with the case of China sourcing waste paper from the US and the UK.

The availability of waste paper has led to the growth of urban paper mills which are close to their feedstock, waste paper, and their customers. These mills face a number of challenges, including ensuring sufficient purity of their waste paper stream and disposing of the sludge left from deinking and cleaning the waste fibres. Even more importantly, urban paper mills are harder hit by energy price increases, as producers are typically unable to benefit from the inherent energy in the wood fibre used by integrated mills.

Producers of virgin pulp are not the only ones who may face competition for their fibre. Many European paper producers using recovered fibre have been concerned that they would face similar competition from energy producers for waste paper, as the economics of renewable energy production could potentially favour incineration. Future deal activity may be driven by waste collectors looking to use non-recyclable waste to produce highly efficient, low-cost power and heat to provide a platform for energy intensive industrial processes such as pulp production and papermaking.

As demand by environmentally conscious consumers for papers with a high recycled fibre content, produced in a carbon neutral process, increases, both the economics and sustainability of a waste-based platform for energy and paper production may look attractive.

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grades), increase productivity and capitalise on industry consolidation through further bolt-on acquisitions.

In another major deal, NewPage, a majority held investment of Cerberus Capital Management LLP, purchased Stora Enso's North American coated papers (magazine and fine) business for US\$2.5bn, effectively doubling its capacity in these core grades. This move creates significant critical mass from which to deliver cost synergy savings, a favourite tactic employed by private equity investors. In January 2008, NewPage announced cuts in operations in Ohio, Maine and Wisconsin and estimated that restructuring would help the enlarged company save US\$265m annually. In May 2008, NewPage filed for an IPO with the SEC, the outcome of which was open at the date of finalising this report.

As previously discussed, another significant deal with private equity involvement was the US\$1.7bn merger of Altiivity (former Smurfit-Stone consumer packaging business) with Graphic Packaging Corporation, announced in July 2007.

In the 2007 edition of *Branching Out*, we reported Apollo Management's US\$1.4bn buy-out of International Paper's North American Coated and Supercalendared papers business as the top private equity deal of the year. In December 2007, Apollo announced plans for an IPO of the company, now called Verso Paper. Verso Paper raised US\$168m in its public offering, which closed in May 2008, with Apollo remaining the majority stockholder. This represented a substantial scale down on the original IPO plans, probably because of scepticism about the outlook for US paper markets.



“Timber plus” investment strategies

Investing in forestland based on the traditional return drivers of biological growth, timber values and sometimes land values has become an attractive investment theme in its own right (see **Timberland: A burgeoning asset class**). However, as we look towards the future, the definition of commercial timber values will continue to expand beyond traditional sawlog and/or pulplog values to include the potential value of the wood as energy. The developing potential of forests as renewable energy and material sources is likely to drive future deals, as the full range of the possible spectrum of uses expands, from wood energy today to biofuels and value added products in the future (see **Bio-energy: redefining the industry?**).

A further set of opportunities is starting to arise from the environmental services (or ‘ecosystem services’) provided by forests. As time passes, awareness is increasing of the valuable role of trees and forests in carbon sequestration and



hence in mitigating some of the effects of global climate change. Most notably the role of forests as a carbon sink could become a source of significant revenue – and “timber plus” investment strategies are receiving growing interest.

The Kyoto Protocol explicitly named afforestation and reforestation as potential avenues for offsetting carbon dioxide emissions and hence, in principle, projects could be generated under either Kyoto’s Clean Development Mechanism (CDM) or Joint Implementation (JI) schemes. In practice and for various reasons, this has not happened. The world’s currently dominant carbon trading system, the EU-Emissions Trading Scheme, does not include options for achieving emissions reduction units (ERUs) via forest activities. Further, the US does not yet have a mandatory emissions reduction or trading systems. For these reasons, the voluntary markets present more opportunities for forestry carbon projects. According to the Greenhouse Gas Market Report 2007 from the International Emissions Trading

Association (IETA), the market share of forest carbon projects in total voluntary carbon projects was 36% in 2006 – there was a similar percentage in 2007. The Chicago Carbon Exchange (CCX) has emerged as the first voluntary, legally binding greenhouse gas reduction and trading system for emission sources and offset activity. The CCX does allow forest carbon sequestration and some trades have occurred.

In consequence of the Bali Action Plan in December 2007, recent attention has also turned to how REDD, a framework of incentives to reduce deforestation and forest degradation, might work under any post-2012 climate treaty to succeed the current Kyoto Protocol. There is a long way to go in terms of producing a framework, but the very fact that work is in progress has begun to spawn specific project ideas for compensating forest communities for avoided carbon emissions, with projects already launched, for example, in Indonesia and Guyana.

In short, in recent months, there has been a surge of activity in proposed forest carbon sequestration and trading

and offset schemes, either as activities separated from traditional timberland investment strategies (such as those based on avoided deforestation in the tropical rainforest) or as an integral but incremental part of a traditional investment platform (for example, an afforestation scheme that generates a carbon credit revenue stream over the growth cycle, before the timber is harvested on maturity and then regrows). Inevitably, there are many complexities with selecting, designing and executing specific schemes, but given a growing imperative to combat climate change and the important role that trees and forests could play, significant markets in forest carbon look likely to develop.

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Europe

Deal values increased in Europe in 2007 but consolidation in the core Pulp and Paper sector remains elusive, as parties struggled to find sensible deals at realistic prices. This situation looks set to change in 2008 following announcements of much needed capacity closures, combined with an ever increasing imperative to address cost base issues more comprehensively. However, rising challenges around regional fibre supply, exacerbated by plans for prohibitively expensive export duties on Russian-sourced unprocessed wood, could further delay the execution of deals.

Market conditions strengthened in Western Europe in 2007, leading to a stronger pricing environment in most products and grades. Nevertheless, with costs for key inputs, such as for wood and waste paper, rising strongly, margins continued to be challenged. Part of the problem was due to disruptions to wood supplies, as harvest patterns in Northern Europe were affected by the warm winter in 2007. Similar weather conditions had an impact on Russian wood supplies, compounded by increases in export duties, which are scheduled to rise to prohibitively expensive levels by 2009. Some producers are also being affected by the direct or indirect impacts of competition for wood from bio-energy producers.

A telling example is provided by Stora Enso, which has seen fibre costs as a proportion of total operating costs spiral from 17% to 25% over the two years ended 2007, with no signs of these pressures abating so far in 2008, at a time that market conditions in Western Europe were also showing signs of a downturn.

On top of all this, most paper and board grades remained oversupplied and the strong euro undermined the profitability of exports outside Europe, especially to the US. Central and Eastern Europe continued as a bright star with strong growth in demand, good price environments and strong regional currencies.

While the European share of deals has grown from 13% in 2006 to 22% in 2007 due largely to the acquisition of SIG Holding (Switzerland) by the Rank Group for US\$2.3bn, consolidation in Western Europe now is desperately overdue. European producers have been slower than their American counterparts to realign their asset bases to changed market opportunities and also slower to consolidate. Private equity has acted as a strong driving force to market rationalisation in the US, but has been conspicuous by its near absence in the Pulp and Paper sector in Western Europe.

In 2007 and into early 2008, a number of companies announced various capacity closures. These closures concentrated on the most oversupplied markets, namely graphic papers. At the date of this report, announced closures of around 2m tonnes were pending, with Nordic producers and the Nordic region bearing the brunt of the closures. To date, closures have focused on newsprint and magazine grades, with mills producing coated woodfree grades remaining online, despite excessive supply. Rationally, further increases in wood costs should trigger closures in this grade.

Closures in pulp capacity in the Nordic region have also been announced, triggered by rising wood costs and/or wood shortages. Stora Enso and

M-Real/Metsa-Botnia have announced curtailments in pulp production for 2008 for these reasons. Both companies have access to lower-cost Southern fibre to meet at least some of their production needs in Europe. Yet if Russia carries out its plans to implement the final rounds of its export tariff increases on exported unprocessed roundwood from 2009, the viability of even more pulp capacity in the Nordic region will be seriously threatened.

These closures have stirred criticism from many stakeholder groups, cutting deeply into the Nordic heartland of the forest products industry. They do not solve the problem of oversupply, however, they may facilitate much needed consolidation amongst producers, which is necessary to provide the platform for the industry to move forward.

Key dealmakers and trends

One of Europe's most active dealmakers in 2007 was Sequana Capital, the listed French paper group, which controls Antalis, one of Europe's two leading paper merchants and Arjowiggins, a major producer of coated fine paper and Europe's largest specialty paper group.

Through Antalis, Sequana is positioning itself as a major paper merchant. It purchased Map Merchant Group from M-Real in 2007 in a deal valued at US\$520m to become the largest paper distributor in Europe (see Figure 7). As a result of this deal, Antalis is estimated to have a merchant market share of 23% in Europe, just ahead of the previous market leader, PaperlinX, with 19%.

Through Arjowiggins, several deals were announced which indicated a strong move into printing papers with high

Figure 7: Top deals in Europe in 2007

| Date | Deal Value \$(m) | Target | Target Nationality | Acquirer | Acquirer Nationality |
|--------|------------------|---|--------------------|-------------------------------|----------------------|
| May-07 | 2,319 | SIG Holding AG (Bid No 2) | Switzerland | Rank Group Holdings Ltd | New Zealand |
| Mar-07 | 674 | Procter & Gamble Co (European tissue operations) | United Kingdom | Svenska Cellulosa AB - SCA | Sweden |
| Jul-07 | 520 | Map Merchant Group Ltd | United Kingdom | Sequana Capital SA | France |
| Nov-07 | 401 | Sonae SGPS SA (6.64%) | Portugal | Banco BPI SA | Portugal |
| Jan-07 | 387 | Pergo AB | Sweden | Pfleiderer AG | Germany |
| Jan-07 | 310 | Metsa-Botnia AB Oy (9%) | Finland | Metsaliitto Group | Finland |
| Jul-07 | 224 | Nord Est SA (79.4%) | France | 21 Centrale Partners SA (MBO) | France |
| Jan-07 | 180 | Moelven Industrier ASA (65.15%) | Norway | Eidsiva Energi AS | Norway |
| Jul-07 | 128 | Attends Healthcare Inc | United Kingdom | Rutland Partners LLP (IBO) | United Kingdom |
| Jun-07 | 108 | Cascades Inc (European recycled cartonboard business) | France | Reno De Medici SpA | Italy |

Source: PricewaterhouseCoopers analysis based on published transactions from the Dealogic "M&A Global" database, December 2007

recycled content. These papers are one of the beneficiaries of sustainability-driven purchasing policies of leading corporate paper users and producers in Europe are struggling to keep up with the growth in demand.

In 2007, Arjowiggins acquired recycled papers producer Dalum Papir (Denmark). It also announced the acquisition of the Zanders Reflex mill/brand from M-Real, although this deal was terminated in June 2008, and purchased Cascades' Greenfield S.A.S (France), Europe's only producer of market de-inked pulp.

In June 2008, Sequana announced a restructuring that would integrate parts of Arjowiggins with Antalis, with a view to driving greater synergies between merchanting and manufacturing. At the same time, a strategic review of the remaining Arjowiggins businesses was announced, indicating disposals would be contemplated of commodity activities.

In March 2008, Swedish private equity house Altor Partners announced the acquisition of Papyrus from Stora Enso for nearly US\$1bn (Euro 640m). Papyrus is the number three merchant by size in Europe and this deal may presage further consolidation in the market for paper distribution in Europe. Stora Enso described the transaction as a concrete step in the direction of focusing the group's business portfolio.

Sweden's Svenska Cellulosa AB (SCA) was also active in 2007 – selling off its North American packaging operations to Metalmark Capital for US\$400m, as well as the Softis hygiene brand, and purchased Procter and Gamble's European tissue operations for US\$674m. This latter move should enable SCA to strengthen its market position in Europe and at the same time improve the profitability of its European tissue operations. For Procter & Gamble, it represents a retreat from the European tissue markets, where returns were below performance targets.

SCA was also looking towards entering new growth markets in the Middle East – the company announced a new joint venture operation with Jordan-based Nuqul in October 2007. In early 2008, SCA also raised their stake in Chinese tissue-maker Vinda from 14% to 19%, in a move that expands the company's footprint in the fast-growing Chinese market. Lastly, as this report was going to press, SCA announced the sale of its standard corrugated packaging business in the UK and Ireland to SAICA, the privately-owned Spanish corrugated producer, for around £100m (around US\$195m), in a deal that will enable SCA to concentrate on higher value-added corrugated packaging in those markets.

Earlier in this report, we detailed several examples of European companies exiting North America. The converse has also been the case, as some North

American players have been leaving Western European markets. In addition to divesting Greenfields, Canadian paper-maker Cascades also sold their European recycled cartonboard operations to Reno De Medici in Italy for just over US\$100m. This deal represents a consolidation of the European recycled cartonboard market, pushing the enlarged Reno De Medici into second place behind Mayr-Meinhof (Austria). Weyerhaeuser also sold off several smaller European businesses, although these were primarily smaller deals.

In short, there is growing evidence of strategies by the leading paper producers designed to exit commodity markets, where they have failed to develop the critical mass to influence the development of those markets and where the prospect of growth is limited. The past two years have seen the reversal of strategies that saw North American producers come to Western Europe and vice versa.

In contrast, Central and Eastern Europe continues to be attractive. Several smaller sized acquisitions were made, as Western producers looked to growth markets close to home. In 2007 Mondi acquired Turkish corrugated packaging and containerboard producer Tire Kutsan. While no large acquisitions are in the offing, the region is largely seen as a growth area. In February 2008, Smurfit Kappa Group announced its intention to make bolt-on-acquisitions in the region.



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 rapid growth markets in South and South-East Asia. Deal drivers in this region are therefore equally diverse. On the surface, deal activity was more subdued in 2007, with deal values down over 10% compared to 2006 – however deal volume was well up, by nearly one-third, with close to 40% of all deal volume globally conducted in this region. In the main, this large volume of small value deals reflected portfolio adjustments by a large number of players in what were the main high growth markets. Q1 2008 saw only minimal deal activity, with just US\$155 in transactions announced.

Japan

Japan represents a mature market for forest products and the performance of its top companies has been lacklustre for several years. There is a continuing need for measures to boost performance and reduce capacity.

In 2006, Oji Paper – the market leader – tried unsuccessfully to take over Hokuetsu Paper Mills, Japan's sixth largest producer, for US\$1.4bn. A number of smaller defensive cross-shareholding moves used to prevent the take-over constituted the major deal activity in 2006. Oji Paper is now looking outside of Japan for growth – the company is building a major plant in Nantong, China, but has faced delays bringing another mill in Yangtong online, due to red tape. Oji Paper is reported to be considering other sites in South-East Asia for further expansion.

Meanwhile, its largest competitor Nippon Paper is undergoing restructuring. In 2007, Nippon Paper completed the US\$168m take-over of specialty paper maker, Mishima, as well as announcing closer cooperation with Hokuetsu and with the number two player in the corrugated board market, Rengo. The alliance with Rengo, already announced in 2006, was further cemented in 2007 via the exchange of mutual capital stakes, and is intended to achieve capacity closures as well as create a more powerful rival to Oji Paper in the segment.

The early part of 2008 was dominated by efforts by Japanese players to cope with a labelling scandal that emerged in January 2008. Nippon Paper, Oji Paper, and most of the other players in the market, faced accusations from the Government that they mislabelled the amount of recycled content in their paper.

China

China continues to account for the largest share of global growth in demand for forest-based products. The sector continues to be highly fragmented, resulting in intense price competition. All producers in China are challenged by the lack of adequate domestic supplies of fibre – virgin and recovered. While China did see some deal activity in 2007, values were either quite modest or not disclosed. The region continues to see substantial levels of investment in greenfields, so the challenge to secure a long-term fibre source is likely to become even more acute in coming years.

Chinese paper and packaging makers have been particularly successful in commodity grades, but as competition heats up, many are looking to maintain profit levels by moving up the value chain. One example is the market leading containerboard producer Nine Dragons, which is looking to diversify into specialty paper and liquid cartons. In 2007 Nine Dragons announced plans to establish a new production facility in Sichuan for high-value specialty

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paper. In January 2008, the company announced plans to acquire two specialty paper makers in southwestern Sichuan province for about CNY20m (about US\$3m), as well as plans to build a liquid paper board manufacturing plant in Jiangsu province in eastern China for about CNY1.4bn (about US\$203m).

Despite ambitious efforts by the Chinese Government to expand industrial plantations and plantation expansions in neighbouring countries such as Vietnam, it is evident that a dramatic shortage of fibre sources in Asia will persist and even worsen, as demand for fibre-based products continues to advance strongly. The region looks set to remain a large net importer of market pulp (and logs and wood chips) and of waste paper, thereby driving global price dynamics for these commodities.

Chinese producers (and Asian producers generally) will continue therefore to seek security of fibre supply. Some companies are looking to Latin America to provide sufficient supply. Asia Pulp and Paper (APP)

China has also begun to look towards North America for fibre. At the end of 2006, the company purchased its first Canadian pulpmill in Meadow Lake Saskatchewan. In early 2008, APP announced it was adding Pope & Talbot's three western North American pulpmills (in administration) and an additional sawmill in northern British Columbia to its assets, in a deal valued at some US\$125m. However, the deal failed to close.

As demand continues to grow, and the challenge of securing fibre becomes greater, we may see additional moves abroad by Asian companies eager to secure fibre. Nine Dragons reported that it would look to purchase a stake in an overseas pulp processor with a secure fibre source in 2008, to ensure a steady stream of pulp. We expect moves by Chinese and other Asian producers to secure fibre sources to be a recurring transactional theme going forwards.

Nine Dragons' listing on the Hong Kong stock exchange was one of the biggest regional deals in 2006. In 2007, another prominent Chinese player followed suit

– tissue-maker Vinda went public on the Hong Kong Stock Exchange in July. Vinda has established a recognised brand in most of China and is well-positioned to benefit from fast growth in the personal hygiene sector. As noted earlier, SCA increased its minority stake in Vinda.

In February 2008, Shandong Chenming, China's largest domestic paper company, which already had a listing on the Shenzhen exchange, announced plans to raise international equity for expansion and to list on the Hong Kong exchange. The transaction was delayed due to weakness in equity markets, but the company proceeded with its offering in early June raising HK\$3.2bn (around US\$410m) ahead of its Hong Kong listing. Pricing and funds raised were at the low end of the indicated range, reflecting softer markets. According to the company, proceeds will be used in building China's biggest integrated wood pulp factory, with annual production capacity of 700,000 tonnes and an associated forestry programme, in an effort to address some of the fibre issues already highlighted.

Figure 8: Top deals in Asia Pacific in 2007

| Date | Deal Value \$(m) | Target | Target Nationality | Acquirer | Acquirer Nationality |
|--------|------------------|---|--------------------|--|----------------------|
| Nov-07 | 1,052 | Advance Agro pcl (99.9997%) | Thailand | Private Investor (Yothin Damnerncharwanit) | Thailand |
| Feb-07 | 220 | CITIC Resources Holdings Ltd (13.95%) | Hong Kong | Temasek Holdings (Pte) Ltd (5%) | Singapore |
| May-07 | 191 | Heilongjiang Black Dragon Co Ltd (70.21%) | China | Guozhong (Tianjin) Water Supplies Co Ltd | China |
| Jun-07 | 177 | Green & Good Group Ltd (70%) | China | Tak Shun Technology Group Ltd | Hong Kong |
| Nov-07 | 168 | Mishima Paper Co Ltd (90.21%) | Japan | Nippon Paper Group Inc | Japan |
| Oct-07 | 158 | Merdeka Timber Group Ltd | Indonesia | Tradeeasy Holdings Ltd | Hong Kong |
| Nov-07 | 130 | Auspine Ltd (39.2%) | Australia | Gunns Ltd | Australia |
| Apr-07 | 125 | PT Toba Pulp Lestari Tbk | Indonesia | Pinnacle Co Ltd | Thailand |
| Apr-07 | 120 | Lambang Pertama Sdn Bhd | Malaysia | Sparkle Scheme Sdn Bhd | Malaysia |
| Oct-07 | 107 | Rengo Co Ltd (6.01%) | Japan | Mitsubishi UFJ Financial Group Inc | Japan |

Source: PricewaterhouseCoopers analysis based on published transactions from the Dealogic "M&A Global" database, December 2007

South and South-East Asia

Asia, other than Japan and China, represents a huge population of mainly good growth markets. This region is seeing significant investment in capacity for wood processing and pulp and paper production.

The year's biggest deal in the whole Asia-Pacific region, valued at over US\$1bn, was the public-to-private acquisition of Advance Agro by private investor Damernchnarnwanit (see Figure 8). The company is Thailand's second largest paper-maker and has announced several plans for growth, including the intention of expanding the company's presence in a number of overseas markets and the planned construction of a third paper mill. As part of the tender in December 2007, the company reported plans to undertake business restructuring after its de-listing, with a possible re-listing on the Bangkok or other exchange after the restructuring programme has been completed.

Malaysia's largest forest products company, Samling, went public in February 2007 with a listing on the Hong Kong exchange. The offering raised equity of HK\$2.18bn (around US\$280m), valuing the company at US\$1.1bn. Samling has extensive forestry concessions in Sarawak (Malaysia) and Guyana and has a range of basic as well as high value-added wood products businesses. The over-subscribed offering later generated controversy, as groups representing indigenous peoples in Sarawak sued the investment banks advising the deal, claiming that Samling's operations had damaged their communities. Samling vigorously denies the charges. It is looking to continue expansion with acquisitions potentially in the offing.

In another smaller Malaysian deal, Idaman Unggul announced plans in April 2007 to sell its special purpose vehicle holding timber concessions, Lambang Pertama, to Sparkle Scheme,

but the deal fell through in July 2007. In February 2008, the company announced that it had received an offer of US\$108m for Lambang Pertama, a deal which is still pending at press time.

Indonesia also saw some activity, with Tradeeasy Holdings Limited agreeing in October 2007 to acquire Merdeka Timber Group Limited for US\$185m (HK\$1.443bn). In November 2007, Pinnacle Company announced plans to acquire another small pulp maker located in North Sumatra, Toba Pulp, for US\$127.5m (around Rp1.15 trillion).

In January 2008, India's largest paper maker, Ballarpur Industries Ltd (BILT) announced a novel private equity transaction. As reported in last year's *Branching Out*, BILT acquired Sabah Forest Industries (SFI), Malaysia's largest integrated pulp and paper producer through its Dutch investment holding entity – Ballarpur Paper Holdings (BPH). Subsequently in January 2008, BILT transferred its existing commodity papers business based in India to a wholly-owned subsidiary – BILT Graphic Paper Products Ltd. Simultaneously, funds were mobilised in BPH from GIC Special Investments (a private equity arm of the Singapore Government) and the private equity arm of JP Morgan by divesting a 21% stake for US\$175m, for acquiring BILT's equity holding in BILT Graphic Paper Products Ltd. The transaction enabled shareholder value enhancement as BILT, through its Dutch subsidiary, mobilised funds on attractive terms (with respect to tenure and rate) and subsequently utilised the funds to retire its high cost debt and effect an attractive share buy-back.

Australia/New Zealand

Domestic markets in this region are relatively mature. The region is also an important exporter of fibre and primary wood products. Further, it is the home region of one of FPP's most prolific dealmakers, New Zealand's Graeme Hart.

Inevitably, Graeme Hart is at the centre of most major deal stories (and rumours), as the market eagerly awaits his next move. As previously mentioned, the largest deal which was expected in 2007 was the sale of Carter Holt Harvey's wood products and building materials business, for an asking price understood to be around A\$2bn (US\$1.6bn). Despite reportedly receiving several expressions of interest, no sale was made and in perhaps, typically opportunistic fashion, Graeme Hart turned acquirer, buying Weyerhaeuser's Australian wood products business in May 2008, as noted earlier. Given Graeme Hart's acquisitions into packaging, he is inevitably mooted as potential purchaser of Amcor's corrugated box business, but any such move would likely face difficulties with the competition authorities.

The largest deal in the region which did happen was Gunns' acquisition of rival Auspine, thereby taking full control, in a move which brought some consolidation in the plantation forestry, sawmilling and wood processing sectors. Gunns is also planning to build a pulp mill in Tasmania using fibre sourced from the native forests on the island. These plans, although approved by the outgoing national administration, are proving highly controversial. With the change in government, a major question mark remains as to whether the development will go ahead.

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Latin America

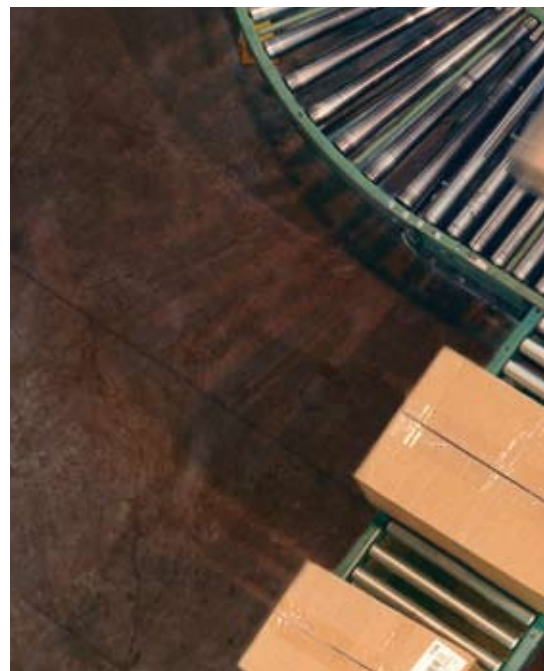
Due to the high potential for quality, fast-growth plantation fibre, Latin America has seen significant greenfield investment in pulp and wood processing by both homegrown and inward investors. The regional markets for forest products have also been developing and present above average growth prospects. In contrast to buoyant greenfield investment in 2007, deal activity in Latin America was subdued, with deal values of US\$530m, down 50% over 2006. Deal volume was also low, with only eight deals with a disclosed value announced in 2007. Q1 2008 saw even lower levels of activity, as the value of transactions dropped to US\$70m.

South America is becoming the world's fibre basket, notably for Europe and Asia. New pulp capacity continues to be built, particularly in Brazil, the largest destination for major investment in plantation-based forestry with forward integration into pulp and, to a lesser extent, wood products production. The Brazilian real has appreciated substantially in recent years, narrowing Brazil's cost advantage – but the country's strong forest base, favourable climate, and land availability mean that its importance as a source of fibre will probably continue to strengthen.

Following on last year's major deal with International Paper (IP), VCP has continued to pursue a strategy to increase focus on pulp and divest paper-making activities, such as the sale of an interest in its specialty paper business to Finland's Ahlstrom. The company also disposed of a number of smaller paper-making interests in Brazil.

In one of 2007's bigger deals (see Figure 9), Stora Enso sold Stora Enso Arapoti to Arauco for US\$208m, a move which gave the Chilean company access to 30,000ha of additional pine plantations in Southern Brazil, as well as a sawmill and a 20% interest in a coated paper mill. Stora Enso had acquired these assets from IP in 2006. The move allowed Stora Enso to concentrate on the magazine paper market in South America, this being the only magazine papers production facility on the continent. It is also considered by Stora Enso to provide a broader platform for cooperation in the region with South America's largest forest products company. In a sequel, in March 2008, Arauco decided to close down the Arapoti sawmill. Reasons given were the increased strength of the Brazilian real and the downturn in US house building. Arauco retained access to the pine plantations.

Chile's Masisa was also active. In June 2007, the company sold 90% of their holding in Forestal Argentina, their Argentinean plantation forestry unit, to the Chilean arm of a US



TIMO, Diversified International Timber Holdings. This deal preceded a number of other significant strategic announcements by Masisa, including the construction of a new MDF plant in Brazil, the possibility of beginning wood products production in Colombia, the sale of its OSB assets to Louisiana Pacific of the US, and the purchase of a stake in a Brazilian wood panel plant.

In a regional consolidation move, Argentina's second largest paper producer, Grupo Tapebicua, acquired control of Uruguay's dominant paper producer, Fanapel, which also has significant operations in Argentina, in a series of step transactions.

Recent studies reported by local media advocate a merger of Brazilian pulp producers, arguing that combining the major local players would result in synergy gains and increased global competitiveness. To date, no such plans have been announced, but if any transactions were made in the major Brazilian pulp assets, deal values would likely be substantial and Brazil's position as the trendsetter in global market pulp markets would likely be further enhanced.



Figure 9: Top deals in Latin America in 2007

| Date | Deal Value \$ m) | Target | Target Nationality | Acquirer | Acquirer Nationality |
|-----------------|---------------------|---|-----------------------|--|-------------------------|
| Sep-07 | 208 | Stora Enso Arapoti (80%) | Brazil | Celulosa Arauco y Constitucion SA | Chile |
| May-07 | 109 | Votorantim Celulose e Papel SA (Paper manufacturing machinery in Brazil) | Brazil | Ahlstrom Oy (Money) | Finland |
| Jun-07 | 107 | Forestal Argentina SA (90%) | Argentina | Diversified International Timber Holdings LLC | United States |
| May – Jul-07 | 85 | Fabrica Nacional de Papel SA- FANAPEL (87.25% in three steps) | Uruguay | Grupo Tapebicua | Argentina |

Source: PricewaterhouseCoopers analysis based on published transactions from the Dealogic "M&A Global" database, December 2007

05 Looking forward

Global competition has fundamentally altered the competitive environment in the FPP industry in recent years and continues to do so. The ever stronger push for sustainability by customers, policymakers, regulators and also investors is now starting to impact strongly upon that environment. While the global credit crunch and uncertain economic outlook do pose challenges, there are some fundamental drivers for continued strong deal flow as the industry copes with key challenges. These include the need to close unprofitable capacity; cope with maturing markets and enter growing ones; secure a stable, cost-effective fibre supply; and adjust to shifts in global currencies.

In contrast to many other industry sectors, where the tough credit markets and cloudy economic fundamentals have combined to dampen transaction activity, early 2008 saw an upsurge in deal activity. In the three months to March 2008, reported deal values totalled almost US\$12bn with deal volume at 77 deals, both trends well up on the past two years, when the fundamentals for deal-making were strong. International Paper's acquisition of Weyerhaeuser's packaging business for US\$6bn, naturally dominated. The second largest deal was a secondary trade in US forestland by two TIMOs. This transaction, valued at US\$1.7bn, supports our view in **Forestland: A burgeoning asset class** that these types of secondary deal look set to be on the increase.

However, to date in 2008, the main deal story continues to be the absence of mega-deals (or even smaller deals) in

Pulp and Paper in Europe. Announcements of further capacity reductions by some of the major players could pave the way for more realistic valuations of assets that will enable deals – outright acquisitions, asset swaps and mergers – to proceed. However, there are steep challenges around fibre sourcing, not least due to the uncertainties created by the Russian export tariffs on raw wood, which could further delay the necessary transactions.

Private equity participation has fuelled much of the consolidation and restructuring which has taken place in FPP in North America in recent years. Yet this remains subdued in Europe. 2007 could have been the year when European PE houses actively looked to participate in the industry's transformation and to play a facilitating role in both large and smaller deals. Altor Equity Partners' acquisition of Stora Enso's merchanting business in Q1 2008 provided some evidence



of PE's appetite, but not in pulp and primary paper production where real action is needed. Further, adding to the difficult credit markets, is the management challenge of turning around any of the big papermakers, even if realistic valuations of assets can be achieved. Taken together, these factors could continue to stall any decisive moves by PE in the remainder of 2008 at least.

We would not expect the strong deal trend evident in the first months of 2008 to be maintained unless there are major consolidation moves in Europe. Whilst clearly necessary, there are several factors which could lead to further delays.

Looking further forward, Europe is not the only region that may see major consolidation in the short- to medium-term. Some of the developing markets could also see additional acquisitions – one possible result might be greater

concentration amongst the rapidly growing pulp producers in Brazil.

A more important deal driver in future is likely to be the need to secure fibre resources (virgin and waste paper). Asian FPP companies search the globe for reliable fibre sources. While the fibre deficit may be most acute in that region, the need to ensure long-term, secure fibre sources applies to companies around the globe, as is being witnessed now in Europe. Many US industry players have shed their forest assets in recent years. The wisdom of these moves will probably only become apparent over the long-term, depending upon the specifics and duration of the wood supply deals they entered into.

In the next few years, we would expect the emerging investment themes outlined in this report to drive a wide array of transactions – conventional M&A as well as partnering. New

opportunities for the management, exploitation and transformation (in short the monetisation) of forest biomass and waste resources have the potential to radically reshape the industry's existing value chain, creating potentially significant upside for traditional FPP players and for new entrants alike. Many new alliances and combinations will be spawned during this transformation and hence the redefined FPP value chain can be expected to offer fertile ground for deals in the years ahead.



06 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

Across our global Transaction Services network, our FPP capability comprises consultants, accountants and experienced industry practitioners with first-hand knowledge of the FPP industry. Territory teams are connected via the network to access local knowledge and contacts across the world. Our regional teams have 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 experts 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 specialists 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

Across our global Corporate Finance network, 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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07 Further reading

Publications from PricewaterhouseCoopers Forest, Paper & Packaging Industry practice are available to download from www.pwc.com/fpp

PricewaterhouseCoopers provides insightful analysis of the challenges and opportunities facing business leaders in the forest, paper and packaging industry. Our thought leadership publications help inform the strategic decisions guiding many of the industry's leading organisations.

Our current publications for the sector include:

Global forest, paper & packaging industry survey

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.

CEO Perspectives – Viewpoints of CEOs in forest, paper & packaging companies worldwide

Summarises the thoughts of leading CEOs in the forest, paper & paper-based packaging sectors around the globe on key issues facing the industry. The thoughts of the CEOs or equivalent from North America; South America; Europe, the Middle East and Africa (EMEA); and Asia are drawn from face-to-face and telephone interviews.

IFRS in FPP – Applying IFRS in the forest, paper & packaging industry

This publication and corresponding website (www.pwc.com/fpp/ifrs) contain our solutions to date, aimed at helping our clients understand the implications of IFRS on the forest, paper & packaging industry.

Risks & rewards – Forest, paper & packaging in South America

Addresses the state of the industry in South America – a series of interesting growth markets for forest, paper and packaging products – and reflects on key considerations for potential investors. With the lowest wood costs of any leading producer region, South America looks set to become a dominant producer of market pulp globally.

The publication includes a major focus on Brazil as well as sections on other key South American markets – Argentina, Chile, Colombia & Uruguay.

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” – providing analysis sector by sector (forestry and logging; processed wood products; pulp, paper and paperboard; paper/non-paper packaging); and exploring the risks and rewards of doing business in Russia.

Risks & rewards – Paper & packaging industry in China

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.

Mark your calendar

PricewaterhouseCoopers 22nd Annual Global Forest and Paper Industry Conference

14 May 2009 – Vancouver, Canada
Westin Bayshore Resort & Marina

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PricewaterhouseCoopers Global Forest, Paper & Packaging practice comprises a network of industry professionals located in over 35 countries around the world.

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