Forest, paper & packaging

CEO Perspectives

Viewpoints of CEOs in the forest, paper & packaging industry worldwide

2010 Edition

Contents

Methodology:

We interviewed 33 CEOs, or equivalent, from forest, paper and fibre-based packaging companies based in North and Latin America; the Middle East, Europe & Africa (EMEA); and Asia; including the CEOs of three major industry trade organisations. Nearly all of these companies are in the PwC Top 100 published in our annual Global Forest, Paper & Packaging Industry Survey. Executives' views were collected in person and by telephone between August and December 2009. Questions were focused, but not exclusively, on the following topics: industry business models, mergers & acquisitions, controlling costs, sustainability and leadership/collaboration. The quotations anonymously cited in this document are taken directly from our interviews and represent a broad range of geographical views.

Acknowledgements

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PwC contributors include: Clive Suckling, Ian Murdoch, Bo Lagerström, Benjamin Ye, Craig Campbell, Bruce McIntyre, Todd Stroup, Elizabeth Montgomery and Erica McEvoy. In addition, other Partners and Directors of PricewaterhouseCoopers Global Forest, Paper & Packaging industry practice also conducted interviews and contributed to the content of the paper.

Graphic design: Hamilton-Brown

Welcome

PricewaterhouseCoopers recently conducted its third series of in-depth interviews with CEOs in the Forest, Paper and Packaging (FPP) industry. We interviewed 33 executives from leading companies around the world. The objective, as with the first two sets of interviews in 2006 and 2007, was to learn more about executives' opinions of the state of the industry, the key issues it faces and its future direction.

Our last edition of CEO Perspectives grappled with major changes in the world in which the FPP industry operates. The years 2008 and 2009 saw global credit markets, and then the world economy, go into freefall. The crisis exacerbated existing declines in some markets and precipitated steep drops in demand in many others, particularly in mature markets. It has also pointed up the split between mature and emerging markets; China and India experienced much shorter and less severe shocks than did Western Europe and North America. So far, the FPP industry has seen relatively few business failures, even in struggling markets – but very few companies can point to real successes either.

So how will the industry reshape itself to meet future challenges? We begin this study by taking a look at the types of transformation needed in the industry, and then elaborate on four key trends in the following discussion:

1. Getting the basics right: Many of the same themes we saw in the last edition of CEO Perspectives, such as the need to reduce capacity and refine company business models, have been made more urgent due to the impact of the economic downturn. Further industry consolidation, particularly in Western Europe, is seen by nearly all executives as vital to the future health of the sector and the necessary precursor to true capacity management.
2. Improving cost structures: Again, an emphasis on cost remains critical. Most executives stress the need for cash preservation in the current environment. For many companies, especially those who have already reduced costs significantly, process innovation and efficient use of raw materials will also be critical to achieve further reductions.
3. Deriving the most value from every tree: The FPP industry as a whole has done an excellent job in improving its environmental footprint. The sector can, and should, position itself as a sustainable industry – however it needs to do a much better job of communicating the progress achieved. Potential collaborations and new revenue streams resulting from new or alternative uses of fibre and biomass (energy, chemicals, etc.) may fundamentally alter the structure of the entire industry. Many FPP companies are well positioned to ensure that each tree felled contributes the most possible value to the economy – if government regulations don't skew the playing field, and if companies are able to meet the challenge.
4. Shaping the sector's future: New impulses continue to be needed to face up to both the increasingly urgent need to get the basics right and to optimise cost structures. Players in mature markets will also face strong pressures to address adequately the challenges which will need to be overcome in order to benefit from new revenue streams.

Today's FPP executives are facing decisions which more than ever could impact their companies for decades to come. All will need to ensure that the main house is standing on a firm foundation – but many also need to build one or more extensions, to house tomorrow's revenues.

Clive Suckling

Global Leader, Forest, Paper & Packaging

PricewaterhouseCoopers

An industry at the brink of transformation?

2009 was a long, dark year for most FPP companies, with a global recession hammering demand across the world. Some sectors experienced unprecedented drops – one North American CEO reports demand plummeting 80% in one product area. These shifts highlight the need for radical change – a process made even more urgent by the recent recession. It's not surprising that the word "transformation" came up, unprompted, from a number of the executives we interviewed. The economic crisis is seen by many as accelerating a process which had already begun, and which some feel is long overdue. One CEO describes the recent economic situation as what was needed for the industry to accept reality and fix its inefficiencies. Another CEO echoes this view, noting that the current downturn may offer the ideal time to "re-think basic strategy."

Certainly there can be no doubt that the industry urgently needs to transform itself. Change will only be possible though, if companies are able to execute their core business successfully by getting back to the basics – they need to make the right product, in the right quantity, at the right price, and make an acceptable return from it. Accomplishing this goal may mean adjusting the business model for some companies. The reality of an on-going structural downturn in some segments, most particularly newsprint and graphic papers, will need to be addressed and capacity managed more rationally. Industry executives are well-aware of these imperatives; the majority of executives in mature markets concurred that they are seeing a continuing structural decline in some, or even most, segments of the industry.

This secular decline exacerbated the steep drops in demand prompted by the global recession. None of the CEOs in mature markets is anticipating a quick v-shaped recovery, although most believe the worst is over. And while newsprint is often singled out as the paper segment hardest hit by the shift to electronic media, many CEOs feel that other segments are also facing a permanent decline in demand.

Much of the change stems from a switch to new media – new digital devices and the internet offer a wide range of choices for consumers and advertisers. The downturn has been accompanied by a secular slump in print advertising, as more customers go online. Several CEOs go further and flag broader concerns about trends in mass marketing and advertising as one of the top issues facing the paper industry over the long-term.

Further, many of the industry's corporate customers, particularly in mature markets, have initiated programmes to reduce consumption of graphic and office papers. While these programmes are often billed as sustainability measures, ("save a tree", "think before you print"), cost reduction is usually a strong motivation for most. This mixture of cost and environmental pressures is also leading to an emphasis on reducing packaging volumes – removal of layers, light-weighting, etc. These trends – and consequent actions – are in sharp contrast to those described by Asian CEOs, all of whom are positive about the future of the industry in their own region; indeed, many are already seeing demand recover. We explore these differing viewpoints in more detail in the next section.

"The long anticipated electronic office is finally here and there is not a sector that is not impacted."

"Transformation [is] a big word, it is more than product portfolio, it's the customer portfolio, the geographic portfolio, the raw material base and then it's the product portfolio. And I think we need to work on all of those."

An industry at the brink of transformation?

Like its customers, the FPP industry needs to control costs rigorously. Further, the industry will need to do a much better job of making the case for paper and packaging as not only environmentally-friendly, renewable and recyclable resources, but also as providing relevant and effective solutions to customer needs. In the past, the industry has often assumed a license to operate and focused on making more products, both in terms of quantity and quality, on bigger and faster machines. Perhaps more importantly, the industry as a whole has failed to address sufficiently a groundswell of environmental, technological and broader societal developments, which have led to questioning the benefits provided by paper and packaging products themselves.

There is a widely held view that the industry as a whole has overinvested in physical assets and underinvested in markets and stakeholders – a trend that some executives clearly agree needs to be rectified. A number of CEOs discussed their belief that the industry needs to do much more in terms of outreach and educational initiatives. Collaboration across the whole value chain will be imperative, in terms of educating and persuading consumers, policymakers and other key stakeholders that the industry's products are both sustainable and practical, and that their overall environmental impact is relatively modest.

Ensuring that the core business is healthy should be every executive's first priority, however given the fundamental changes in demand, for many companies their old ways of doing business will not be sufficient to ensure long-term profitability.

It will also be necessary to look at new business opportunities.

Additional and alternative applications for fibre are one important area that will transform industry business models. These uses will look to make better use of the fibre available (e.g. to produce energy from low value/un-utilised biomass). Another goal will be to put higher quality fibre to alternative uses, in part to replace falling paper usage. Short-fibre from eucalyptus or other fast-growing species may also displace much of the long-fibre from boreal forests currently employed in paper-making, freeing up supply for new uses in higher value products.

Increasing the fibre yield from existing forests will also play a role in helping the industry maintain competitiveness, such as changing silvicultural and harvesting practices to using new plant materials that produce better resource input to output ratios. There are companies at the forefront of this type of innovation in all corners of the world; one Scandinavian executive describes successful efforts to increase yields in slower-growth Northern forest, while in Asia, another executive mentions how his company's plantation forests are benefiting from state-of-the art forest management practices. Other executives point towards Brazil as leading the way, particularly in terms of developing genetic materials to increase yield.

We describe the industry's perspective that fibre should be put to its highest possible economic use in greater detail later in this report, in the section, *Deriving the most value from every tree*.

"It's over-capacity, it's the fragmentation of the industry, it's declining demand, it's the need for more efficiencies. And also new business opportunities. I think it's all part of the same restructure or structure of change. Transformation we like to call it."

Getting the basics right

In 2008 we described the widely-held view amongst FPP CEOs that the industry needed to "get back to basics." This year, CEOs still see getting the basics right as essential to the industry's long-term survival. What do we mean by the basics? Making the right amount of the right product at the right price and providing top-quality customer service.

The CEOs we interviewed almost all agree: the industry needs to adjust capacity as the necessary first step to long-term survival, particularly in mature markets such as Western Europe, and to a lesser extent North America. In some cases, consolidation will be a necessary precondition to achieving further significant reductions. Companies will also need to optimise their product mix and convert capacity as necessary. Many CEOs report that their companies have already closed mills or curtailed capacity at on-going operations – "right-sizing" capacity to anticipated long-term market demand is seen as critical. This process will mean not only closing capacity, but also re-thinking the best use of remaining resources. One North American CEO

"So we've taken a very simplistic view of saying let's get the broad basics right. If that's right you can optimise around the fringes. But if we're going to spend all of our life trying to optimise around the fringes, the broad base is going to fail. So I would say from the industry point of view it is still about getting back to basics. You know, keeping it simple."

Europe: "I think the first thing is capacity consolidation. ...I think there's an over-capacity, everybody knows about it, and it's not on the graphic side only or on the packaging side only, it's on both."

North America: "Net net, the industry is adding capacity in emerging markets and shrinking capacity in mature markets in North America and Europe and I would argue that the rate of capacity shifting needs to accelerate, particularly in the mature markets, to enable profitability to return."

Forest financing is booming, but risk issues need to be addressed

Heightened awareness of environmental issues, including, but not limited to climate change, is helping spur a boom in forestland investment. While this trend is encouraging for the industry, some caution is needed. Economic development impacts forest cover and forest health in a number of ways, from land conversion, to pollution and forest fragmentation. Sustainable forest management and forest conservation projects can help offset these negative effects. Examples include:

- community and small scale forest enterprises
- timberland investment funds
- certified selective harvesting from natural forests
- reforestation projects for carbon markets
- sustainable plantations
- avoided deforestation projects
- payments for ecosystems
- eco-tourism and recreational forest projects
- carbon offset projects

Companies and investors looking to benefit from these opportunities need to understand fully the sustainability issues associated with forestry and the risks and opportunities they pose for the financial sector. Sustainability issues in the sector can pose serious financial and reputational liabilities. Simultaneously, an increasing focus on green and low carbon solutions can create new business opportunities.

Interest from the finance sector in taking advantage of these options is high. However, while the finance sector is making an increasing number of commitments to the sustainable financing of forestry and the forest products industry, PwC's research suggests that despite these commitments, banks' environmental policies are not typically supported by effective implementation and due diligence procedures. There are significant new commercial opportunities developing for the financing of forestry operators and forest products value chains.

PricewaterhouseCoopers (PwC) and the World Business Council for Sustainable Development (WBCSD) have jointly developed a Sustainable Forest Finance Toolkit to support the trade in legal and sustainable forest products, and those companies making real progress towards this goal. The Toolkit will be available free of charge to banks to incorporate into their existing screening and approval procedures, such as policy development guidance for corporate functions, portfolio management tools, new customer application checklists and issue briefing notes, and guidance on forest products procurement for internal bank operations.

The PwC/WBCSD Sustainable Forest Finance Toolkit will be available for download at *www.pwc.co.uk* in early 2010.

"What differentiates us from others? It is quite simply that we deliver the right product, at the right time, at the right price, to our clients."

"As long as your shareholders think that the right thing is for the company to grow, and I think they always do, then we have to restructure... we will have to concentrate on growth in the other areas."

"Having a sound strategy, low-cost operating structure and a strong balance sheet are extremely important. That said, execution of the strategy is equally as critical and having strong leaders to implement the strategy is the key to any company's long-term success."

comments that his company will look to shift capacity in remaining mills to more profitable grades as part of this process. Another CEO describes the sharp cuts in capacity his company has already instituted as better preparing his company to take advantage of more favourable market conditions when they emerge.

Most CEOs see an upswing in mergers and acquisitions activity as inevitable. In China, CEOs cite the fragmented nature of the current industry and government incentives to improve product efficiency as strong drivers for future consolidation. Most European CEOs agree further consolidation is urgently needed in Western Europe to create a platform for ongoing restructuring of capacity in line with demand, but some are sceptical about it being achieved.

Given tight financial markets, one CEO believes that deals will need to be struck by companies sitting down at the table and working out an agreement, then selling it to the marketplace, rather than relying on investment bankers to drive transaction activity. Overall, CEOs placed less emphasis on private equity as a potential source of further finance in the industry than in our previous editions of this publication. Most don't see private equity as likely to drive deals in the immediate future. Some also think deals of any kind will be difficult in the current environment. One CEO opines that while major deals will likely happen in the middle-term, they are unlikely to come to fruition in the next 2-3 years, as some of the industry's main players are facing limited financial capacity and challenging debt levels. In North America, where executives generally believe more has already been done to adjust manufacturing capacity, some additional consolidation is also viewed as likely. One CEO sees the channels to market as a particularly likely area for further consolidation; he believes there will be significant consolidation amongst printers and merchant brokers in an attempt to gain economies of scale.

Capacity issues are one headline concern for our CEOs; business models are another. Many CEOs are continuing to test the health of their company's business model. Some CEOs anticipate only minor modifications, and stress the importance of other factors such as customer service. Other CEOs are re-examining their company's business model in more fundamental ways; in some cases, backwards integration to secure supply is on the table, while other companies are looking seriously at incorporating bio-energy more fully into their overall business model.

We frame this report as examining the global FPP industry, it's important to note that not all aspects of the sector can accurately be described as global. One European CEO believes that the industry is not truly global, with asset, material and customer bases tending to be very regional in nature. Another North American CEO opines that although his company competes with Europeans, South Americans and Asians on the selling side, consumption is regional. To what extent the sector is perceived as global depends somewhat upon a company's relative position in the value chain. Companies operating further upstream – pulp producers in particular – are much more likely to serve global markets, or at the minimum cover a much larger region. Companies producing paper and wood products tend to focus more closely on regional or local markets.

Given the importance of a regional focus for many companies, it's not surprising that we found a significant divergence in the views of Asian CEOs compared to those in Europe and North America. While some European CEOs believe the worst is over, they anticipate a long road ahead and a slow recovery, where demand may never reach previous levels. North American CEOs have a similar perspective; some do note that the market is beginning to recover, particularly for packaging, but they also doubt that demand will return to previous levels.

Throughout Asia (excluding Japan), executives told us demand is already recovering somewhat. While many outside of Asia see a recovery there as fully focused on domestic demand, one Asian CEO also views the export markets as critical to returning to a more stable level of demand. More tellingly, every

Asian CEO we spoke with was bullish on the future. They see FPP as a growing industry for their region. The rapid rise in Asian consumption has driven significant capacity expansion, effectively closing the market to European exports, which may have trouble competing on price. One Asian CEO told us that his company had used the crisis as an opportunity to make capital improvements at a somewhat lower cost, by taking advantage of a decline in the market for machinery.

In the mature markets, the situation looks dramatically different. All of the FPP CEOs from these countries agree that it's unlikely that demand will return to pre-crisis levels, with a few notable exceptions in specific consumer segments. Some FPP CEOs stress the need to try and avoid falling into a "shrinking" mindset which can be off-putting for investors and demoralising for employees, as well as potentially decrease the effects of organisational changes aimed at increasing efficiency and profitability. Although demand is contracting, opportunities remain to create value through products that fill a market or customer need; one example provided was closed loop paper or packaging supply chains. Packaging generally was felt to offer greater opportunities, with most CEOs fairly bullish about the potential to increase market share at the expense of non-fibre substrates. In both North America and Europe, executives also saw building materials as an area with growth potential, as demand for sustainable building materials looks likely to increase.

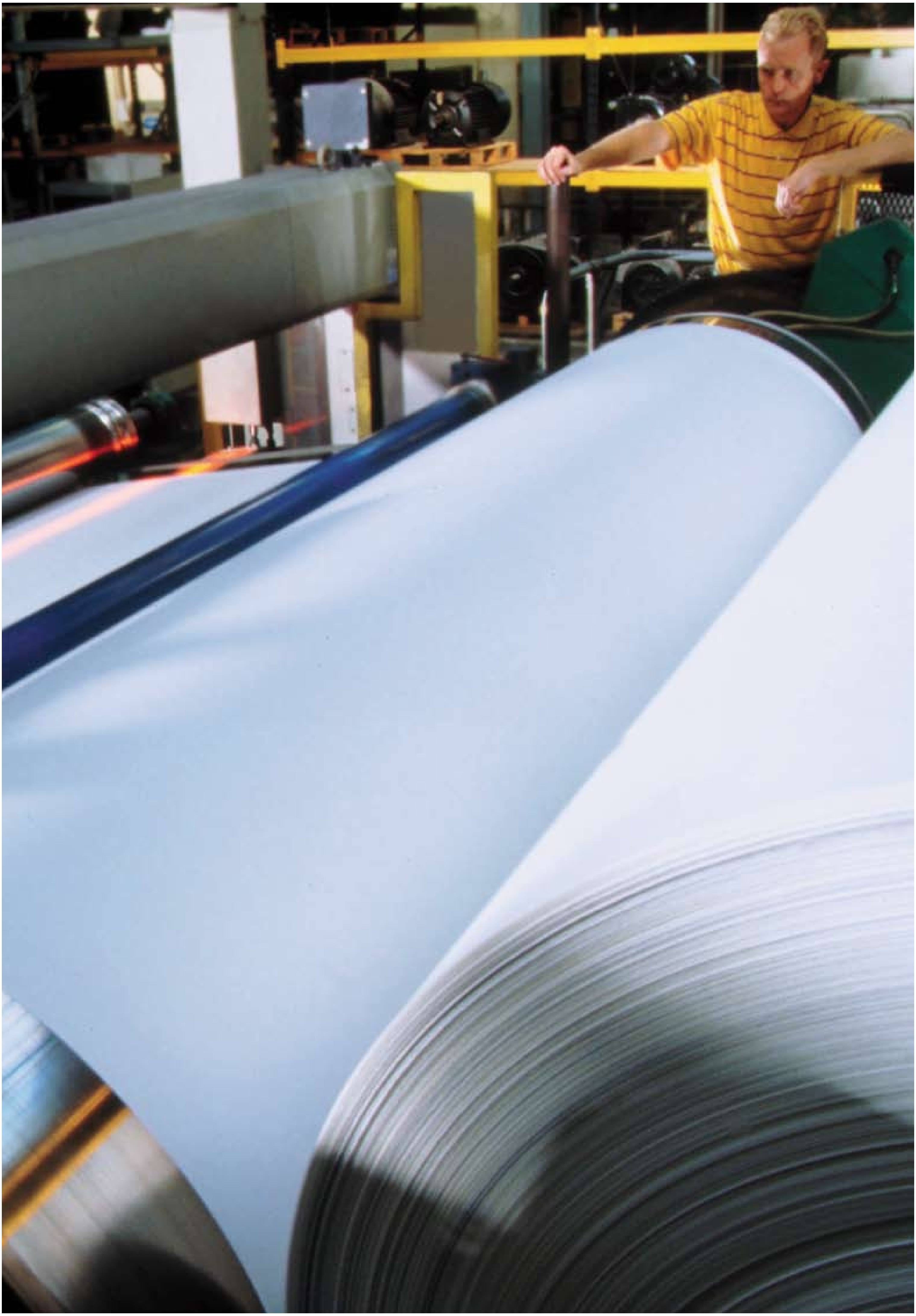
CEOs from both emerging and advanced markets agree on one other basic premise – understanding the customer. We highlighted this need in both of the previous editions of CEO Perspectives and it remains as valid as ever. Quite a few CEOs express the view that top-notch customer service is the true differentiator in a commoditised industry although opinions do vary on the extent to which individual companies' products are seen by their CEOs as commodities, to some extent depending on where the company sits in the value chain. FPP companies will need to fully engage with customers to discover where value truly can be added to their propositions (e.g. sustainable packaging solutions that enhance the brand). Some CEOs have already started driving this type of shift at their companies. One CEO describes efforts to create packaging solutions which help simplify re-loading for customers as an area where packagers can significantly impact the cost structures of their customers. Another CEO describes his company's method of supporting customers in the inventory process; his company manages inventory so that the customer has no need to place separate orders, substantially reducing their administrative time. Another example raised was of continuing developments around "intelligent" packaging, with the potential to further advance the contribution of the packaging itself to overall consumer benefits.

Other options include providing customised products; however this requires a delicate balancing act. One CEO describes the challenge of aligning the organisation to customer needs and understanding when to accommodate them – and when to say no. Another CEO says, "The trick is how do you tailor products for customers but keep enough mass in a group of products such that every order isn't a specialised order because you lose efficiency in the manufacturing process."

For much of the industry, sourcing from certified forests and providing chain of custody credentials is seen by customers as a pre-requisite to doing business. These developments have often been driven by large retail customers. In some segments, understanding the end-consumer is also seen as vital. In China, one CEO describes the challenge of understanding significant geographic variation. Some CEOs express frustration that consumers often have unrealistic expectations; for example, they may want 100% recycled paper, but they want the same quality and price as a paper made from virgin fibre. More importantly, many consumers still link reducing paper consumption with saving trees. We discuss the need for comprehensive efforts to increase understanding of the entire forest and paper life cycle in *Getting the word out* (See page 17).

"Differentiate yourself from the commodity business and impose yourself as a service provider, it's so important."

"This kind of modification [to company business models] is based on the market demand; we maintain close communications with our partners on customer needs to strive for mutual development and benefits."



Improving cost structures

Virtually all CEOs report that their companies have been actively cutting costs; we discussed this emphasis in detail in our last edition of CEO Perspectives. Cost-cutting measures have not always led to increased margins, though, as they are not always sufficient to offset significant cost increases in raw materials, energy and transportation fuels etc. Further, some CEOs feel the industry has tended to pass cost savings back on to customers – rather than building returns for its investors. This orientation will need to change now that more financing may come from investors rather than from banks. Companies will need to focus on high value products with sufficient margins to ensure profitability.

In most paper and board sectors, companies may need to develop or enhance low cost positions... or otherwise be prepared to exit. One CEO puts it most succinctly: "if you don't have your costs right you're dead." In some cases, the process is far from straightforward, though, as there may be significant barriers to exit.

Energy costs are important; we discuss these in more detail in the next section. Volatility in these costs is of particular concern, as is the potential for costs to be affected more by government action than by purely market forces. Many executives describe their companies' effort to hedge against this volatility by increasing energy efficiency and their own capacity to generate power internally. One CEO notes that even if an FPP company manages to be completely off-the-grid in their own production process, most are still subject to the impact of oil price volatility on the cost of chemicals. Innovation directed at reducing chemical consumption may help improve the long-term cost structure.

Transport costs represent another large line item for some companies, and are also largely linked to oil price fluctuations. For some companies, aggressively reducing transport costs may mean a shift in production locations, for example in Canada, where many mills are in remote areas and transport costs may be expensive. But how important transport costs may be for FPP companies varies widely by sector and region, particularly for sectors like pulp where wood represents such a large cost component that accessing cheaper sources of fibre may compensate for additional transport costs (see *Transportation & Logistics 2030,* page 12).

Many executives are also pointing up the need to preserve cash. A significant portion of the executives we interviewed describe cost reduction programmes as a necessary part of achieving sufficient cash flow; companies who made aggressive cuts earlier tended to note that as helping them weather the economic crisis. The focus on cash has its downsides, too. One executive sees the need to preserve cash flow as a significant obstacle to capacity reduction, as companies rely on the cash mills generate, even when they represent over-capacity when viewed from an industry-wide perspective. Another discusses the danger that cutting back too drastically may make it difficult to re-start capacity when the market picks up again.

The reality, though, is that most costs are unavoidable and for most companies, fibre heads up the list by a wide margin. Government efforts to promote "green power" may cause significant demand for wood used for energy, which could in turn lead to significant price volatility as pulp and paper companies are forced to compete for fibre with energy providers. A few executives with significant recycled fibre inputs point up the need to support local efforts to increase recycled paper flows. One North American CEO describes the pressures on recovered paper supply,

"We are going to need structural changes though, to drive cost productivity on energy. We are going to need structural changes in our formulation and our technology of how we dissolve trees into pulp and how we coat our paper. .. both of those are areas we are investing quite heavily in to drive a step-change in cost reduction."

"We have an efficiency potential which we can utilise and put into effect. This should be equivalent to 2-3% per year.
(Q: what is necessary to achieve this?)
That we establish more efficient processes, more modern technology and similar activities. This also includes, of course, that we secure a better utilisation of the raw material."

as on the one hand, availability reduces with shrinking paper consumption, while on the other hand demand increases due to increased demand in emerging markets and a greater call by consumers for products including recycled fibre. He anticipates this situation will lead to increasing price-volatility in waste fibre. Another CEO sees a strong presence in the global market for waste fibre as being a potential growth engine for his company. Some executives, particularly in Asia, also mention efforts to broaden fibre resourcing beyond the traditional wood/recycled flow, such as using bagasse.

One European CEO describes wood fibre as representing 60% of his cost base, in contrast HR costs, a frequent target of cost-reduction programmes in other industries, make up only around 12%. Further, most staff are required whether a mill is running at full capacity or 80%, so there is not much room for substantive savings. There are a number of ways companies can tackle the process of improving efficiency; doing the same things smarter is one important step in the right direction (see *Efficiency improvement programmes*). For this European CEO, though, it's also important to look at how to do things very differently. He sees process innovation as the best means of achieving real cost savings – basically ensuring that his company gets the most value possible

Transportation & Logistics (T&L) 2030: How will supply chains evolve in an energy-constrained, low-carbon world?

PwC's Transportation & Logistics practice recently released the first volume of its forward-looking T&L 2030 series, taking a close look at how supply chains may evolve in an energy-constrained, low-carbon world. The report, based on the expert views expressed in a Delphi survey and comprehensive desk research, asserts that supply chains will go much further in the direction of ensuring that the cost of emissions is paid by those who reap the benefits, spurred not only by regulation, but also by changes in consumer behaviour. Transportation costs will need to factor in the cost of emissions, affecting the final prices of every downstream product. The T&L 2030 report also anticipates that supply chains will benefit from improvements in technology which enable significant real-time control, allowing greater flexibility. And although in some sectors regional supply chains are likely to grow in importance, overall the supply chain of the future will also remain primarily a complex global system – but one where transport costs and emissions are increasingly key constraining factors.

How exactly supply chains will shift in the FPP industry remains to be seen. One North American CEO was adamant in the belief that it makes more sense to produce paper locally, rather than ship heavy, bulky materials long distances. In his view, further increases in the oil price are likely, and should reinforce the importance of regional, rather than global, paper and packaging markets. Pulp markets may be another story; tropical regions enjoy a significant cost advantage in fibre production, which could offset transport costs to some extent, although the extent to which additional costs are levied for emissions could impact this equation. The full T&L 2030 report is available for download at *www.pwc.com/tl2030*

Efficiency improvement programmes such as Lean Manufacturing, Six Sigma

Businesses are continually in search of ways to reduce costs. Pulp and paper companies have a few significant cost components – namely fibre, energy, chemicals and transportation. There is little room for reduction in actual inputs, so cost reduction efforts turn to process improvement. One option that is gaining traction amongst some in the FPP industry is Six Sigma. One North American CEO reports that his company's investment in Six Sigma is already paying off in savings many times greater than the cost of the programme. The theory behind Six Sigma is that a rigorous focus on reducing variation will solve process and business problems, which in turn reduces costs. Use of a rigid and structured investigation methodology helps companies to understand their processes and reduce variation.

Other companies may be looking toward "lean" manufacturing or other approaches. Inspired by practices pioneered by Toyota in Japan, lean principles use a set of tools and practices to eliminate waste, drive efficiency, increase quality and maximise customer satisfaction. Lean focuses processes around value creating activity, relentlessly removing waste and ensuring that work flows as efficiently as possible. The use of lean in all business functions has proven to be highly successful, providing the benefits of increased efficiency whilst engaging and motivating teams. Lean tools and techniques can be applied to any process and are particularly successful when adopted business-wide.

"Over the past two years, we have focused on not only surviving but thriving from the economic downturn. That includes reducing fixed and variable costs, improving productivity and controlling working capital."

out of the wood fibre they process, with the least impact on the environment.

Many other CEOs agree on the need for innovation. Some CEOs are also looking to foster innovation around raw material usage; one describes his company's efforts to recruit and retain top engineering talent to drive such improvements.

Innovation is happening at all ends of the value chain – and when technology advances, not everyone wins. The same CEO whose pulp producing company benefits from process innovation also notes that his customers are innovating too, and that some have developed the capability to produce paper using lower-quality pulp from his competitors.

While process innovation will indisputably be critical to achieving cost savings and continued improvement of the industry's environmental profile, the improvements it drives are primarily incremental. Only a few CEOs are thinking more broadly about the types of innovations that could truly drive a step-change in the industry and provide an impetus for new uses of paper, in the way that carbon paper did, only to be superseded by non-impact printing. Most of the truly innovative ideas currently relate to alternative ways of monetising wood fibre; for example producing energy, fuels or chemicals instead of, or in addition to, chemical pulp. Other CEOs feel that other sectors may also provide rich sources of new ideas.

Deriving the most value from every tree

Much of the previous discussion focuses on issues which have been building in the industry with greater or less urgency over the past couple of decades. What may truly revolutionise the FPP sector, though, is the new impetus to re-evaluate the total value of each tree. Many CEOs discuss the need to consider the value wood fibre value can bring in a whole range of applications; some are looking at the carbon value of standing trees.

The most exciting option for some stems from bio-energy. Many CEOs, particularly in Europe, see greater participation in bio-energy generation as critical to future viability. Some CEOs describe bio-mass generated energy as critical to their companies' futures. One CEO cautions against overly euphoric investment decisions, though. He stresses that any investment made in future energy projects should only be made where they complement the company's long-term goals for the core forest and paper business. This may mean investing in wind power, rather than a new boiler, to avoid the risk that capacity utilisation at a particular mill may decline in the future.

Achieving energy independence and getting off the grid as much as possible is a goal for nearly all CEOs; one points out that attaining this could lead to an increase in large sites, which have sufficient capacity to run their own energy generation projects. Another describes his company's own generation efforts as a natural hedge against future energy price hikes. Some CEOs aspire to a net energy surplus which can be sold back into the grid – in some cases benefitting from government incentives for "green" power. In this scenario, pulp production might even become a by-product of a new, energy-focused business. Issues around bio-energy were a hot topic at our 2009 annual conference in Vancouver as well (see *Re-energising the forest industry*).

In Europe, several CEOs express significant concern around the availability of wood fibre, particularly in light of government incentive programmes to increase the generation of fuel and power from bio-mass. Several executives on both sides of the Atlantic pointed specifically to the flurry of biomass energy projects in the UK – with good reason, given the regularity of new announcements. Currently planned projects look likely to require the equivalent of around 30 million green tons/year of biomass feedstock, mostly in the form of imported wood chips and pellets, enough to supply 7 – 8 world scale chemical pulp mills and an amount substantial enough to impact global wood flows. These plants are all at various stages of planning, and if all built according to announced timescales would come on stream from 2012.

"Virgin fiber based carton board is the most sustainable, most environmentally sound packaging application and we are very confident that the total demand and consumption of those packaging materials will very strongly increase also in the future."

Re-energising the forest industry: report from our 2009 annual conference

At our annual FPP conference in Vancouver, a number of our panellists discussed options for the forest products industry through the increasing use of bio-energy.

Many of the current and planned projects described leverage joint venture models. Several panellists agreed these have significant advantages, particularly given the high capital requirements of some projects. One panellist from such a joint venture described the need to develop a truly sustainable business model, and demonstrate it as such to a sceptical public. Several factors, including the price of oil, and public policy, will impact the viability of bio-energy schemes. Magnus Hall, CEO of Holmen, also noted that bio-energy will depend upon making the best use of the tree. He emphasised that a forest is a renewable resource. Hall says companies are taking more decisive action and 2008 has proved that the industry is learning and capitalising on the opportunities ahead of them. In his view, bio-energy demand has the potential to destroy or save the pulp and paper industry.

Deriving the most value from every tree

CEOs in North America and Europe also eloquently describe the need to help policy-makers understand the importance of deriving as much total value as possible from wood. An integrated process which includes pulp and paper-making together with energy generation, and potentially the production of chemicals or bio-fuels, may produce significantly more value than efforts to produce fuel or power from bio-mass in isolation. There is significant potential for a win-win situation. Forward looking forest product companies will adapt, form alliances with other parties to exploit the opportunities, and acquire new competencies, all with the potential to generate new, sustainable and profitable revenues – provided the appropriate strategic choices are made in order to generate a respectable return on investment.

The industry must ensure that they promote the advantages of this approach to policy-makers. Most of the CEOs in Europe and North America feel there is a significant danger that competition for wood fibre will not be on a level playing field. Several express fears that bio-mass energy projects will not be held to the same level of sustainable forestry already achieved by the FPP industry, although a few CEOs were more optimistic that ambitious goals for renewable energy will not significantly impact timber supplies. Either way, continuing advocacy will be needed to avoid a scenario which puts the industry at a competitive disadvantage in fibre sourcing.

Further, some companies are looking at the potential revenue forests can bring when they are not harvested, in terms of potential carbon credits. For some companies this could represent a significant new source of revenue, as FPP companies reap the benefit of their role in managing global forests as carbon reservoirs and preventing deforestation (See *COP 15: Where to now for Forestry?* See page 18).

We heard a strong consensus from CEOs that the FPP industry needs to do a much better job at raising public awareness and understanding of the fundamentals of the business. The industry must improve its ability not only to publicise its successes in increasing efficiency and reducing carbon emissions, but also to convey the realities of modern sustainable forestry and pulp and paper-making processes. CEOs believe that too many laypeople still see the industry as a major polluter, when in reality the overall environmental impact is significantly less than is popularly believed. Notions that paper production destroys the rainforest are also widespread, even amongst opinion setters. The industry needs to work on improving its reputation as a leader in technology improvements that reduce its impact on the environment. Sourcing fibre from sustainable forests and minimising the environmental footprint are common objectives of the industry. Improvements over the last decade have been significant but more education is still required to change the public perception. One CEO comments that while his employees are generally proud of the sustainability accomplishments of the company, few are actually spreading the word, even to their own friends and neighbours. Better PR is urgently needed.

Some executives also believe that efforts are also needed to provide more information around particular products. Consumers looking to make more sustainable purchasing decisions currently have little opportunity to understand and compare the relative impact of paper or paper products versus other options.

Several CEOs describe emerging educational efforts, such as “Open Days” organised for the community, where participants are asked to bring their old newspapers as the ticket of entry. Consumers then learn about the recycling and manufacturing process and achieve a greater understanding of the industry, and/or of particular products. While individual company efforts are a great start, significant change in awareness is unlikely to happen unless the industry acts collectively (see *Getting the word out*).

Getting the word out

Over several years, there have been many efforts by companies, both individually and collectively, to demonstrate the industry's sustainability credentials. These started as responses to single environmental issues e.g. chlorine usage in pulp bleaching, but have become more complex as a series of single issues have merged to create a backdrop of negative publicity towards the industry and its products, notwithstanding the industry's efforts to counter. Surveys and behaviours in civil society show that common misconceptions about forestry, pulp and papermaking's environmental impact remain widespread though, and seemingly deep rooted. Indeed, there is evidence that the increased focus on the protective functions of forests in helping combat climate change may be reinforcing misconceptions about paper products and even the broader productive value of forests. Many companies have focused past efforts on certification and chain of custody initiatives; both are useful tools in demonstrating the industry's sustainability and have become part of the industry's "license to operate." The sector still needs to go a step further, though, and educate consumers at a more basic level. There is a strong, continuing need for significant collective effort by all parties with a commercial interest in paper in all its forms; they need to join together with a view to enhancing broad public understanding of paper's sustainability profile. Further, they need to provide consumers with accurate information to enable them to make informed choices around their consumption of paper products in all their forms. This means understanding the impact not only of such products on the environment, but also that of possible substitutes.

One such effort has been started in the UK, where companies from across the graphics paper supply chain have joined together to launch "Two Sides," an initiative that aims to promote the responsible production and use of print and paper. The initiative provides stakeholders with facts to dispel common environmental misconceptions and information that supports print and paper as a practical and sustainable communications medium. At the time of writing, there were plans to extend the Two Sides campaign across Europe.

On the other side of the Atlantic, "The Responsible Package" campaign, funded by the Paperboard Packaging Alliance (PPA) and the Corrugated Packaging Alliance (CPA), also seeks to raise awareness of the paper-based packaging industry's sustainable practices and the responsibly made products it supplies.

"We certainly think there is money to be made on the carbon side of our business."

COP 15: Where to now for Forestry?

In December 2009, the world looked to Copenhagen, as leaders from around the globe met to hammer out a successor agreement to the Kyoto Protocol to limit carbon emissions. Advocates for the FPP sector were looking for an agreement that acknowledged the role that sustainable forest management can play globally in meeting the challenges of carbon reduction. In the run-up to Copenhagen, consensus amongst negotiators was building that forests play a vital role as carbon sinks, and that there is an opportunity to significantly reduce emissions from limiting deforestation.

The key proposal on the table in Copenhagen related to the mechanism for so-called Reduced Emissions through avoided Deforestation and forest Degradation (REDD) projects in developing countries. In the preparatory negotiations for Copenhagen, the various parties had agreed that the mechanism to be determined at COP 15 should not be REDD, but an expanded version of the concept known as REDD-plus. This was significant as it expanded the range of projects that could potentially benefit from the REDD mechanism beyond those which just reduce the loss of natural forest cover to a broader range of forest-related activities including the conservation and enhancement of forest carbon stocks and sustainable forest management.

As Copenhagen drew to a close, it became clear that the details of an international framework to support REDD-plus were not going to emerge. Instead, The Copenhagen Accord noted the ‘need to…establish a mechanism including REDD-plus’; specific details on how REDD-plus should be financed or implemented were left for future negotiations. So, although key actors have committed to agreeing a REDD-plus mechanism, the details have yet to be worked out and the future policy regime for REDD-plus therefore remains unclear.

Despite the absence of clear regulatory and policy frameworks, many parties have been keen to demonstrate that REDD-plus projects can be successfully designed and implemented. To date, these have been financed either through voluntary bilateral or multi-lateral funding, or through the sale of carbon emission reduction credits in the voluntary carbon market. Indeed, earlier in the negotiations at COP 15 a group of six of the developed countries had jointly pledged $3.5bn over the next three years towards REDD-plus projects. In the scheme of things, this investment represents a fairly modest amount – but nevertheless a start. What may lie ahead?

The scale of activity required to make a serious dent in deforestation will involve a much greater financing level than voluntary actions are likely to yield. Regulation

that channels private-sector capital is therefore needed. It is difficult to see the private sector funding major projects without more clarity on the longer term policy framework and regulatory regimes, and strengthening of institutional arrangements in many of the developing countries where REDD-plus projects are planned or required. Furthermore issues such as leakage (where reducing deforestation in one area simply results in higher deforestation elsewhere) mean that REDD-plus is unlikely to be widely accepted, unless a coordinated, international effort is established.

Operating within this uncertainty, there are several potential ramifications for the FPP industry.

REDD-plus and the FPP industry

With REDD-plus, the financial benefit extends to projects that promote "carbon stock enhancement" through a variety of forest-related activities, which could provide multiple opportunities for those FPP companies operating in developing tropical countries, including:

- The protection of existing natural forest. A risk for some FPP companies may be that the creation of a regulated REDD-plus market in due course could increase competition for natural forest land from carbon developers seeking to establish REDD-plus projects. This could result in an increase in forest land prices and limit the land area available for timber harvesting or put pressure on FPP suppliers to use more marginal land, increasing operational costs. This will depend on the comparison of forest carbon to timber prices, premiums on forest carbon prices from biodiversity, community and ecosystem benefits and the possibility of developing projects for other ecosystem service markets (e.g. water regulation).
- The afforestation and reforestation of land managed by FPP companies for the purposes of forest carbon stock enhancement. This is likely to be focused on land that has not been recently deforested. Recently deforested land may not be eligible.
- Sustainable forest management. With the appropriate management systems in place, FPP company/supplier managed forest land can provide a carbon sequestration function and be eligible for carbon offset credits, as well as supporting a sustainable timber harvest.

Some FPP companies may be well positioned to implement all three of these activities at scale, including biodiversity, ecosystem and community co-benefits.

Shaping the sector's future

On improving efficiency through innovation and process improvement: "It also takes just really bright, aggressive resources to think differently, to take best practices from other industries and apply them to our industry."

"Radical changes in an industry have never come from the industry, itself, they have always been effected from outside the industry."

"The industry needs different visions and different values."

When asked if they see their company as an industry leader, many executives revert back to discussions of product market shares. Some also mention strong levels of customer service and top marks on customer satisfaction survey, or good results of restructuring or reorganisation programmes. These are certainly important areas in which to take a leading position.

Still, it is notable that only a few make any reference to the future of the entire industry – an issue which emerged with greater intensity in the interviews for our previous edition. To some extent this narrower lens may be seen as a direct response to the significant challenges posed by the global recession; executives coping with double-digit drops in demand simply have less time to focus attention on the sector's future. We also observed an increased air of pragmatism about what individual companies can accomplish. CEOs acknowledge that for many FPP executives, what makes the best economic sense for a single company may be in conflict with what would be optimal for the industry as a whole. Several executives mentioned the need for scale; for example capacity reductions are only possible once a company has achieved sufficient scale to make combining operations viable – and as one CEO put it, big players have both a right and an obligation to lead on capacity management when times get tough.

The first imperative for industry leaders then, particularly in developed markets, is achieving or maintaining supply discipline – and in Western Europe and North America that will most certainly entail further cuts in capacity.

Industry leaders will also need to work together. Many executives describe the need for collaboration as absolutely fundamental to growth, be it with existing partners such as suppliers to help drive innovation in the process, with customers to develop products which better fill their needs, or with other industries to develop new revenue streams. One CEO singles out bio chemicals, recycling and waste management as promising areas for collaboration. Another emphasises the need for each party to bring something to the table and gain concrete benefits from partnering.

Collaboration will need to expand well beyond the limits of the current FPP supply chain, though. Collaborations between FPP companies and players in other industries such as the energy or chemical sectors should help sector players exploit emerging opportunities. Executives may also want to mine the experiences of other industries to improve their own practices; one CEO singles out equipment maintenance as one area where companies can learn from the strategies employed by other sectors.

FPP executives will also need to look beyond the corporate world to the political stage, and indeed society at large. As we stressed in the last edition of CEO Perspectives, the FPP industry is at the heart of many of the most important and intense debates taking place in both political and corporate circles, as well as within society at large – such as climate change, sustainable development, the future of our forests and the most appropriate use of fibre resources. These are issues that affect not just the health of individual companies, but the planet as a whole. Addressing them will require collaboration on numerous fronts – not the least of which will be between the FPP industry and regulators and governments.

Many of the executives we interviewed express concern around the direction of public policy. Some of their remarks focus on local issues, such as the direction of a new cap-and-trade policy in the US or the need for government funded financing options in several countries. Some executives believe that current policy decisions are often going in the wrong direction. One CEO argues that government support has distorted the natural effects of an economic crisis, allowing weak players to survive despite a lack of competitiveness. As already noted, some executives are also concerned that aggressive regulation supporting bio-energy will fail to take into account the full picture and could result in a non-level playing field. Even those executives who feel that policy is going in the right direction wonder if political pressures will push new regulations in directions unfavourable to the FPP sector. One North American CEO suggested that "the devil is in the details" – and cap and trade regulation in the US is still being hotly contested.

Many CEOs would prefer to see as little government intervention as possible. While in some cases government programmes may benefit individual players – as in the tax credits for black liquor received by some US companies – the prevailing view is that government regulation has a tendency to distort market competition. At the same time, given the need to encourage renewable energy, some regulation seems inevitable. Making a strong case for the industry and working together with regulators will be vital to ensuring a healthy base for the sector.

It will also be critical to attracting the next generation of leaders, many of whom will be looking for employers whose values mirror their own (see *Managing the millenials*). Many of the CEOs we interviewed expressed some concern about the ability of their organisation to attract the best and brightest new graduates. For some companies, the challenge is partly one of location; the rural environments of some of the major mills are seen by many as less attractive than more urban settings. In North America, a scarcity of graduates in core engineering disciplines is seen as a cause for concern. For a few CEOs, the current economic downturn has provided a welcome opportunity to hire top young graduates, with Wall Street losing its charm and many other companies/sectors instituting hiring freezes. One CEO whose company has taken this strategy sees this investment as vital to driving long-term growth. Companies will need new joiners with strong engineering skills to drive innovation – one executive stressed the need to promote the sector as a high-technology industry. They will also need people with strong management skills to keep a steady hand on the helm as companies navigate the choppy waters of declining demand, or steer their business into entirely new realms.

"The more that our stakeholders know about the industry and the more they know about our record and our involvement and the positive attributes of our products, the more likely they are to help come to the table to shape the legislations so that the details are actually done in a way that's beneficial to the industry, rather than harmful."

Managing the millennials

In 2008 PwC undertook a major survey of new graduates in order to understand more fully how the next generation of employees views the world of work. Understanding the millennial generation will be critical to achieving long-term growth objectives. Given the urgent need for innovation, the FPP sector may have an even more pressing need for fresh approaches.

The results bring some good news for the sector. Corporate responsibility is seen to be critical – 88% of millennials said they would choose employers who have corporate social responsibility (CSR) values that reflect their own and 86% said they would consider leaving an employer if its CSR values no longer matched their expectations. If the industry can succeed in broadening understanding of its sustainability credentials, it may have an edge in recruiting top talent.

Companies will need to ensure that they have sufficient resources to cultivate in-house talent, as training and development was the most highly valued employee benefit. The number choosing training and development as their first choice of benefit was three times higher than for those who chose cash bonuses. Virtually all (98%) respondents said that working with strong coaches and mentors is an important part of their development.

Balancing short-term pressures with long-term business objectives is never easy. The organisations that get the balance right and invest in understanding and nurturing the millennial generation will be best positioned for the future. The success stories of tomorrow will be the companies that are addressing their long-term skills needs both creatively and holistically, today.

For the full results of the new graduate survey, as well as more insights on the future of work and managing the millennials, please see *www.pwc.com/hrs*

Concluding thoughts

The FPP industry is standing on the brink of major changes. The need for the industry to transform itself is generally accepted, at least among executives in the mature markets – for CEOs in emerging markets this theme may not yet be top of mind. Nevertheless, we encountered far less discussion around the future shape of the industry during the interviews for this edition than in the previous one. Many CEOs in mature markets are facing unprecedented negative market conditions, with lowered demand forcing closures, redundancies, capacity reductions, and a greater focus on cash generation. These issues have been fundamental to short-term survival and have absorbed CEOs attention, perhaps to the exclusion of longer-term considerations.

Executives now need to move forward from ensuring short-term survival and consider the long-term future of their companies. This means thinking about new challenges. Bio-energy stands out as one of the most pressing questions to address. Every FPP company needs to have a considered strategy around bio-energy. Our interviews suggest that many have already taken the first steps, but there is more work to be done in order to ensure that the industry plays a significant role in determining the future direction of green power.

Most CEOs also already recognise the need to take the customer's wishes more closely into account. This sentiment needs to be broadened and companies also need to work collectively to take a strong case for the industry's fundamental license to operate to end-consumers and policy-makers. Paper has many advantages as a sustainable, practical material; packaging has a valid role to play in consumer society and shouldn't take the rap for all negatives associated with consumerism.

Further, in recent decades the industry has made extraordinary gains in terms of reducing its overall environmental footprint. These messages need to be spread widely, to counteract the myths that portray the FPP sector as a dirty industry – in reality, the sector is one of the greenest around. Simply promoting paper at the expense of other materials is not the solution, though. In our examination of sustainable packaging in the UK, we found that local market conditions and recycling practices have a profound impact on which packaging solution is the most sustainable for particular uses. Instead, the industry needs to focus on promoting greater understanding of the merits of its products and the true impact of how it manufactures them.

Much of the progress made in recent years is a direct result of the industry's own quest for greater efficiency – and not the result of legislated targets – a point that some executives made quite explicitly. There is an urgent need to enter into the public debate with politicians, government bodies and regulators on the direction of policies now being devised and their implications on the industry. Promoters of bio-energy would do well to consider the entire forest value chain, and ensure that their policies are promoting rational use of forest resources. Regulators looking to cap carbon emissions need to treat the sector fairly, and include points such as sequestration of carbon in forest products in robust life cycle analyses. Progress on common, sensible standards for carbon accounting is also needed.

Many of the potential changes to FPP business models which we anticipate represent true transformation. They will require substantial levels of innovation; indeed, as we have already noted, innovation will also be necessary to maintain competitiveness in existing core business areas. Companies will need to innovate in nearly every realm – around products, process, end-uses, and markets. They will need to develop internal structures, like appropriate HR policies to train and reward innovation. They may need to collaborate with new types of partners. While some executives are already thinking beyond process improvement and considering new types of fibre-based products, to date we have seen limited evidence that CEOs are fully considering even more fundamental issues, such as how the industry needs to be structured and organised and how companies could introduce the change and innovation models essential for making a successful transformation into these new businesses.

Perhaps more than ever before, the perspectives of executives in the growing emerging markets differ from those in mature markets suffering from structural decline. In China, for example, executives were more likely to see building their brand or understanding consumer needs in their own domestic markets as the most pressing task at hand, with growth nearly assured as standards of living rise. Still, at least one Asia-based CEO acknowledges that the current rates of growth in the emerging markets will probably also eventually slow, or even reverse, in response to the increasingly ubiquitous use of electronic forms of communication. He sees the writing as already on the wall; the industry will need to adjust to market demand.

Further reading

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

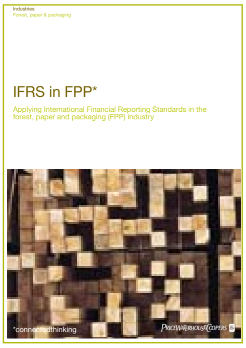
PricewaterhouseCoopers provides thoughtful analysis of the challenges and opportunities facing business leaders in the forest, paper and packaging industry. Our thought leadership publications help inform the strategic decisions guiding many of the industry's leading organisations.

Global reviews:

Global Forest, Paper & Packaging Industry Survey – 2009 edition Survey of 2008 results

The annual Global Forest, Paper and Packaging Industry Survey, now in its 12th year, benchmarks the financial performance of the PwC Top 100, the world's largest forest, paper, and paper-based packaging companies. It looks at the aggregate industry numbers and provides a regional analysis, focusing on metrics such as sales, and net earnings. It includes a write-up of our global industry conference in Vancouver in May 2009, which featured some of the new and evolving industry themes, notably bio-energy.

IFRS in FPP – Applying IFRS in the forest, paper & packaging industry (2007)

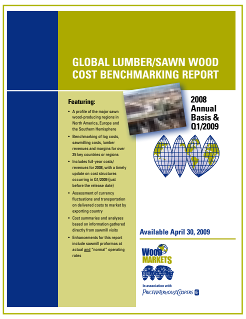


This publication and corresponding website (*www.pwc.com/fpp/ifrs*) contain our solutions so far to help our clients in understanding the implications of IFRS on the forest, paper & packaging industry.

Forest, Paper and Packaging Deals – Global deals activity in the forest, paper & packaging industry (2009)

This publication reviews 2008 deal activity in the forestry, paper and fibre packaging sectors, exploring the key drivers behind transactions in the industry. The analysis also focuses on deal activity by key regions and considers the future transactions outlook. The 2009 edition included a series of deal dialogues around the following issues: making the most of M&A opportunities in a downturn; re-energising the forest products industry through the use of available wood feedstock and industry to generate new sources of revenue from bioenergy, biofuels, biochemicals and other bioproducts; and the widening scope of funders' sustainability screening.

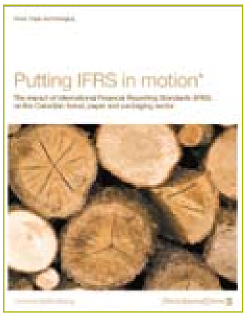
Global Lumber/Sawn Wood Cost Benchmarking Report (2009)



Obtaining key cost information on competing regions is a critical part of any company's operational and strategic planning. The Global Lumber/Sawn Wood Cost Benchmarking Report, 2008 & Q1/2009 features delivered log and sawmilling cost data on actual 2008 results, as well as for Q1/2009, to assist in decision-making. The report was compiled by PricewaterhouseCoopers LLP, International Wood Markets Inc., and The Beck Group. It covers the largest forest products producers in more than 25 countries or regions on six continents and is based on cost data collected from sawmills in 2008.

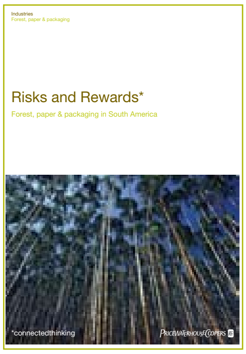
Regional reviews:

Putting IFRS in Motion – The impact of International Financial Reporting Standards (IFRS) on the Canadian forest, paper and packaging sector (2009)



This report draws on PwC's experience working with more than 12,000 companies during their IFRS transition and details valuable lessons applicable to Canada's forest, paper and packaging sector. In particular the report discusses some of the differences between Canadian GAAP and IFRS and how we can manage your transition to the new reporting language.

Risks & Rewards – Forest, paper & packaging in South America (2007)



This publication 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.

Technical issues:

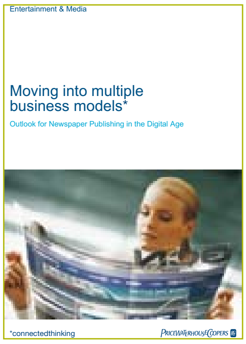
Forest Industry: Application Review of IAS 41, Agriculture: The Fair Value of Standing Timber (2009)

This study reviews how fair value is being applied by forest owning companies using IFRS. It aims to provide insight into the key judgments that are made by preparers from around the world and highlights some of the difficulties as well as similarities and differences.

Further reading

Related materials:

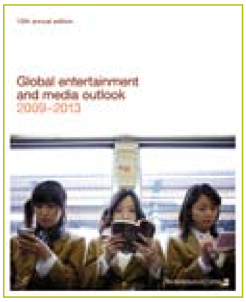
Currently available



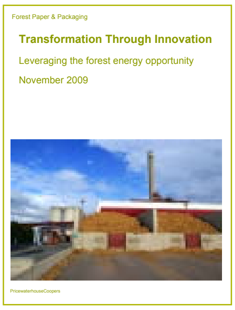
Outlook for Newspaper Publishing in the Digital Age (2009)

This study examines the outlook for newspaper publishers as they deal with long-term structural challenges related to declining circulation and ad sales, adapt to the digital revolution, and cope with the continuing fallout of the global economic slowdown. Research by PwC's Entertainment & Media Industry practice, carried out in cooperation with the World Association of Newspapers (WAN), focuses on two key issues: the change of consumer behaviour with respect to their consumption of news content, and the response of newspaper publishers, advertisers, advertising agencies and media buyers to these changes.

Global Entertainment & Media Outlook (2009)



Against a backdrop of tough economic conditions, we believe there will be nowhere to hide from the implications of digital migration. As economic pressure increases, so does the pace of change: aside from short-term challenges posed by the economic downturn, the real challenge lies in how to take advantage of the digital reality. Now in its tenth annual edition, PricewaterhouseCoopers' Global Entertainment & Media Outlook is a consistent, comprehensive source of global analysis for consumer/end-user and advertising spending. With like-for-like, 5-year historical and forecast data across 12 industry segments in 48 countries, Outlook makes it easy to compare and contrast regional growth rates and consumer and advertising spend.



Transformation through innovation: leveraging the forest energy opportunity

FPP players around the world can no longer take wood fibre availability for granted. There is more than one factor at work, but of increasing force is the demand from energy providers who see forest (or woody) biomass as an important renewable energy source. This is clearly a challenge for FPP players, as competition for feedstock from new entrants to the market heats up. This competition can be expected to intensify as demand for traditional wood fibre-based products recovers. However, this is also a significant business opportunity for the established players in the fibre value chain – timberland owners, forest management and harvesting businesses, logistics companies and the wood processing industries. PwC works in cooperation with our colleagues serving the energy and government sectors amongst others, to support public and private sector stakeholders in their projects in the energy wood space. This document outlines the services that we provide, provides examples of work we have completed, and sets out some of the thought leadership that we have published.

Coming soon

Sustainable Forest Finance Toolkit

PricewaterhouseCoopers and the World Business Council for Sustainable Development (WBCSD) have jointly developed a Sustainable Forest Finance Toolkit to support the trade in legal and sustainable forest products, and those companies making real progress towards this goal. The Toolkit is available free of charge and in a series of standalone modules for banks to tailor to and incorporate within their existing screening and approval procedures, such as policy development guidance for corporate functions, portfolio management tools, new customer application checklists and issue briefing notes, and guidance on forest products procurement for internal bank operations. The Sustainable Forest Finance Toolkit will be available for download at *www.pwc.co.uk* in early 2010.

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To register, or for more information, go to:
www.pwc.com/forestconf10

pwc.com/fpp

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