

# *Global Forest, Paper & Packaging Industry Survey* 2011 edition – survey of 2010 results









# Contents

Leaders' message .....	2
2010 in perspective.....	4
PwC Top 100 .....	8
Highlights .....	8
Results by region .....	11
List of companies .....	14
Survey methodology .....	16
PwC 24 <sup>th</sup> Annual Global Forest & Paper Industry Conference .....	17
Publications.....	18
PwC Global Forest, Paper & packaging contacts .....	Inside back cover

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# Leaders' message

Welcome to the PwC Global Forest, Paper & Packaging<sup>†</sup> Industry Survey — 2011 Edition. The goal of the Survey, now in its 14<sup>th</sup> year, is to provide insight into the major companies and an overview of the issues and events shaping the industry. This year's Survey summarises the 2010 publicly available year-over-year financial information of the PwC Top 100, the 100 largest forest, paper and packaging (FPP) companies in the world, ranked by sales revenue.

This year's Survey results show some recovery in the industry's performance after two exceptionally challenging years—2008 and 2009. The PwC Top 100 companies' revenues increased by 9% reflecting a full year combination of the volume and sales price increases, which began in late 2009. The market recovery also led to an improvement in profits. However, the extent of the improvement was uneven across sub-sectors and geographies. Input costs rose strongly; upstream companies were

able to benefit and integrated producers were able to partially shield themselves. Non-integrated companies, however, suffered as it was not universally possible to recover input cost increases in end-product prices. For export-oriented companies based in strong currency countries, continued US dollar weakness worked against them.

The composition of the PwC Top 100 remained relatively stable. For the second year, the trend towards increased emerging market participation stalled, although those represented generally moved up the list. The emerging market presence, at around 15% of Top 100 sales, understates the significance of those regions in this industry. This is a twin function of industry structure and ownership, with Emerging Asia especially being characterised by a high degree of market fragmentation as well as private company ownership. That said, we still expect emerging market company participation in the Top 100 to increase in the coming years.

## PwC Top 100 Companies (US \$ billions<sup>1</sup>)

	2010	2009	2008	2007	2006
Sales revenue	339.1	310.8	358.3	333.3	317.3
Operating profit	23.7	14.2	21.2	26.1	23.5
Net income (loss)	18.3	5.1	(6.5)	13.8	11.9
Return on sales (%)	7.0%	4.6%	5.9%	7.8%	7.4%
Return on capital employed <sup>2</sup> (%)	4.9%	2.7%	2.3%	4.9%	4.6%
Capital expenditures	18.0	18.4	23.8	24.5	21.9
Depreciation	21.3	20.8	20.6	19.9	20.6
EBITDA margin	13.3%	11.7%	11.7%	13.8%	13.9%

1. Throughout the Survey all currency references are in US dollars unless otherwise noted.

2. Refer to the Methodology section on page 26 for the definition of return on capital employed.

† Inclusive of paper packaging only

In May 2011, the first Global Forest Products Leadership Summit was held in Vancouver, Canada. The Summit comprised a series of international conferences and events over several days that explored themes and issues for the future of the world's forests and forest products industries. Central to the Summit was our 24<sup>th</sup> Annual Global Forest & Paper Industry Conference under the theme "Changing directions", which stimulated extensive discussion around the opportunities and outlook for people, products and markets. The conference drew close to 500 CEOs, senior executives, customers, suppliers, financial analysts, government representatives and other stakeholders. We include a summary in this report, starting on

page 17 and more details are also available on our website: [www.pwc.com/forestconf11](http://www.pwc.com/forestconf11). The 25<sup>th</sup> Annual Conference will be held on 10 May, 2012 in Vancouver as part of the second Global Forest Products Leadership Summit.

PwC's thought leadership and depth of industry knowledge have enabled us to satisfy our clients' business needs and surpass their expectations by offering proactive solutions to help them identify and capitalise on trends. For more information about the services offered by PwC's Global Forest, Paper & Packaging Industry Practice, please contact one of the professionals in your region listed inside the back cover of this Survey. We hope you enjoy the 2011 edition of the PwC Global Forest, Paper & Packaging Industry Survey.

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# 2010 in perspective

## Economic context

2010 saw a strong continuation of the economic rebound which began in the second half of 2009. According to the IMF, World GDP grew by 4.0% in 2010 after a decline of 2.3% in 2009. The US grew at 2.9%, Japan at 4.0% and Canada at 3%. The Eurozone's recovery was just 1.7% and would have been lower but for a strong performance by the German economy at 3.5%. Characteristically, the key emerging economies all grew above the global trend led by China at 10.3%. Of the other BRICs, India grew at 8.6%, Brazil resumed growth with a strong 7.5% increase and Russia reversed a steep decline in 2009 to grow by 4%.

The recovery was led by manufacturing. Manufacturing is one of the more cyclical sectors, so it suffered disproportionately during the recession and during 2010 came back more strongly than other sectors. That said, in the developed countries industrial output by the end of 2010 was still below the levels reached in 2007. Other sectors saw little rebound—US residential construction is a stark case. However with economic growth returning international trade continued to expand although exports in both the Eurozone and Japan were still well below their pre-recession levels by the end of 2010.

Led by strong growth in demand from China, most commodity prices rose strongly during 2010 creating pricing pressures for

producers. With spare capacity widespread, producers had mixed success in passing these costs through in product prices. The emerging markets had less slack to absorb these cost pressures prompting several of their governments to tighten interest rates to put a brake on inflation as the clock moved into 2011.

On the currency side, the US dollar weakened against most major currencies. During 2010 it lost ground to the euro. Many countries relying upon commodity exports saw their currencies strengthen versus the US dollar; of particular note are the Brazilian Real and the Canadian dollar. The Chinese Renminbi was steadier due to the Chinese government's managed upward float of their currency against the US dollar. This is a key policy tool to ensure Chinese exports remain competitive but potentially a source of tension especially with other emerging economies experiencing rising exchange rates.

Casting a shadow over recovery in the developed markets though was increasing levels of government debt. A debt crisis that began as a banking crisis in 2007/2008 and led to the recession in 2008/2009 was showing mounting signs of moving into a sovereign debt crisis. Governments had spent to save banks and to avoid a worse recession, but in the process exaggerated borrowings to levels that few economists saw as being sustainable. Some developed countries were already applying the brakes on further spending during 2010 and

trusting that the economic recovery underway would be enough to drive growth in the private sector as government expenditures were cut back. Going into 2011, it became increasingly apparent that the developed countries would struggle to grow whilst deleveraging by governments (and consumers) held sway. For the emerging economies, the main challenge was different; how to maintain growth without triggering further inflation.

### **Progress in the forest, paper and packaging industry**

The global economic environment continued to influence the performance of the PwC Top 100. World paper demand came back strongly and at a global level at least, the volume losses in 2008/2009 were reversed. At a regional level the picture was slightly different as in Europe and North America production remained below 2007 levels but was ahead in the emerging economies. Packaging grades and tissue led the recovery in paper and board; graphic paper demand whilst recovering on the back of increased user spend especially in advertising, was less buoyant reflecting in all likelihood a permanent loss of volume as markets continued to switch to digital solutions in various forms. Overall though

the recovery in demand led to a strong rise in capacity utilization, with world paper and board operating rates running at just under 90% of capacity.

With demand recovering and confidence boosted, investment plans for new capacity were drawn up (or dusted off). China continues to lead the way and there were many announcements of new capacity across all grades, but led by containerboard and tissue, scheduled to kick in from 2011 and 2012. Although at a much lower level than China, Indian producers also announced several new projects. Net capacity expansion in global paper and board was a modest circa 3.5 million tons in 2010, well down on recent years and compares with the circa 12 million tons projected for 2011. Following a near standstill, pulp projects were resumed or new projects announced in South America again with Brazil in the fore. These are scheduled for start up from 2012 onwards. During 2010, the most notable new pulp capacity was the APRIL Rizhao mill in Shandong, China. The strong demand for pulp (for paper and viscose staple), together with the temporary loss of capacity in Chile after the February 2010 earthquake, also triggered many mill restarts including several in Canada.

In the developed markets, investment was more modest. Whilst some new capacity came on stream notably in containerboard, investment focused on the conversion of machines to more profitable grades and efficiency improvements to existing capacity with energy saving investments continuing to feature.

On a broader note, developments in 2010 provided some respite to major capacity closures, but the underlying trends were still clear- overcapacity remains in the developed markets, with high cost graphics paper capacity being especially vulnerable to the twin threats of electronic media and societal trends as well as the direct and indirect effects of new capacity builds in Asia. In this context, Western Europe is seen as more vulnerable than other developed regions, as the process of industry restructuring necessary to manage capacity in an orderly way is less advanced.

Pulp prices followed the course of other industrial commodities as prices continued on an upward trajectory during the first half of 2010, helped by the curtailment of Chilean supply, although steadied later in the year. Prices for recovered fibre also rose strongly during the year although the upward trend eased slightly towards the year end. In US dollars at least both pulp

and recovered fibre prices in broad terms were more than restored to their previous peak in early 2008. Chinese buying patterns continued to be the feature dominating month-by-month price movements for both virgin and recovered fibre.

Overall these trends were positive for pulp producers, although it became something of a lottery depending upon currency. Broadly the main beneficiaries were US dollar based producers; for producers in other currencies, the benefits were diminished by their own strengthening currencies versus the US dollar. A key case in point was Brazil. That said, market pulp producers were more fortunate than non-integrated paper producers. Although paper prices generally increased especially during the second half of 2010, they were insufficient to restore papermaking margins to respectable levels. The broad picture in 2010 was one of paper producers playing catch up as fibre costs, energy and chemicals costs increased.

In this situation, the winners were producers with strong fibre positions. A moot issue is producers reliant mainly upon recovered fibre. Given the highly disaggregated nature of waste paper collections and the often comingled nature of waste streams, it is rarely possible for producers of recycled papers to achieve the

same degree of backwards integration as producers of virgin papers. This is a concern for such producers and it is a common trend to find them looking at ways in which to increase both the security and reduce the price volatility of their raw material supply. Producers with long positions in waste fibre would seem to be in a strong position.

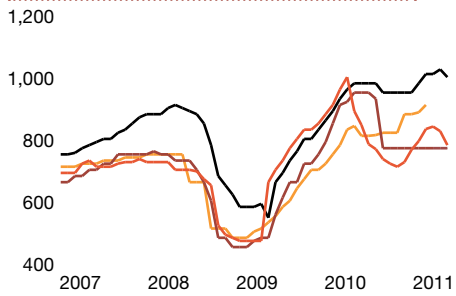
Wood products producers had another challenging year. Demand patterns for wood products varied more across the globe than those for paper products. In the world's biggest wood products market, North America, the continued depressed level of new build activity in the US kept the lid on sawn timber and engineered wood product demand. Prices remained subdued too with any rallies quickly being countered due to overcapacity. In these conditions only the lowest cost producers were able to turn a profit. There were some bright spots. Some Pacific Northwest producers were able to increase their business with China where demand for fibre products in all forms was strong. In fact, the Pacific Northwest industry nearly doubled their business with China in terms of both sawn timber and log exports in 2010. Another bright spot was the demand for energy wood- chips and increasingly pellets-with a main driver continuing to be the European demand for

woody biomass to meet targets for renewable energy. In much of Europe, demand for energy wood underpinned wood prices. In fact the pricing power with energy wood users in many jurisdictions due to various incentives and/or subsidies available to them continues to be challenge to traditional wood buyers over the longer term and concern mounts about potential wood shortages arising in Europe.

In conclusion, a better year for FPP companies but peppered with a mix of winners and those that were less fortunate. Winners in terms of financial performance were those companies with strong and preferably low cost fibre positions. Efficient, low cost production was also an advantage, but without fibre integration the conversion benefits were dissipated. At the other end, companies with high value added products or strongly differentiated product offerings and strong market positions also performed well. However with the industry as a whole returning only 4.9% on capital employed, it is clear there is still significant room for improvement.



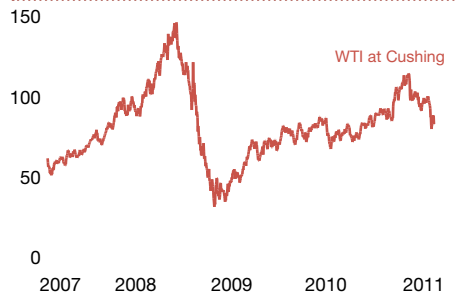
**Global NBSK Pulp Prices**  
(US \$ per tonne)



Canadian – delivered to US East  
 Canadian/Nordic – delivered to Northern Europe  
 China  
 Western Europe

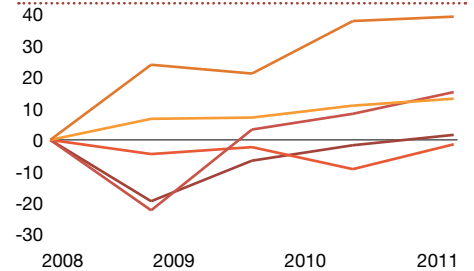
Source: RISI PPI Pulp & Paper Week

**Monthly Spot Crude Oil Prices**  
(US \$ per barrel)



Source: US Energy Information Administration, accessed at  
<http://www.eia.doe.gov/emeu/international/Crude1.xls>

**Appreciation of Major Currencies**  
Against the US Dollar  
(Percent)



Yen  
 Renminbi  
 Real  
 Euro  
 Canadian \$

Source: Onada.com



# PwC Top 100

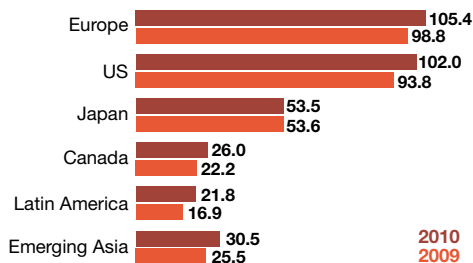
## Highlights

### Sales and income

The PwC Top 100 reported total sales of \$339 billion in 2010, up 9% from \$311 billion in 2009; getting back to near 2007 sales levels. Consistent with previous years, the 20 largest companies accounted for nearly 60% of total sales.

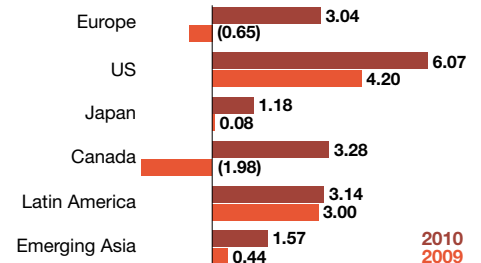
EBITDA of \$45 billion represented an increase of 24% compared to prior year results. The increase in EBITDA is largely a result of improving world economies as they recover from the economic downturn of 2008. In particular, Europe, Asia, Canada and Latin America showed the largest improvements.

### Sales (US \$ billions)



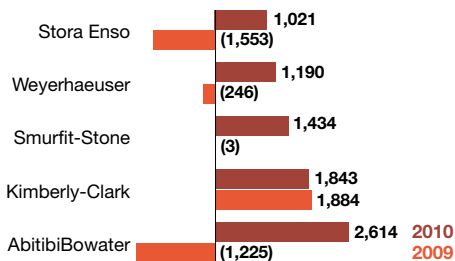
Source: PricewaterhouseCoopers LLP

### Net income (Loss) (US \$ billions)



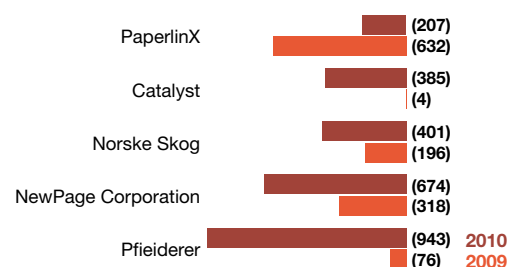
Source: PricewaterhouseCoopers LLP

### Highest earnings (US \$ millions)



Source: PricewaterhouseCoopers LLP

### Largest losses (US \$ billions)



Source: PricewaterhouseCoopers LLP



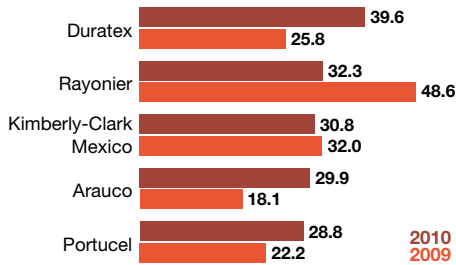
### EBITDA margins

EBITDA margins improved to 13.3% in 2010 from 11.7% in the prior year. All regions apart from the US saw improved margins. Latin America continued to lead the pack with an EBITDA margin of 26.2%, compared to the US in second place with a margin of 13.2%.

Duratex from Brazil, the largest panel manufacturer in Latin America, topped the list of EBITDA margin leaders in 2010, generating a margin of 39.6%. Duratex was followed by Rayonier from the US and Kimberly-Clark Mexico at 32.3% and 30.8% respectively.

### Highest EBITDA margin

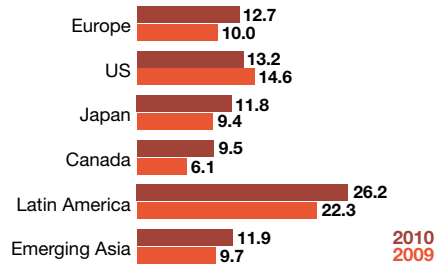
(%)



Source: PricewaterhouseCoopers LLP

### EBITDA margin by region

(%)



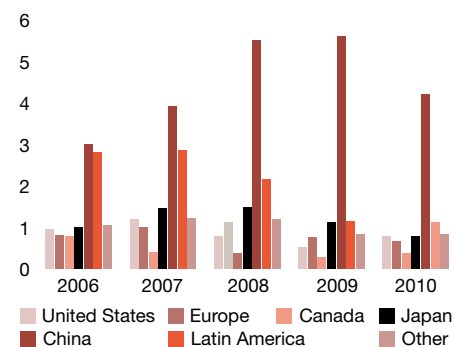
Source: PricewaterhouseCoopers LLP

### Reinvestment ratio

Reinvestment ratio, calculated as capital investment as a percentage of depreciation, measures the extent that capital investment is replacing aging assets. In broad terms, when the ratio is in excess of 1.0, it indicates an expansion of capacity. A ratio of less than 1.0 indicates capacity shrinkage and suggests that assets are being depreciated faster than they are being replaced.

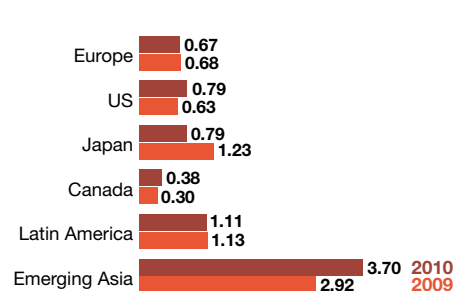
The overall reinvestment ratio averaged 0.8 in 2010 for the industry, compared to 0.8 in 2009 and 1.2 in 2008. China continued to have the highest reinvestment ratio at 4, down from 5.6 in 2009. Latin America's reinvestment ratio was 1.1, while the remaining regions had ratios of less than 1.0. The challenge for many investors continues to be the gap between the cost of capital and average industry returns that are less than the cost of capital.

Reinvestment ratio  
(Cumulative data)



Source: PricewaterhouseCoopers LLP

Reinvestment ratio  
(%)



Source: PricewaterhouseCoopers LLP

### Financial Summary Information by Country/Region (US \$ millions)

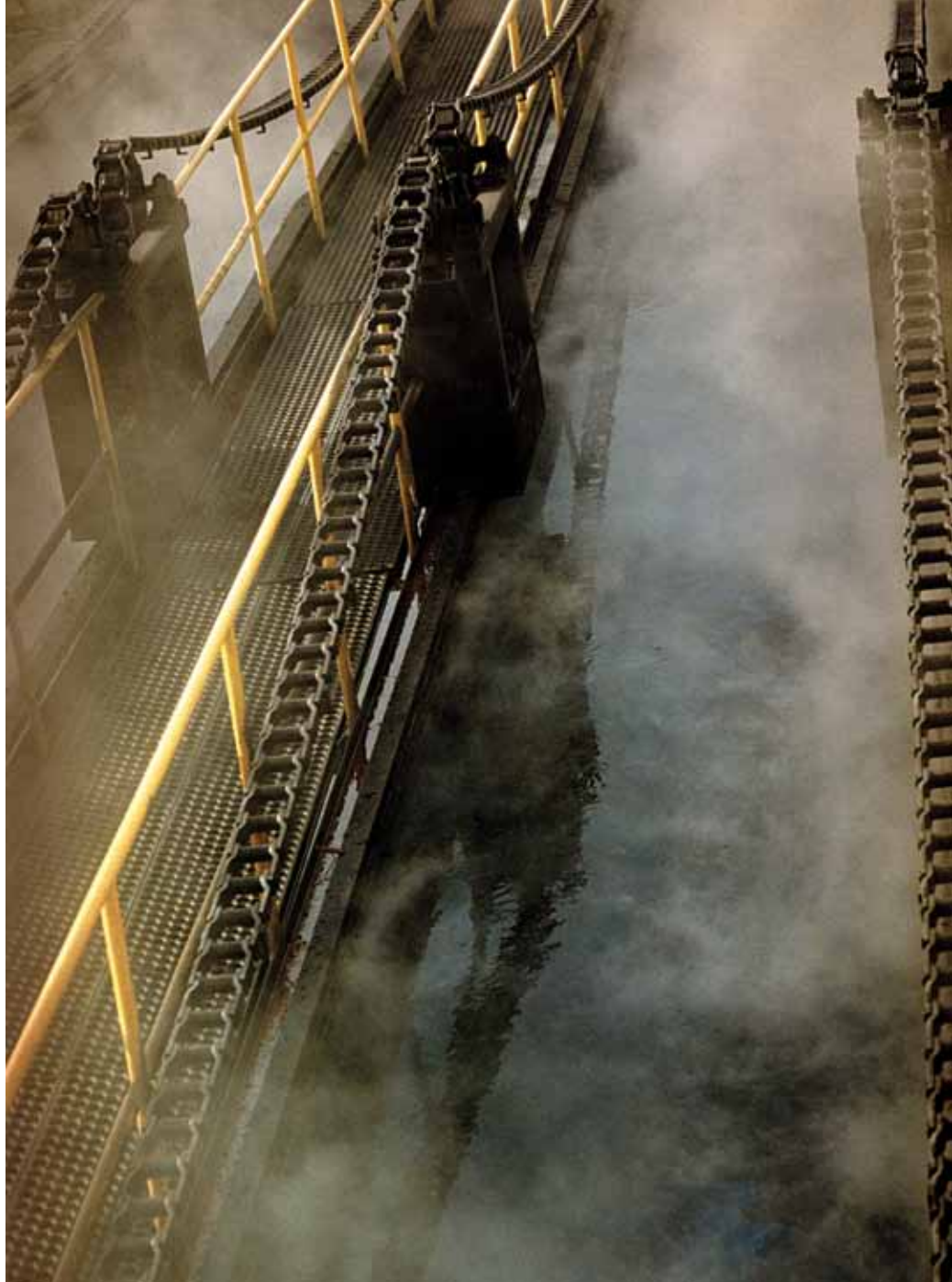
	Sales 2010 (\$)	Sales 2009 (\$)	% change	Net Income 2010 (\$)	Net Income 2009 (\$)	% change	EBITDA 2010 (\$)
Europe	105,399	98,822	6.7	3,044	(655)	(564.8)	13,383
US	101,999	93,780	8.8	6,068	4,200	44.5	13,496
Japan	53,515	53,559	(0.1)	1,179	84	1298.2	6,339
Emerging Asia (& other <sup>1</sup> )	30,452	25,510	19.4	1,566	438	257.4	3,616
Canada	25,957	22,224	16.8	3,284	(1,981)	(265.8)	2,479
Latin America	21,777	16,902	28.8	3,137	2,996	4.7	5,695
<b>Total</b>	<b>339,099</b>	<b>310,798</b>	<b>9.1</b>	<b>18,278</b>	<b>5,082</b>	<b>259.6</b>	<b>45,010</b>

Note: Other includes South Africa and Australia



## Results by region

All regions showed increased sales in 2010 with the exception of Japan, where sales were flat. The real growth, however, was primarily in Asia and Latin America with double-digit growth rates in sales in 2010. Canada also recorded 16.8% growth in sales, however this is primarily due to the Canadian dollar increasing over 10% in 2010.



EBITDA 2009 (\$)	% change	EBITDA Margin 2010 (%)	EBITDA Margin 2009 (%)	ROCE 2010 (%)	ROCE 2009 (%)
9,869	35.6	12.7	10.0	3.9	1.6
13,736	(1.7)	13.2	14.6	6.3	4.4
5,046	25.6	11.8	9.4	2.6	1.4
2,463	46.8	11.9	9.7	6.2	2.8
1,357	82.7	9.5	6.1	4.8	(2.6)
3,777	50.8	26.2	22.3	6.1	5.5
<b>36,247</b>	<b>24.2</b>	<b>13.3</b>	<b>11.7</b>	<b>4.9</b>	<b>2.6</b>

## Europe

The Euro area marginally lagged the overall growth rate of other advanced economies primarily as a result of a 5% appreciation in the Euro vs. the US dollar in 2010. Most companies returned to profitability in 2010, led by Stora Enso which posted net income of \$1.0 billion compared to a loss of \$1.2 billion in 2009.

Against the trend, Germany's Pfeleiderer, a wood panels producer, posted a significantly increased loss of \$0.9 billion in 2010 largely as a result of restructuring its operations.

## United States

The US economy began to recover in 2010 as GDP increased to 2.9% after it fell to negative 2.5% in 2009. Housing starts continued at a lackluster level in the 550,000 – 600,000 range.

On the corporate side, International Paper and Kimberly-Clark retained their first and second overall rankings in 2010. The most notable turnarounds include Weyerhaeuser, which reported net income of \$1.2 billion in 2010 (including special credits of \$1.035 billion, primarily income tax adjustments related to its conversion to a real estate investment trust) compared to a loss of \$246 million, and Smurfit-Stone which reported net income of \$1.4 billion compared to a loss of \$3 million in 2009 after emerging from bankruptcy protection in June 2010.

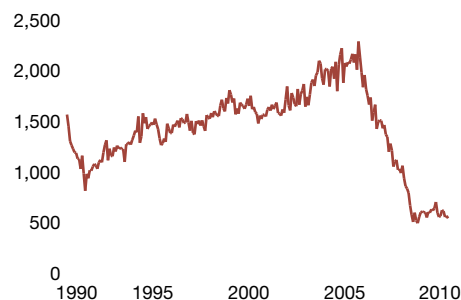
## Japan

Japanese companies remained relatively stable when compared to 2009. The two largest Japanese companies in the survey, Oji Paper and Nippon Paper, both returned to profitability after suffering losses in 2009.

## Emerging Asia and other

The Other category grouped with Emerging Asia comprises Sappi and Nampak from South Africa and Paperlinx from Australia. Every company in this grouping reported increased sales in 2010, and overall sales increased 19.4% this year over last. This increase mainly reflects the ongoing economic growth in the region, led by China.

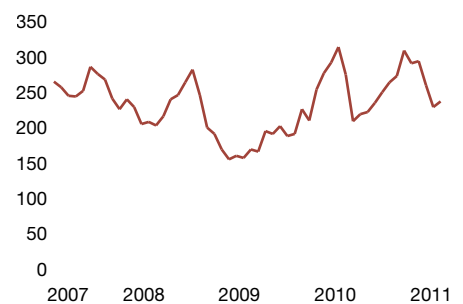
**US housing starts – 20 year trend <sup>1</sup>**  
(Thousands of units)



1. Seasonally adjusted annual rate.

Source: US Census Bureau

**North American building materials**



Lumber 2x4 #2&8 Btr KD Western SPF US \$ per mfbm

Source: Lumber—Random Lengths Yardstick



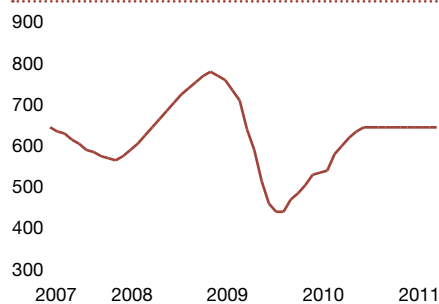
## Canada

Canadian companies recorded 16% growth in sales, due to strengthening markets. Of note, AbitibiBowater emerged from creditor protection in December, 2010 and recorded a gain on reorganization items of \$1.9 billion and income tax benefits of \$1.6 billion, which skew the net income figure for Canada. EBITDA increased to \$2.5 billion in 2010 compared to \$1.4 billion in 2009.

## Latin America

Latin America companies posted the highest increase in sales at 28.8% in 2010. The growth in sales resulted largely from increased BHKP (Bleached hardwood kraft pulp) prices in 2010, as this region dominates in terms of worldwide BHKP production. Due to its low input costs, Latin America also reported the highest EBITDA margin at 26.2% in 2010.

### North American newsprint prices (Newsprint 30lb delivered to US East, US \$ per tonne)



Source: Pulp and Newsprint – RISI PPI Pulp & Paper Week



# PwC Top 100

## Top 100 Global Forest, Paper & Packaging Industry Companies

(US \$ millions)

Rank 2010	Rank 2009	Company name <sup>1</sup>	Country	Sales		Net income (Loss)		EBITDA as a % of sales	
				2010 \$	2009 \$	2010 \$	2009 \$	2010 %	2009 %
1	1	International Paper	US	25,179	23,366	644	663	12.5	16.4
2	2	Kimberly-Clark	US	19,746	19,115	1,843	1,884	18.2	18.9
3	3	Svenska Cellulosa (SCA)	Sweden	15,202	14,594	773	636	13.9	14.1
4	5	Stora Enso	Finland	13,671	12,473	1,021	(1,225)	12.7	6.1
5	4	Oji Paper	Japan	13,097	13,558	284	(68)	13.9	9.8
6	6	Nippon Paper Group	Japan	12,502	12,713	343	(250)	11.4	8.7
7	7	UPM - Kymmene	Finland	11,848	10,764	745	236	17.0	11.8
8	8	Smurfit Kappa	Ireland	8,865	8,446	66	(170)	12.0	11.0
9	9	Mondi Group	UK	8,269	7,331	297	(46)	14.6	11.5
10	10	Metsaliitto	Finland	7,139	6,745	226	(162)	15.5	6.9
11	15	Sappi	South Africa	6,572	5,369	66	(177)	11.4	8.0
12	13	Smurfit-Stone	US	6,286	5,574	1,434	(3)	8.7	11.8
13	14	Domtar	Canada	5,850	5,465	605	310	12.0	13.1
14	12	Sequana Capital	France	5,753	5,700	42	28	10.2	10.5
15	11	MeadWestvaco	US	5,693	5,406	106	225	12.6	14.7
16	19	Weyerhaeuser <sup>2</sup>	US	5,629	4,624	1,190	(246)	17.0	1.6
17	18	Rengo	Japan	5,221	4,779	194	84	12.9	8.9
18	21	AbitibiBowater	Canada	4,746	4,366	2,614	(1,553)	7.0	5.2
19	17	Daio Paper	Japan	4,682	4,527	(92)	17	10.9	12.9
20	16	PaperlinX	Australia	4,665	4,984	(207)	(632)	0.6	1.1
21	29	CMPC	Chile	4,219	3,124	638	261	26.9	20.7
22	24	Sonoco	US	4,124	3,597	201	151	20.3	21.5
23	22	Graphic Packaging	US	4,095	4,096	11	56	12.4	14.4
24	23	Unicharm	Japan	4,073	3,722	281	183	17.2	14.9
25	20	Sumitomo Forestry <sup>2</sup>	Japan	3,975	4,467	27	11	5.2	3.7
26	26	Cascades	Canada	3,843	3,412	17	53	8.4	11.1
27	25	Temple-Inland	US	3,799	3,577	168	206	10.2	16.7
28	30	Arauco	Chile	3,788	3,113	701	305	29.9	18.1
29	31	NewPage Corporation	US	3,596	3,106	(674)	(318)	(6.2)	(13.1)
30	32	Fibria Celulose (VCP + Aracruz)	Brazil	3,572	2,679	341	1,311	23.6	19.5
31	27	DS Smith	UK	3,201	3,298	59	(18)	6.9	5.0
32	28	Norske Skog	Norway	3,090	3,314	(401)	(196)	(2.0)	5.6
33	34	Rock-Tenn	US	3,001	2,812	226	222	17.3	20.2
34	37	West Fraser Timber	Canada	2,801	2,070	161	(300)	15.2	3.8
35	41	Sodra	Sweden	2,744	2,194	282	61	17.7	10.1
36	50	Nine Dragons Paper Holdings <sup>2</sup>	China	2,628	1,939	317	245	22.5	19.1
37	38	Suzano	Brazil	2,567	2,001	437	479	28.5	36.9
38	43	Shandong Chenming	China	2,519	2,199	170	123	15.1	14.7
39	40	Ahlstrom	Finland	2,515	2,226	24	(46)	8.4	7.7
40	35	Mitsubishi Paper	Japan	2,508	2,708	(18)	12	7.8	7.9
41	42	Packaging Corp of America	US	2,454	2,148	205	266	13.9	23.4
42	36	Holmen	Sweden	2,446	2,375	98	132	19.4	16.4
43	39	Mayr-Melnhof Karton	Austria	2,362	2,232	143	131	13.7	15.5
44	51	Canfor	Canada	2,359	1,827	68	(62)	13.4	(2.7)
45	46	Boise Cascade	US	2,241	1,973	(6)	(19)	1.0	(2.7)
46	47	Hokuetsu Paper	Japan	2,214	1,956	83	20	16.1	13.9
47	45	Boise Inc.	US	2,094	1,978	63	154	15.8	22.8
48	59	Klabin	Brazil	2,083	1,499	318	85	16.3	13.9
49	52	Kimberly-Clark Mexico	Mexico	2,075	1,832	335	308	30.8	32.0
50	49	The Lecta Group	UK	2,020	1,924	32	(113)	10.5	11.2

Rank 2010	Rank 2009	Company name <sup>1</sup>	Country	Sales		Net income (Loss)		EBITDA as a % of sales	
				2010 \$	2009 \$	2010 \$	2009 \$	2010 %	2009 %
51	48	Pfleiderer	Germany	1,980	1,926	(943)	(76)	3.3	7.3
52	64	Sino Forest	China	1,923	1,238	395	286	20.4	22.9
53	54	Universal Forest Products	US	1,891	1,673	17	25	3.2	4.5
54	56	Portucel	Portugal	1,839	1,527	280	147	28.8	22.2
55	57	Tembec	Canada	1,822	1,572	50	(193)	6.4	(5.5)
56	44	Sonae Industria	Portugal	1,804	2,015	(98)	(82)	(1.7)	0.6
57	63	Siam Pulp & Paper	Thailand	1,633	1,232	110	67	9.2	7.1
58	60	Verso Paper Holdings	US	1,605	1,361	(131)	106	(0.2)	(5.7)
59	55	Daiken	Japan	1,609	1,608	6	6	4.9	4.0
60	89	Duratex <sup>2</sup>	Brazil	1,559	977	266	91	39.6	25.8
61	58	Tomoku	Japan	1,556	1,461	36	28	8.7	8.2
62	66	Yuen Foong Yu Paper	Taiwan	1,544	1,189	46	55	5.7	7.2
63	53	Myllykoski	Finland	1,491	1,690	(135)	(95)	(4.4)	(1.5)
64	65	P H Glatfelter	US	1,455	1,184	54	123	17.3	28.0
65	62	Lee & Man Paper	China	1,428	1,245	236	39	23.0	7.7
66	72	Louisiana-Pacific	US	1,384	1,061	(39)	(121)	3.6	(3.4)
67	61	Clearwater Paper	US	1,373	1,250	74	182	14.0	14.7
68	70	Hansol Paper	Korea	1,350	1,067	25	35	7.8	10.0
69	68	Rayonier	US	1,315	1,169	218	313	32.3	48.6
70	73	Nampak <sup>2</sup>	South Africa	1,273	1,205	62	(42)	11.2	4.0
71	78	Cheng Loong	Taiwan	1,229	921	50	34	10.2	11.8
72	75	Billerud	Sweden	1,228	1,020	98	22	18.7	11.5
73	69	Kinnevik (Korsnas)	Sweden	1,195	1,103	2	2	17.6	17.6
74	80	Mercer International	Canada	1,195	865	114	(86)	24.9	6.6
75	71	Catalyst	Canada	1,193	1,077	(385)	(4)	(20.2)	8.6
76	83	Shan Dong Sun Paper	China	1,177	880	93	71	19.9	18.9
77	76	Moelven	Norway	1,169	1,017	27	16	6.3	4.7
78	67	Chuetsu Pulp & Paper	Japan	1,146	1,180	0	7	13.0	11.8
79	N/A	ENCE <sup>3</sup>	Spain	1,103	747	86	(216)	20.0	(6.9)
80	74	Wausau-Mosinee Paper	US	1,056	1,032	37	20	9.5	11.6
81	82	Shandong Huatai Paper	China	1,042	861	14	162	13.9	16.8
82	77	Masisa	Chile	1,017	914	72	39	17.5	21.0
83	85	Sveaskog	Sweden	967	793	286	253	19.7	16.6
84	79	The Pack	Japan	931	880	35	33	8.6	8.6
85	87	Bio Pappel (fr. Grupo Industrial Durango)	Mexico	897	763	31	118	8.9	9.1
86	93	Norbord	Canada	892	718	17	(58)	16.8	0.7
87	84	Plum Creek Timber <sup>2</sup>	US	854	808	213	236	24.0	15.1
88	97	Ballarpur Industries	India	853	645	154	115	9.3	10.6
89	81	Appleton Papers	US	850	762	(32)	23	10.4	12.1
90	95	KapStone Paper and Packaging	US	783	632	65	80	14.5	32.5
91	96	Arctic Paper	Poland	760	584	10	43	12.0	17.4
92	88	Buckeye Technologies	US	756	755	115	(65)	25.8	3.7
93	92	Schweitzer-Mauduit	US	740	720	65	35	20.2	18.5
94	91	Exacompta Clairefontaine	France	713	740	4	6	5.8	7.1
95	90	Heinzel Holding	Austria	710	905	9	128	7.3	18.6
96	N/A	Reno De Medici <sup>3</sup>	Italy	669	597	2	(10)	7.7	6.0
97	N/A	Western Forest Products <sup>3</sup>	Canada	648	511	27	(66)	7.1	(6.0)
98	99	Setra Group	Sweden	646	543	9	(41)	6.0	(3.0)
99	100	Advance Agro	Thailand	615	536	35	58	12.7	17.3
100	N/A	Interfor <sup>3</sup>	Canada	607	343	(4)	(21)	1.9	(9.6)
<b>Total</b>				<b>339,099</b>	<b>310,798</b>	<b>18,278</b>	<b>5,082</b>	<b>13.3</b>	<b>11.7</b>

Source: PricewaterhouseCoopers LLP

#### Notes

- All companies have December 31, 2010 year ends except for those listed below:  
March 31, 2010: All Japanese companies  
April 30, 2010: DS Smith  
June 30, 2010: PaperlinX, Ballarpur, Buckeye  
September 30, 2010: Sappi, Rock-Tenn
- 2009 Sales have been adjusted to exclude real estate.
- New additions to the PwC Top 100 this year.



# Survey methodology

The PricewaterhouseCoopers Global Forest, Paper & Packaging Industry Survey examines the 100 largest forest, paper and packaging products companies in the world — whether state, private, publicly owned, or a division of a larger entity — ranked by sales, provided there is sufficient public disclosure to allow meaningful analysis

The data reported is drawn from a number of sources including annual reports, websites, press releases and the companies. Information may be unaudited. There are known to be several companies, mainly privately-owned entities, that are of sufficient size to warrant inclusion in the PwC Top 100, but which have been excluded due to no or limited financial information being available. These companies include but are not limited to:

## North America

Georgia-Pacific (part of Koch Industries), Kruger, Tolko and Menasha

## Europe

Tetrapak (Sweden), SAICA (Spain), Fritz Egger and Prinzhorn Holding (both Austria), Elopak (Norway), Papierfabrik Palm (Germany), Fedrigoni Group (Italy) and Ilim Pulp (Russia)

## Asia Pacific

Asia Pulp and Paper (APP) (Indonesia and China), Asia Pacific Resources International (APRIL) (Singapore/Indonesia), and Visy Industries (Australia)

The PwC Top 100 results include only companies whose forest, paper and fibre packaging products business comprise more than 50% of total sales. Companies are grouped based on the location of their head offices. The 2009 comparative corporate data included in this Survey depends upon the data reported in the companies' 2010 annual reports. PwC takes no responsibility for the correctness of the extrapolated figures. The 2010 Japanese data is for their fiscal year ended March 31, 2010.

Return on Capital Employed (ROCE) is calculated as net income before unusual items, minority interest and interest expense, on an after-tax basis, divided by average total assets less average non-interest bearing current liabilities.

Unusual items have a significant bearing on the net income figure used for the purpose of calculating ROCE. As an example, in some cases, when reported earnings are negative, the effect of adding back unusual items results in a positive adjusted net income, and therefore a positive ROCE. Restructuring charges, discontinued operations, exceptional tax credits, impairment charges, gain on the sale of fixed assets, and accounting changes are among the items commonly treated as unusual items and therefore excluded from the ROCE calculation.

Earnings before Interest, Taxes, Depreciation and Amortization (EBITDA) is calculated as operating earnings plus depreciation and amortization.

Foreign exchange fluctuations can have a significant impact on the data presented. This Survey has directly adopted the results of companies that report in US dollars; otherwise we have translated income statement items at the 2010 and 2009 average rates for the calendar years (irrespective of year ends within 2010). Balance sheet items have been translated at the rates as of December 31, 2010 and 2009 respectively.

# 24<sup>th</sup> annual PwC Global Forest & Paper Industry Conference

The 24<sup>th</sup> annual PwC Global Forest & Paper Industry Conference, with the theme of Changing directions: Opportunities and outlook for people, products and markets, brought together close to 500 CEOs, senior executives, customers, suppliers, financial analysts, government representatives and other stakeholders in Vancouver, Canada on May 11, 2011. The conference speakers and panellists tackled the tough realities of the industry's lacklustre financial performance over the last several years, but more importantly explored some exciting new directions and opportunities. Conference delegates learned about the general global economic outlook and anticipated demand for the world's fibre resources, geopolitical risks in conducting business in many parts of the world, the rising power of China and flat to lower growth in Western markets such as North America and Europe, and the resulting realignment on forest products trade and demand.

The industry's recent sub-par financial performance and brighter near-term expectations were discussed; there was a repeated call for further industry consolidation. M&A trends included an increased number of deals with smaller values; larger deals are seen on the horizon. Increased competition for the world's fibre resources is expected from traditional and non-traditional sources. Cross-industry collaboration and partnerships are felt to be necessary for long term success, an idea

supported by several speakers.

Delegates heard recent business success stories from Fortress Paper, a producer of specialised paper products, and the multi-platform transformation of The Globe and Mail, Canada's largest national daily newspaper.

The industry was encouraged to focus on new strategies, technologies and business models, and to aggressively recruit new talent to replace an estimated 50,000 workers who will leave or retire from the Canadian industry in the next decade. Governments were encouraged to make long term commitments to support research and innovation, not just one or two years at a time. Government policy should create monetary incentives and lasting conditions to encourage business investment and innovation, not simply support the existing industry models.

The impacts of growing demand for forest products from China and India were discussed, as well as how the lower cost structures of production facilities in South America are challenging traditional market relationships. Several speakers discussed how their investments in building relationships in these countries over the last decade are now paying dividends. The impact of the stronger Euro and Canadian dollar against the US dollar were explored, and how these have altered the costs and fortunes of many producers around the globe.

CEOs from leading forest products companies had an open and honest dialogue about the future globally and locally. They discussed market successes, attracting and retaining a talented and educated workforce, fostering innovation, balancing social and business priorities for land use, opportunities and challenges with managed tree plantations, carbon sequestration, bio-fuels and engineered wood products.

The luncheon keynote speaker, the Consul General of Japan in Vancouver, Hideki Ito, made a presentation on the impacts of the recent Tohoku earthquake and subsequent tsunami in Japan. Mr. Ito also discussed Japan's current drive to fully assess the damage and provide immediate temporary housing to those most in need. He expressed his thanks to the individuals, companies and governments around the world for their continued support to the people of Japan.

The PwC Conference was part of the week-long Global Forest Products Leadership Summit 2011, a five day series of events and conferences focused on the global pulp, paper, wood products, bioenergy and fibre-based packaging industries. Organisations participating in Summit 2011 included The Pulp and Paper Products Council (PPPC), International WOOD Markets Group, the BC Bioenergy Network, and PwC.

Conference proceedings are available at [www.pwc.com/forestconf11](http://www.pwc.com/forestconf11)

Save the date for the **25<sup>th</sup> Annual PwC Global Forest & Paper Industry Conference** taking place in Vancouver, British Columbia, Canada on **May 10, 2012**.

# Publications

*PricewaterhouseCoopers Forest, Paper & Packaging practice publications are available for download from [www.pwc.com/fpp](http://www.pwc.com/fpp)*

## Global Reviews



### *Growing the Future*

There's radical change happening in the forest, paper and packaging industry. We believe several key factors will shape the sector's direction over the next two decades, including technology, fibre competition, changing industry structures and players, and regulation.

In this short report, we look at how these factors, combined with evolving value chains are redefining the possibilities for FPP companies. We consider how business models may change in response.



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

Forest, Paper and Packaging Deals 2010 reviews deal activity in the FPP industries. We examine the rationale behind deal trends and key individual deals. This year we also continue our discussion of the evolution and growth of timberland as a global asset class. We look at the year under review, the context of the preceding years, and ahead to the future direction of deal-making in the sector.



### *CEO Perspectives: Viewpoints of CEOs in the forest, paper & packaging industry worldwide (2010 edition)*

In 2009 PwC conducted its third series of in-depth interviews with CEOs in the FPP industry. We interviewed 33 executives from leading companies around the world. The objective was to learn more about executives' opinions of the state of the industry, the key issues it faces and its future direction. So how will the industry reshape itself to meet future challenges? Our study takes a look at the types of transformation needed in the industry, and elaborates on four key trends in the following discussion.



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## 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.



### *Global forest and paper industry: Net earnings summary*

PwC analysts prepare this quarterly Net Earnings Summary from financial statements issued by the companies noted. Comparing financial results with the same quarter in the previous year, each summary identifies trends in performance, looking at regional differences between Canada, the US, Europe and Rest of World.

## Technical issues



### *Forest Industry: application review of IAS 41 Agriculture: The fair value of standing timber, 2011 edition*

The application of fair value to standing timber requires a considerable degree of judgment, and the presentation of this type of valuation is of growing interest. In 2009, we published a study on how fair value was being applied by forest owning companies applying IFRS. In this 2011 study, we have reviewed the manner in which fair value is being applied, providing a follow up on the insights published in 2009 and highlighting certain observations on the difficulties, as well as similarities and differences.







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

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