

By Tim Grogan with Bruce Buckley

## Treading Water

# A Weak Recovery Checks Inflation

**N**o more federal stimulus money, no highway bill, a weak economic recovery, a stalled housing market, a non-residential building market yet to bottom out, gridlock in government, continued high unemployment—it could add up to no inflation in 2011. That is about as simple as a cost forecast can be. Inflation? Not so much. Engineering News-Record expects its Building Cost Index to increase just 1.3% next year after rising 3.6% in a difficult 2010 market. ENR projects its Construction Cost Index to increase 2.0% in 2011 following this year's 3.6% gain.

The accuracy of ENR's forecast is heavily influenced by union wage settlements, which account for 80% of the CCI and 65% of the BCI. With the economy still limping along and construction starts in a slump, there is little confidence that labor wages and benefits could improve significantly in 2011. Union settlements through 2011 will see an average increase

of 3%, according to the Construction Labor Research Council, Washington, D.C. Bob Gasperow, president of the CLRC, notes that some of those increases were settled three years ago, before the economic downturn. "Those settlements [from three years ago] are still working through the system," he says.

In light of the downturn, Gasperow

notes that short-term deals have been common. "So many one-year deals were negotiated in 2010 that 2011 will be a heavy bargaining year," he adds. Those agreements will be negotiated under the cloud of historically high unemployment, which in November was still stuck at 18.8% for construction, according to the Bureau of Labor Statistics.

Denise Gold, associate general counsel for labor and employment law for the Associated General Contractors of America, says many AGC members expect that 2011 settlements will remain consistent with 2010 levels. A year ago, ENR predicted that the skilled labor component of the BCI would increase 3.0%; it ended the year with a 3.3% gain. The labor component of the CCI was projected to increase 3.3% this year but ended 2010 with a 3.5% gain.

Next year, ENR believes wage settlements will be hard-pressed to match the 3.0% increase already agreed to in multi-

ENR's 2011 Cost Forecast			
	2010	2011	% CHG. 09-11 10-11
<b>BUILDING COST INDEX</b>	4969.92	5032.60	+3.6 +1.3
<b>SKILLED LABOR INDEX</b>	8634.23	8893.26	+3.3 +3.0
<b>WAGE, \$/HR.</b>	47.92	49.36	+3.3 +3.0
<b>CONST. COST INDEX</b>	8952.40	9127.36	+3.6 +2.0
<b>COMMON LABOR INDEX</b>	19103.29	19657.29	+3.5 +2.9
<b>WAGE, \$/HR.</b>	36.30	37.35	+3.5 +2.9
<b>MATERIALS COST INDEX</b>	2730.89	2673.54	+4.3 -2.1
<b>PORTLAND CEMENT, TON</b>	102.62	102.11	-0.9 +0.5
<b>LUMBER, 2X4, MBF</b>	396.27	390.33	-2.1 +1.5
<b>STRUCTURAL STEEL, CWT</b>	45.85	44.70	+5.5 -2.5

ENR'S COST INDEXES FORECASTED TO DECEMBER 2010; PERCENT CHANGES ARE DECEMBER VS. DECEMBER.

Materials Price Inflation Through 2012						
	2007	2008	2009	2010	2011	2012
<b>ASPHALT PAVING</b>	9.2	22.3	0.7	4.6	0.9	1.2
<b>CEMENT</b>	5.4	-0.3	-1.7	-5.3	0.3	3.9
<b>REINFORCING BARS</b>	12.3	38.6	-36.8	13.9	-2.6	9.9
<b>CONST. MACHINERY</b>	2.9	3.2	3.6	-0.3	2.6	3.2
<b>FABRICATED PIPE</b>	-1.3	7.6	5.2	11.8	1.1	3.1
<b>GYPSUM PRODUCTS</b>	-15.2	-9.8	-0.6	-2.6	-0.9	3.5
<b>LUMBER, SOFTWOOD</b>	-9.9	-8.4	-9.5	13.1	-0.4	10.8
<b>PLYWOOD</b>	2.0	-0.7	-6.3	8.4	-1.0	7.0
<b>AGGREGATES</b>	8.7	6.6	4.6	1.1	0.5	1.8
<b>SHEET-METAL WORK</b>	3.1	6.1	-2.7	-0.6	-0.8	4.1
<b>STRUCTURALS, STEEL</b>	16.4	31.3	-26.6	0.8	-2.5	3.3

SOURCE: IHS GLOBAL INSIGHT INC., NOTE: ESCALATION RATES ARE ANNUAL AVERAGES

year contracts. ENR's forecast is for the labor component of the BCI to increase 3.0% next year, while the CCI's labor component is expected at 2.9%.

The materials component of ENR's cost indexes is expected to see little inflationary pressure next year. The most common themes voiced by economist interviewed by ENR were that prices were "bottoming out, flat or trending sideways." In ENR's forecast, that translates to a 2.1% decline in the MCI, which increased 4.3% this year.

The Portland Cement Association, Skokie, Ill., forecast that cement consumption in 2011 will inch up just 1.4%, following a 27% decline in 2009 and a mere 0.3% gain this year. That will not be enough to budge prices. The forecasting firm IHS Global Insight, Washington, D.C., predicts that cement prices will increase just 0.3% next year after falling the previous three years. Overall, ENR's forecast calls for a 0.5% decline in cement prices.

Lumber prices, which experienced some volatile swings this year, are expected to be relatively calm in 2011. The composite lumber price tracked by the Bedford, Mass.-based forecasting firm RISI peaked last April at \$357 per thousand board ft, which was up 85% from the previous year. By this month, that price was back down to \$263. "After some seasonal movement we expect prices to end next year at \$260," says Robert Berg, an RISI economist. "The industry is operating at 60% capacity, and that won't get above 70% next year," he says. "It's hard to sustain price increases in that environment." ENR's forecast calls for lumber prices to decline 1.5% next year.

Steel prices will also trend sideways in 2011, says John Anton, analyst for Global Insight. He says scrap prices are very high right now. "Demand is so bad that scrap prices should come down and with it prices for structural steel." He says prices have already fallen from a peak of \$736 a ton last summer and expects prices to hit \$664 a ton by the fourth quarter of next year. ENR's forecast calls for 2.5% decline in steel prices. ■

## Builders' Construction Cost Indexes

NAME, AREA AND TYPE	OCT. 2009	JAN. 2010	APRIL 2010	JULY 2010	OCT. 2010	% CHANGE QUARTER	YEAR
<b>GENERAL-PURPOSE COST INDEXES</b>							
ENR 20-City: Construction Cost <sup>1</sup>	800.28	806.22	807.76	823.31	830.46	+0.9	+3.8
ENR 20-City: Building Cost <sup>1</sup>	704.84	710.53	712.93	726.72	732.20	+0.8	+3.9
BuRec: General Buildings <sup>2</sup>	305.00	307.00	314.00	316.00	317.00	+0.3	+3.9
FM Global: Industrial <sup>3</sup>	—	283.00	—	278.00	na	na	na
LSI, Sierra West: Material/Labor <sup>1</sup>	823.52	824.50	822.23	830.56	836.42p	+1.0	+1.8
Means: Construction Cost <sup>4</sup>	181.00	181.60	182.30	183.50	184.00	+0.3	+1.7
ECC, Edwartoski Cost Consulting <sup>5</sup>	160.05	160.55	na	na	na	na	na
<b>SELLING PRICE INDEXES—BUILDING</b>							
LSI, Sierra West: Subcontractor <sup>1</sup>	912.07	888.65	883.30	870.60	870.51p	-1.2	-4.9
Turner: General Building <sup>1</sup>	803.00	799.00	798.00	798.00	801.00	+0.4	-0.3
Rider Levett Bucknall <sup>6</sup>	142.48	141.80	142.21	142.58	142.60	0.0	+0.1
<b>SPECIAL-PURPOSE BUILDING COST INDEXES</b>							
U.S. Commerce: One-Family House <sup>7</sup>	97.20	97.80	95.70	96.00	96.70	+0.3	-0.5
U.S. Commerce: New Warehouses <sup>7</sup>	123.80	123.50	123.30	123.60	124.10	+0.4	+0.2
U.S. Commerce: New School Buildings <sup>7</sup>	130.40	131.10	132.00	131.80	131.90	+0.4	+1.2
U.S. Commerce: New Office Buildings <sup>7</sup>	112.70	112.60	112.20	112.60	112.30	-0.1	-0.4
PowerAdvocate: Powerplant <sup>8</sup>	170.60	172.20	173.90	175.50	175.60	+0.1	+2.9

<sup>1</sup>BASE: 1967=100; <sup>2</sup>BASE: 1977=100; <sup>3</sup>BASE: 1980=100; <sup>4</sup>BASE: 1993=100; <sup>5</sup>FORMERLY SMITH GROUP, 1992=100; <sup>6</sup>BASE: APRIL 2001=100; <sup>7</sup>BASE: 1992=100; <sup>8</sup>POWERPLANT FOR A 550-MW COMBINED-CYCLE FACILITY. P=PRELIMINARY REPRESENTS SEPTEMBER DATA FOR LSI.

## Construction Materials Price Movement in 2010

		APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
<b>AGGREGATES</b>	Monthly % chg.	+0.2	+0.4	-0.2	-0.1	+0.7	+0.6	-0.5
	Annual % chg.	+0.1	+0.6	+0.6	+0.6	+1.5	+1.8	+2.1
<b>ALUMINUM SHEET</b>	Monthly % chg.	+3.7	-1.3	-2.8	-1.5	+2.4	+0.9	+2.0
	Annual % chg.	+19.7	+16.6	+13.0	+9.8	+9.2	+7.7	+9.9
<b>ASPHALT PAVING</b>	Monthly % chg.	+2.1	+0.4	0.0	-0.2	-0.4	-0.3	-0.6
	Annual % chg.	+8.2	+5.8	+7.8	+6.8	+5.3	+5.5	+5.1
<b>CEMENT</b>	Monthly % chg.	-0.9	-0.7	-0.5	0.0	+0.7	-1.1	-0.4
	Annual % chg.	-7.1	-6.9	-6.1	-5.3	-4.2	-5.1	-4.9
<b>COPPER PIPE</b>	Monthly % chg.	+5.0	-5.8	-7.0	-0.2	+6.1	+5.4	+5.5
	Annual % chg.	+31.0	+21.4	+14.9	+16.5	+5.2	+5.9	+15.4
<b>DIESEL FUEL</b>	Monthly % chg.	+6.4	-1.8	-5.9	-1.5	+5.8	-1.5	+7.2
	Annual % chg.	+43.4	+41.7	+16.1	+26.4	+13.2	+17.8	+20.3
<b>DUCTILE IRON PIPE</b>	Monthly % chg.	+1.3	+2.4	0.0	+1.1	-1.8	+0.9	+1.7
	Annual % chg.	+7.4	+11.5	+9.2	+10.8	+6.6	+7.3	+8.4
<b>FABRICATED STEEL</b>	Monthly % chg.	-0.1	-0.1	-0.5	+0.5	+0.1	+0.2	-0.8
	Annual % chg.	-6.7	-5.7	-4.6	-2.9	-2.3	-1.0	-0.8
<b>GYPSUM PRODUCTS</b>	Monthly % chg.	+2.2	+2.6	+3.3	-3.6	-0.1	-3.1	+0.6
	Annual % chg.	-5.8	-2.1	+2.0	+0.6	+0.4	-1.8	+0.5
<b>LUMBER, SOFTWOOD</b>	Monthly % chg.	+5.2	+2.7	-9.6	-1.9	-3.1	-1.3	-1.1
	Annual % chg.	+28.9	+34.5	+20.1	+10.1	+6.8	+4.7	+4.9
<b>PLYWOOD</b>	Monthly % chg.	+8.7	+4.1	-4.8	-0.9	-3.6	-1.9	-1.4
	Annual % chg.	+16.8	+21.2	+16.2	+13.3	+8.3	+4.7	+5.1
<b>PVC PRODUCTS</b>	Monthly % chg.	+0.7	0.0	-0.2	-0.5	-0.3	-0.2	+0.7
	Annual % chg.	+3.6	+3.3	+3.3	+2.7	+2.9	+1.6	+2.0
<b>READY-MIX CONCRETE</b>	Monthly % chg.	-0.8	-0.1	0.0	-0.5	+0.5	+0.1	-0.1
	Annual % chg.	-2.8	-2.8	-2.8	-3.2	-2.0	-1.7	-1.0
<b>SHEET METAL</b>	Monthly % chg.	+0.6	+0.4	-0.2	-0.1	+0.3	-0.1	+0.1
	Annual % chg.	0.0	+0.8	+1.2	+0.7	+1.0	+1.1	+0.3

SOURCE: BUREAU OF LABOR STATISTICS

By Gary J. Tulacz

# Heads of Major Firms Believe Market Is Nearing Stability

Industry executives' consensus on the prospects for recovery: maybe not now, but soon

Maybe it is the gains on Wall Street. Maybe it is the recent midterm elections. Maybe it is the general optimism of the construction industry at work. Whatever the reason, major contractors, design firms and subcontractors are feeling decidedly less pessimistic about construction market prospects than they did just three months ago, according to the ENR Construction Industry Confidence Index survey for the fourth quarter of 2010.

The ENR Construction Industry Confidence Index (CICI) for the fourth quarter of 2010 spiked to 43 on a scale of 100 from 32 in the third quarter (ENR 9/27 p. 33). An index of 50 would mean a stable market. The 756 executives of large construction and design firms responding

to the survey believe that the market is moving out of free fall and may soon be stable.

The CICI measures executives sentiment about the current market and projections for where it will be in the next three to six months and over a 12- to 18-month period.

The index is based on responses to surveys sent to more than 3,000 U.S. firms on ENR's lists of the leading contractors, subcontractors and design firms. The current index is based on a survey conducted from Nov. 23 to Dec. 13.

This quarter, 46% of all respondents say the market is still in decline, down from 63% in last quarter's survey. Design



firms continue to be more optimistic about a turnaround in the near term than general contractors or subcontractors (see chart, p. 55).

Applying the CICI formula to individual market sectors, respondents felt more optimistic in all markets except for trans-

portation, which remained unchanged at a level of 50. Markets in which respondents see growth either currently or in the near future include health care, rated at 66 on the CICI scale, higher education (55), petroleum (59), power (67), water/sewer/waste (57), and hazardous waste (56).

Another survey that sees an increase in

## Outlook for Individual Sectors by Firms Working in Those Markets

Market	No. of Firms	Currently (%)			3-6 Months (%)			12-18 Months (%)		
		Declining Activity	Stable Activity	Improving Activity	Declining Activity	Stable Activity	Improving Activity	Declining Activity	Stable Activity	Improving Activity
Commercial Offices	526	71	27	3	48	46	7	14	52	34
Distribution/Warehouse	293	54	41	6	35	52	13	12	49	39
Education K-12	406	32	58	10	27	54	19	13	50	37
Entertainment	205	48	43	9	33	56	12	14	57	29
Health Care	475	14	56	31	8	49	43	3	34	63
Higher Education	485	21	62	16	17	54	28	6	45	48
Hotels	332	52	39	9	34	51	15	13	48	39
Multi-Unit Residential	273	39	44	17	26	45	29	7	45	48
Retail	388	57	36	7	40	44	16	12	48	40
Industrial/Manufacturing	373	36	49	16	22	52	25	8	41	51
Transportation	259	30	57	13	24	49	27	9	42	49
Water, Sewer and Waste	243	21	58	21	14	56	30	6	44	49
Power	181	15	53	31	8	43	49	3	22	75
Petroleum	92	20	65	15	7	62	32	3	33	64
Environmental/Haz. Waste	103	23	59	17	12	58	30	5	40	55

SOURCE: ENR FIGURES MAY NOT ADD UP TO 100% DUE TO ROUNDING.

industry optimism is the most recent CONFINDEX survey, which is about to be released by the Construction Financial Management Association, Princeton, N.J. CFMA polls 200 chief financial officers from general contractors, subcontractors and heavy and civil contractors. “Our CONFINDEX went from 106 to 117 in the fourth quarter,” says Brian Summers, CFMA chief operating officer.

### Timing Is Everything

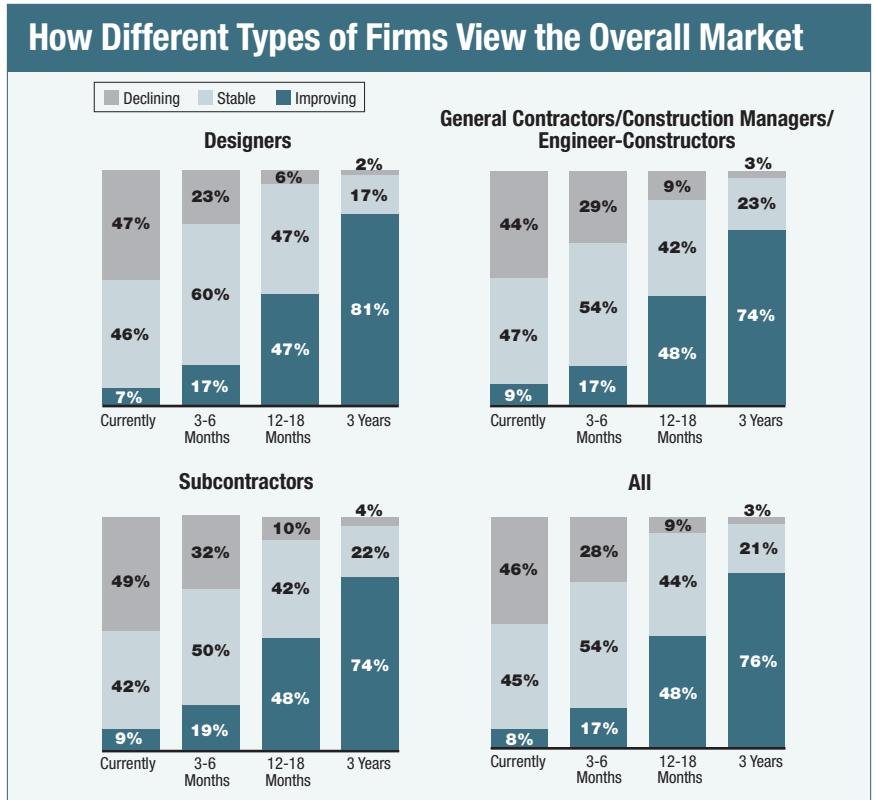
Like ENR’s CICI, CFMA’s CONFINDEX dropped in the third quarter, only to rebound strongly in the fourth quarter. “Part of this drop may have been the timing of the survey responses,” says Summers. He notes that both the CICI and CONFINDEX surveys were collected in late August, during a plunge in stock prices and concerns over economic fundamentals, which may account for both indexes’ plunge last quarter. “Wall Street in not a reflection of the construction market, but falling stock prices have a psychological effect on people,” he says.

The CONFINDEX is broken down into four indices. The strongest rise in optimism concerned business conditions, which surged from 110 to 129 from a scale of 200, indicating the belief that the market is ready for a turnaround. However, the survey’s “financial-conditions” index inched up to 105 from 101. The results suggest industry CFOs believe financing may still be a problem in 2011.

CICI survey respondents are also worried about project financing. ENR once again asked about client access to capital for project financing. In the fourth quarter, 34.5% of respondents said the credit markets continued to tighten for construction projects over the past six months, while 51.2% said the availability of credit was unchanged during that period. While still troubling, these figures are an improvement over the last quarter when 45.2% respondents said the credit market was continuing to tighten.

### Post-Election Hangover

The CICI survey also asked industry ex-



ecutives about the potential impact of the congressional midterm elections. Of the 756 respondents, 401 (53.0%) thought the election would be good for the overall economy, while 64 (8.5%) said it would be bad, and 160 (21.2%) did not believe it would have any impact. When asked about the election’s impact on the construction industry, 40.5% said the industry would benefit, while 12.2% said the impact would be bad; 26.5% said it would have no impact.

The favorable response to the midterm elections may have buoyed industry confidence a bit. However, the election may be a double-edged sword. “There are many in the industry who believe that gridlock in Washington [with the Republicans now a majority in the House] is a good thing, but gridlock may hurt companies in the infrastructure sector that are hoping for additional federal funds for sectors like transportation, water and sewer work,” says Anirban Basu, CEO of Baltimore-based economic consultant Sage Policy Group Inc. and an economic

advisor to CFMA. He says partisan politics may further stall bills such as the federal transportation reauthorization bill.

Many CICI participants continue to worry about inflation. In this quarter, 52.1% of respondents said they had seen upward price pressure in at least some materials or equipment. Copper and steel were the most frequently mentioned items experiencing price increases, along with concrete, drywall, fuel and petroleum-based products.

“These findings are consistent with the November [Producer Price Index] report,” which rose by 0.8%, says Basu. He says that, while materials prices have been creeping up recently, there continues to be heavy competition for work, leading to a further squeeze on profit margins.

Summers notes that there is another element for construction firms to consider: staff salaries. “Many top staff people, including CFOs, have gone without raises for two years or more. Now that the market is beginning to brighten a little, they will expect increases.” ■

By Mike Larson

# Why Few Are Debating the New Federal Fuel Economy Rules

Getting stakeholders to agree on a clean-air rule is no easy feat. So it may come as a surprise that the equipment industry is getting behind new federal greenhouse-gas targets for big trucks.

One reason for the lack of debate is economics. “The new, more-efficient trucks will run more cleanly, and their savings at the fuel pump will far outweigh the cost of the technology needed to create those savings,” says Luke Tonachel, a senior analyst at the Natural Resources Defense Council.

Another reason? The needed technology already exists. “The trucking industry supports fuel economy standards that are both economically and technologically feasible as one of several preferred methods in reducing its carbon footprint,” says Brandon Borgna, spokesman for the American Trucking Association.

The U.S. Environmental Protection Agency and National Highway Transportation Safety Administration jointly proposed the new rules in October, targeting trucks in Class 2b through Class 8—everything from heavy-duty pickups to tractor-trailers. These categories were previously unregulated in terms of fuel economy. The regulation would divide the trucks into three groups: Heavy Duty pickups and utility vans, vocational trucks

(such as dump trucks and concrete mixers) and combination semi-trailers.

The targets for all these groups focus on fuel economy, which has a direct impact on greenhouse gas emissions, according to environmental experts. The cuts will kick in with the 2014 model year and run through 2018. They are seen as just the first step in improving fuel economy and reducing greenhouse gas emissions from these kinds of heavy vehicles.

The targets would cut heavy-duty pickup and van CO2 emissions by 10% for gasoline engines and 15% for diesels. Vocational trucks would emit 10% less CO2 while increasing fuel economy 20%. Combination trucks would emit 20% less CO2 while using 20% less fuel.

## Looking for Payback

Regulators estimate the program would cost \$7.7 billion initially but produce \$49 billion in benefits for a net gain of \$41 billion over the lifetime of the model-year 2014 to 2018 vehicles. The new technology the trucks will need in order to meet the standards would increase the cost of a typical heavy-duty pickup truck by an estimated 4%, the proposal says. For a typical vocational vehicle, the cost bump is an estimated 1% and about 6% more for a typical combination tractor-trailer truck. How those figures will translate to retail prices is a guess at this point.

Despite the anticipated cost increases, the rule could provide payback. Expected fuel efficiency gains ranging from 7% to 20% would pay back most new-truck buyers in one to two years. Buyers whose mileage is considered below daily averages would see payback in four to five years, according to the proposal.

Kevin Healy, equipment procurement manager for contractor Skanska USA Civil Northeast Inc., Whitestone, N.Y.,



**PAYOFF** Improved fuel efficiency will help defray the cost of meeting new environmental standards.

agrees with the rule but would like to see it simplified. “We need to clean up the air, but the rules for doing it should be simpler and clearer,” he says.

Both NRDC and ATA would like to see further steps. “One of the largest opportunities for more savings is to improve trailers, which are not included in this proposal,” says NRDC’s Tonachel. “The technology to boost fuel efficiency with aerodynamic improvements and easier-rolling tires already exists, so it wouldn’t take a lot of lead time for manufacturers to employ it.”

Borgna says that future rules should concentrate on a 65-mph national speed limit for all vehicles, laws allowing more-productive truck weights and combinations that safely improve fuel economy, and improvements to the Interstate highway system that will reduce congestion and cut truck idling time.

The proposed regulation is in the public comment stage until January 31. After that, EPA and NHTSA will analyze the public input, make any adjustments the agencies feel is warranted, and then make the rule final. ■

## Estimated Cost Per Truck to Comply With New Standards

(2008 dollars) Year	HD Pickups and Vans	Vocational	Semi-Tractors
2014	\$225	\$374	\$5,896
2015	\$292	\$367	\$5,733
2016	\$567	\$400	\$5,480
2017	\$848	\$392	\$6,150
2018	\$1,411	\$359	\$5,901
2020	\$1,406	\$343	\$5,661

SOURCE: EPA, NHTSA, ESTIMATED COST PER VEHICLE FOR PRODUCERS IN 2008 DOLLARS, CLASS 2B THROUGH CLASS 8.

# Chinese Demand Props Up Prices

Exports put a 12% premium on western spruce prices despite a weak domestic market

Contractors on the West Coast may be scratching their heads, asking why lumber prices are rising when they are falling every where else. The answer is China. The Chinese have more than doubled their purchases of lumber from Canada and the U.S. within the last year, according to industry specialist Random Lengths, Eugene, Ore. That demand drives a price disparity in the Pacific Northwest, especially for spruce products, and prices in the rest of the country.

“Between 2000 and 2009, western spruce 2 X 4 prices averaged about 12% less than our national composite price,” says Robert Berg, an economist with the Bedford, Mass.-based forecasting firm RISI. “It’s now selling at parity to the composite price, which is a 12% premium, and that strength is really tied to the Chinese market.”

Nationwide, RISI’s composite price fell from a peak of \$357 per thousand board ft last April to \$263 this month. Berg predicts prices will end 2011 at about where they are now (see p. 22).

Prices for lumber and logs from the western United States and Canada have jumped more than 25% since July of this year due to Chinese presence in the market, says Random Lengths.

“We have had domestic builders and industrial users cancel and postpone projects because of the sharp increases in lumber costs since July,” an executive with a large U.S. lumber distributor said. “Prices could increase another 8% to 10% within the next few months—who knows? People don’t realize how much product is leaving the continent.”

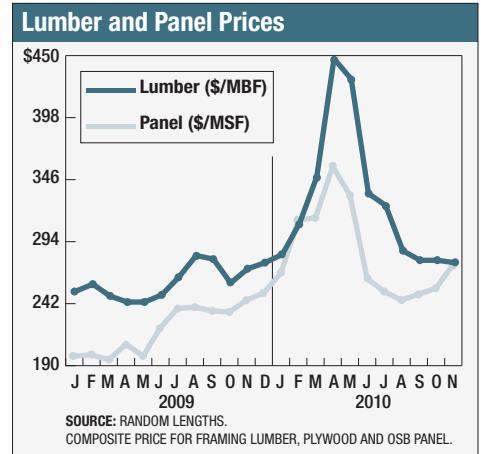
China’s North American purchases have focused on lower grades of lumber, which are destined for use in concrete forms for high-rise construction. But recent purchasing trends have seen more

higher-grade lumber included in the mix, says Random Lengths. Logs are destined for China’s domestic mills to supply the country’s enormous market for composites, plywood and veneers as well as lumber.

The seeds for the unexpected rise in western lumber and logs were sown in 2007 when Russia imposed an export tax on logs. The tax started at 6.5% but quickly increased to 25% by mid-2008. Chinese buyers of wood fiber then turned to North American forest products, made doubly attractive by low prices and a weak dollar. China’s impact on North American prices is further amplified by the recession, which drove production cuts at West Coast mills.

China’s potential fiber-supply gap (the difference between total demand and total domestic supply) is projected to reach approximately 150 million cubic meters by 2015, according to a report by International Wood Markets Group of Vancouver, B.C. That volume is more than the entire Canadian timber harvest in 2009—a strong indication that China’s wood imports must continue to rise in the short- to medium-term period to match with projected consumption.

“China is expected to be the fastest-growing lumber producer, importer and consumer nation in the world over the next half-decade,” says Gerry Van Leeuwen, vice president of International Wood Markets Group. He forecasts an average annual increase in Chinese lumber consumption of more than three billion board ft per year and says that meeting the needs of its growing middle class will require huge raw material imports over the next five years. This fast-paced consumption growth is expected to have a significant impact on global wood demand, especially as the major global economies begin to



emerge from the current recession.

A key question is whether higher North American lumber prices could cause Chinese buyers to scale back their purchases from U.S. and Canadian mills. This does not appear to be the case, according to Random Lengths. Concerns that the Chinese would pull back when mill prices for West Coast hemlock hit \$260 per thousand board ft several weeks ago were overcome when the price blew through that level due to new orders from China.

Russia now is now considering dropping the log export tax as that country moves toward meeting World Trade Organization membership requirements. Thanks to China’s soaring demand, the impact of that move would probably not be felt until 2012, with little downward price movement expected.

Prices for eastern U.S. pine may be starting to feel the effects of Chinese buying as prices for western Ponderosa Pine have risen.

Trucks and containers in western ports are also in short supply to move Chinese purchases from the producers to the ports. This has led to an increase of \$10 per thousand board feet for lumber deliveries from the northwest to California. ■

By Peter Reina with Tim Grogan

# Recession Relinquishes Grip On Global Construction Costs

Costs continue to fall in six countries with biggest declines in Eastern Europe

The global recession's vise grip on construction costs is starting to loosen in several countries, according to the London-based international project and cost-management firm Gardiner & Theobald Inc. The nineteenth annual survey of costs is conducted exclusively for Engineering News-Record. G&T surveys its 51 offices and affiliates worldwide.

Of the 28 countries reporting building cost inflation through 2010, all but two saw either a bump in inflation or an easing in de-escalation. Eastern Europe appears to be the hardest hit by the global recession, with four of five countries reporting declining costs for the second consecutive year. However, the declines were less severe, averaging 7.3% this year compared to a 12.6% decline during 2009.

In western Europe, building costs continued to decline in Ireland and the United Kingdom, but less sharply than

the previous year. Not counting Portugal, which reported a whopping 13% jump in building costs, the average inflation rate for countries reporting increases rose to 2.2% from 1.1% last year.

In other areas of the world, inflation also started to make a modest comeback from the pounding it took from the recession in 2009 (see Asia story, p. 62). Building costs in Egypt bounced back 8.8%,

Building Cost Forecast 2011	
BRAZIL: São Paulo	6.6
BULGARIA: Sofia	-3.0
DENMARK: Copenhagen	0.4
EGYPT: Alexandria	8.1
FINLAND: Helsinki	1.5
FRANCE: Paris	2.3
HUNGARY: Budapest	1.0
INDIA: New Delhi	6.3
IRELAND: Dublin	-1.2
ISRAEL: Tel Aviv	5.5
ITALY: Milan	1.6
THE NETHERLANDS: Amsterdam	2.1
NORWAY: Oslo	1.4
ROMANIA: Bucharest	10.3
SOUTH AFRICA: Various	5.7
SWEDEN: Stockholm	5.8
TURKEY: Ankara	9.3

SOURCE: GARDINER & THEOBALD INC. NOTE: RATES ARE ANNUAL CHANGE FOR BUILDING TENDER PRICE INFLATION.

Building Inflation	PERCENT CHANGE							
	2003	2004	2005	2006	2007	2008	2009	2010
<b>EASTERN EUROPE</b>								
BULGARIA: Sofia	3.4	5.3	2.4	2.3	35.1	28.5	-25.4	-5.0
CROATIA: Zagreb	2.2	2.7	2.2	3.0	5.0	6.5	-15.0	—
CZECH REPUBLIC: Prague	2.2	2.8	1.9	2.9	4.1	4.5	-15.0	-10.0
HUNGARY: Budapest	-0.6	5.3	7.1	8.1	6.0	2.2	-4.5	-5.0
POLAND: Warsaw	18.6	9.0	7.0	20.0	12.0	8.0	—	—
ROMANIA: Bucharest	-3.4	15.0	16.9	19.7	7.1	-2.6	-4.7	2.2
SLOVAKIA: Bratislava	2.3	8.0	2.5	3.5	4.9	3.4	-11.1	-9.0
<b>WESTERN EUROPE</b>								
FINLAND: Helsinki	1.5	-0.2	2.1	4.2	11.2	0.0	-1.3	1.7
FRANCE: Paris	3.1	6.2	2.6	5.3	4.0	4.0	0.8	0.6
GERMANY: Berlin	0.1	1.8	0.5	3.3	5.9	2.7	0.3	1.2
IRELAND: Dublin	-0.6	7.8	3.8	4.8	-4.3	-10.4	-17.1	-8.4
ITALY: Milan	1.8	4.5	4.3	1.6	2.4	3.1	-4.6	1.6
THE NETHERLANDS: Amsterdam	1.3	3.2	0.6	6.0	7.2	4.0	-2.4	1.4
NORWAY: Oslo	2.1	4.0	2.9	4.4	4.8	3.3	0.5	2.4
PORTUGAL: Lisbon	3.4	15.0	16.9	19.7	7.1	-3.1	2.1	13.0
SPAIN: Barcelona	3.3	2.4	3.9	3.8	3.6	1.4	0.7	2.1
SWEDEN: Stockholm	2.7	4.4	3.4	6.6	5.4	4.4	2.1	6.2
SWITZERLAND: Zurich	-2.1	1.6	1.1	3.3	4.2	3.9	-1.1	—
UNITED KINGDOM: London	4.5	3.4	5.8	5.5	5.9	5.8	-8.6	-4.3
<b>MIDDLE EAST/AFRICA/ASIA/SOUTH AND NORTH AMERICA</b>								
ARGENTINA: Buenos Aires	21.2	25.0	10.0	23.6	21.8	20.8	15.0	20.0
AUSTRALIA: Melbourne	5.0	4.0	3.1	3.0	3.6	4.2	—	—
BRAZIL: São Paulo	14.4	11.3	6.5	5.0	6.4	11.5	3.6	7.8
CHINA: Shanghai	0.1	0.2	-4.9	0.2	7.0	7.4	-3.4	1.4
Hong Kong	2.7	2.6	2.6	5.0	11.9	16.0	-3.7	4.8
EGYPT: Alexandria	7.6	25.4	10.1	26.0	30.0	23.0	-25.0	8.8
INDIA: New Delhi	3.8	6.7	8.3	6.2	18.6	15.7	13.6	11.9
ISRAEL: Tel Aviv	2.4	4.9	5.9	3.5	3.1	3.3	0.0	3.9
JAPAN: Tokyo	3.5	1.9	-2.9	2.0	2.3	0.1	-0.7	2.3
LEBANON: Beirut	4.8	29.4	-4.5	2.7	11.0	12.2	7.9	—
NEW ZEALAND: Auckland	1.1	10.0	3.1	5.8	4.4	5.2	—	—
SOUTH AFRICA: Various	2.5	18.1	14.3	6.8	7.3	13.1	1.7	7.4
SRI LANKA: Colombo	0.0	12.1	32.4	7.5	19.2	19.5	10.0	2.1
TURKEY: Ankara	34.9	20.0	12.0	8.0	9.8	7.8	0.6	7.9
USA: New York City	3.1	11.0	8.1	11.7	7.5	6.9	-11.7	0.0

SOURCE: GARDINER & THEOBALD INC. NOTE: RATES ARE ANNUAL CHANGE FOR BUILDING TENDER PRICE INFLATION.

after falling 25% last year. Cost in China and Japan also increased again, after falling in 2009. In New York City, building costs tracked by G&T held steady this year, following 2009's 11.7% decline.

### Euro Crisis

European construction is now a mixed bag, with some countries experiencing growth while others struggle to avert economic disaster. However, currency turmoil in the euro zone, caused by unsustainable government debt in some countries, is having little or no impact on construction prices, according to cost consultants in the region.

The Irish Republic's recent bailout by European Union countries and the International Monetary Fund has created great uncertainty over construction prospects, says Kevin James of G&T in Dublin.

"Everyone is waiting" for the impact of the "unprecedented" \$20-billion public spending cuts over the next four years, announced by the government last month, says James. Already, "infrastructure spending is all but gone," he adds.

Contractors are bidding sub-economic prices to keep going. Sales are "down dramatically," adds James. "Financial robustness of contractors is more important to some clients than the lowest price."

Across the Irish Sea, the U.K.'s construction market "seems to be bumping along the bottom still," says Gavin Murgatroyd, a G&T partner in London. Prices will be stable to negative in the first half of 2011 and are expected to rise in the second half, he forecasts.

Underlying inflationary pressures from rising commodity prices have "not really fed through yet," adds Murgatroyd. That's because contractors are bidding so keenly that "they are going into negative margins," he explains.

In continental Europe, the construction market is generally slow, with some exceptions. German construction prices currently are rising, says Jürgen Bartels, a senior project manager with G&T in Berlin.

"Every company has a lot [of work] to do," explains Bartels. Market conditions

are similar in eastern and western Germany, but demand is hotter in larger cities, such as Hamburg and Munich, he adds.

In Poland, with public finances in relatively good order, "there is a lot of infrastructure work taking place [with] a lot of the money coming from the European Union," says Jan Holyst, an analyst at G&T in Warsaw.

However, infrastructure work fails to compensate for severely depressed building-sector demand, adds Holyst. Polish

bid levels "are very competitive at the moment," he says. But with "glimpses of things maybe starting to pick up," conditions are better than they were a year ago, he adds.

"[The French] have not really had a year of recession," says G&T's Chris Gilmore in Paris. "Government spending, which has always been the motor of the general construction market, has been reasonably resilient," he adds.

Nevertheless, competition is stiff, with bid prices "in the region of 7.5% to 10%

## World Labor Rates

COUNTRY	BASIC RATES (\$/HR)			TOTAL BILLING RATE (\$/HR)		
	UNSKILLED	APPRENTICE	SKILLED	UNSKILLED	APPRENTICE	SKILLED
<b>EASTERN EUROPE</b>						
<b>CROATIA:</b> Zagreb	3.61	5.48	7.21	6.12	9.31	12.26
<b>CZECH REPUBLIC:</b> Prague	6.56	15.75	27.57	13.13	26.26	44.64
<b>HUNGARY:</b> Budapest	3.84	7.73	14.69	6.64	13.74	16.40
<b>POLAND:</b> Warsaw	5.55	5.88	9.79	8.16	8.49	14.69
<b>ROMANIA:</b> Bucharest	2.02	3.25	4.98	3.06	4.98	6.74
<b>SLOVAKIA:</b> Bratislava	9.07	13.62	18.55	13.07	18.16	26.66
<b>WESTERN EUROPE</b>						
<b>CYPRUS:</b> Nicosia	10.41	11.33	12.52	18.55	19.77	22.01
<b>FINLAND:</b> Helsinki	14.76	19.26	23.85	25.05	32.68	40.47
<b>GERMANY:</b> Berlin	14.36	21.35	24.52	24.06	36.59	42.56
<b>GREECE:</b> Athens	8.57	9.88	12.52	14.49	16.47	21.08
<b>IRELAND:</b> Dublin	19.61	22.31	24.51	35.50	40.55	44.55
<b>ITALY:</b> Milan	20.75	23.52	26.35	38.74	42.69	45.72
<b>NETHERLANDS:</b> Amsterdam	39.39	45.97	52.56	43.48	50.07	56.66
<b>NORWAY:</b> Oslo	21.45	30.85	39.60	53.79	63.85	69.79
<b>SPAIN:</b> Barcelona	28.99	28.99	30.31	32.94	34.26	38.21
<b>SWEDEN:</b> Stockholm	27.62	—	28.78	54.23	—	56.40
<b>UNITED KINGDOM:</b> London	12.39	14.36	16.70	15.85	18.37	22.29
<b>MIDDLE EAST/AFRICA/ASIA</b>						
<b>CHINA:</b> Shanghai	1.16	1.40	1.65	1.98	2.39	2.84
Hong Kong	9.26	—	14.80	10.68	—	17.11
<b>INDIA:</b> New Delhi	0.41	0.55	0.69	0.55	0.69	0.83
<b>INDONESIA:</b> Jakarta	1.05	1.16	1.33	1.47	1.64	1.89
<b>ISRAEL:</b> Tel Aviv	12.98	—	15.19	16.57	—	19.88
<b>JAPAN:</b> Tokyo	20.61	25.02	28.59	30.97	37.76	43.60
<b>QATAR:</b> Doha	1.92	2.06	2.47	2.34	2.61	2.75
<b>SOUTH AFRICA:</b> Durban	11.94	18.12	32.61	14.57	22.10	39.78
<b>SRI LANKA:</b> Colombo	0.70	0.82	0.94	0.84	0.99	1.13
<b>TURKEY:</b> Ankara	4.97	5.63	5.96	6.62	7.28	8.28
<b>U.A.E.:</b> Dubai	1.09	1.36	2.18	2.18	2.72	4.36
<b>NORTH AND SOUTH AMERICA</b>						
<b>ARGENTINA:</b> Buenos Aires	11.78	12.81	13.91	24.75	26.91	29.22
<b>BRAZIL:</b> São Paulo	2.28	2.82	4.81	6.27	7.77	13.23
<b>CAYMAN ISLANDS:</b> George Town	21.93	30.07	45.91	24.15	32.17	52.46
<b>U.S.:</b> New York City	53.00	65.00	74.00	76.00	90.00	112.00
Los Angeles	34.00	42.00	53.00	54.00	68.00	85.00
Seattle	36.40	44.84	51.39	42.22	51.57	59.10

SOURCE: GARDINER & THEOBALD INC.

NOTE: RATES FOR TOTAL BILLING INCLUDE GUARANTEED OVERTIME, STATUTORY AND INSURANCE CONTRIBUTIONS AND IMPORTATION OF LABOR. RATES ARE BASED UPON A STANDARD WORK WEEK, WHICH VARIES.

below budget,” says Gilmore. Large contractors are bidding low to “cover their overheads,” he adds. Professionals’ fees generally are increasing slightly but falling substantially in the private sector.

Sweden is also one of Europe’s better economic performers, says Anders Kivijarvi, chief executive of Stockholm-based cost consultant Bygganalys A.B. But “overall we had a decrease in the [construction] market in 2009 and a small de-

crease this year as well,” he adds.

The decline in Swedish residential construction has obscured the rise in publicly funded infrastructure work, adds Kivijarvi. But weak demand “has not had a big effect on costs because we are short of resources,” he adds.

With the notable exception of Poland, construction market conditions across Eastern Europe are tough. Hungary’s construction market, for example, remains

“very depressed,” says Jim McDaid in G&T’s Budapest office. Few commercial building jobs are going forward, he adds. At the same time, residential construction is being hit by a wave of mortgage defaults.

Construction prices have dropped since 2008 but now are steadying, says McDaid. “Everybody has stripped out all the fat, all the profit and all the overhead that they can.” ■

International Commercial and Industrial Building Costs												
	OFFICE			INDUSTRIAL			BUSINESS PARK			HOTEL		
	\$/SQ FT		FLOOR	\$/SQ FT		FLOOR	\$/SQ FT		FLOOR	\$/SQ FT		FLOOR
LOW	HIGH	LOW		HIGH	LOW		HIGH	LOW		HIGH		
<b>EASTERN EUROPE</b>												
<b>BULGARIA:</b> Sofia	135	135	6	51	71	1	116	128	7	110	152	10
<b>CROATIA:</b> Zagrab	97	141	20	46	64	1	78	98	1	122	183	7
<b>CZECH REPUBLIC:</b> Prague	90	137	6	49	85	1	88	132	6	117	220	8
<b>HUNGARY:</b> Budapest	89	130	7	54	67	1	79	97	—	166	299	5
<b>POLAND:</b> Warsaw	102	144	—	55	76	—	—	—	—	135	174	—
<b>ROMANIA:</b> Bucharest	100	129	15	48	52	1	80	98	4	153	226	7
<b>SLOVAKIA:</b> Bratislava	92	132	10	49	82	1	82	110	5	116	212	7
<b>WESTERN EUROPE</b>												
<b>CYPRUS:</b> Nicosia	147	245	—	110	184	—	122	196	—	220	282	—
<b>FINLAND:</b> Helsinki	189	238	5	105	131	1	166	208	5	239	275	7
<b>DENMARK:</b> Copenhagen	236	295	5	214	268	4	216	270	2	269	253	10
<b>GERMANY:</b> Berlin	201	279	5	67	134	1	147	209	4	202	336	6
<b>GREECE:</b> Athens	147	294	—	86	165	—	147	220	—	245	367	—
<b>IRELAND:</b> Dublin	196	257	5	84	122	1	80	110	2	220	343	6
<b>ITALY:</b> Milan	192	318	—	88	212	—	257	379	—	273	404	—
<b>NETHERLAND:</b> Amsterdam	110	163	—	104	115	—	98	107	—	178	196	—
<b>NORWAY:</b> Oslo	224	368	—	107	236	—	196	307	—	337	460	—
<b>SPAIN:</b> Barcelona	150	239	10	77	138	—	132	214	—	220	312	—
<b>SWEDEN:</b> Stockholm	242	289	3	128	134	1	195	275	1	302	363	3
<b>UNITED KINGDOM:</b> London	175	321	12	37	73	1	110	146	3	212	292	8
<b>MIDDLE EAST/AFRICA/ASIA</b>												
<b>CHINA:</b> Shanghai	86	128	35	45	77	1	—	—	—	145	186	25
Hong Kong	171	234	—	100	151	—	—	—	—	265	322	—
<b>INDIA:</b> New Delhi	72	103	10	41	62	2	72	113	5	72	92	15
<b>INDONESIA:</b> Jakarta	62	88	—	50	55	—	50	55	—	82	100	—
<b>JAPAN:</b> Tokyo	276	364	15	104	199	1	—	—	10	418	554	20
<b>LEBANON:</b> Beirut	92	116	14	63	76	1	82	105	4	193	232	18
<b>QATAR:</b> Doha	153	179	30	96	108	—	166	191	—	217	255	20
<b>SOUTH AFRICA:</b> Durban	81	123	—	36	71	—	—	—	—	121	169	—
<b>SRILANKA:</b> Colombo	36	41	8	25	27	1	28	34	2	32	35	14
<b>TURKEY:</b> Ankara	9	12	15	4	7	3	7	8	5	8	11	10
<b>U.A.E.:</b> Dubai	96	132	20	71	104	—	91	126	—	228	304	—
<b>NORTH AND SOUTH AMERICA</b>												
<b>ARGENTINA:</b> Buenos Aires	—	—	—	37	80	1	—	—	—	102	115	10
<b>BRAZIL:</b> São Paulo	68	153	10	57	74	1	65	153	3	98	131	20
<b>CAYMAN ISLANDS:</b> George Town	252	375	6	76	95	1	—	—	—	252	314	5
<b>U.S.:</b> New York City	279	650	45	93	214	—	139	279	—	269	595	40
Los Angeles	274	534	15	102	177	1	153	348	1	251	548	25
Seattle	255	715	45	105	230	—	165	350	—	235	510	40

SOURCE: GARDINER & THEOBOLD INC., NEW YORK CITY, LONDON WORLDWIDE.  
 NOTE: OFFICES INCLUDE RAISED FLOORS, CARPETING, SUSPENDED CEILINGS, HVAC, LIGHTING AND POWER, BUT EXCLUDE DRYWALL. OFFICE BUILDING HEIGHT IS TYPICAL OF A MAJOR CITY IN THE COUNTRY. INDUSTRIAL BUILDING IS FOR A LARGE, SINGLE-STORY UNIT WITH A STEEL FRAME AND ALUMINUM CLADDING. BUSINESS PARK IS TWO-STORY, WITH A FIRST-FLOOR WAREHOUSE AND SECOND-FLOOR SUITABLE FOR HIGH-TECH WORK. ■

## International Materials Prices

	REBAR \$/TON	STEEL \$/TON	CEMENT \$/TON	CONCRETE \$/TON	AGGREGATE \$/TON	SAND \$/TON	PLASTER \$/CU YD	LUMBER \$/CU YD	BRICKS \$1,000	BLOCKS \$/CU YD	GLASS \$/CU YD
<b>EASTERN EUROPE</b>											
<b>BULGARIA:</b> Sofia	552.00	751.00	87.00	55.00	11.00	21.00	350.00	196.00	216.00	11.00	6.00
<b>CZECH REPUBLIC:</b> Prague	1,050.00	1,575.00	126.00	96.00	18.00	26.00	147.00	289.00	394.00	22.00	23.00
<b>CROATIA:</b> Zagreb	1,155.00	—	109.00	64.00	21.00	33.00	—	181.00	528.00	7.00	18.00
<b>HUNGARY:</b> Budapest	730.00	1,616.00	114.00	68.00	15.00	14.00	191.00	203.00	270.00	22.00	31.00
<b>POLAND:</b> Warsaw	702.00	800.00	134.00	62.00	24.00	11.00	232.00	200.00	359.00	18.00	23.00
<b>ROMANIA:</b> Bucharest	1,094.00	1,943.00	126.00	58.00	16.00	13.00	184.00	98.00	415.00	35.00	31.00
<b>SLOVAKIA:</b> Bratislava	1,048.00	1,131.00	142.00	77.00	13.00	16.00	166.00	212.00	408.00	26.00	22.00
<b>WESTERN EUROPE</b>											
<b>CYPRUS:</b> Nicosia	540.00	1,054.00	90.00	69.00	16.00	16.00	158.00	544.00	632.00	13.00	13.00
<b>DENMARK:</b> Copenhagen	1,714.00	2,769.00	214.00	187.00	27.00	21.00	815.00	685.00	—	20.00	110.00
<b>FINLAND:</b> Helsinki	966.00	1,916.00	167.00	75.00	16.00	16.00	505.00	359.00	721.00	15.00	50.00
<b>GERMANY:</b> Berlin	1,664.00	2,194.00	265.00	63.00	24.00	27.00	195.00	322.00	583.00	25.00	19.00
<b>GREECE:</b> Athens	527.00	988.00	72.00	60.00	16.00	16.00	145.00	403.00	105.00	—	17.00
<b>IRELAND:</b> Dublin	602.00	755.00	175.00	66.00	20.00	22.00	186.00	245.00	573.00	6.00	45.00
<b>ITALY:</b> Milan	988.00	1,647.00	179.00	101.00	24.00	28.00	200.00	201.00	198.00	13.00	23.00
<b>THE NETHERLANDS:</b> Amsterdam	1,120.00	2,240.00	290.00	79.00	9.00	8.00	435.00	378.00	461.00	22.00	17.00
<b>NORWAY:</b> Oslo	1,320.00	2,805.00	231.00	111.00	19.00	19.00	305.00	404.00	1,072.00	36.00	62.00
<b>SPAIN:</b> Barcelona	1,186.00	2,372.00	158.00	86.00	21.00	22.00	94.00	191.00	182.00	14.00	47.00
<b>SWEDEN:</b> Stockholm	1,591.00	—	268.00	177.00	18.00	13.00	557.00	1,072.00	752.00	24.00	—
<b>UNITED KINGDOM:</b> London	944.00	1,101.00	142.00	96.00	16.00	16.00	315.00	361.00	315.00	46.00	20.00
<b>MIDDLE EAST/AFRICA/ASIA</b>											
<b>CHINA:</b> Shanghai	610.00	973.00	51.00	41.00	10.00	12.00	—	236.00	83.00	3.00	4.00
Hong Kong	664.00	—	77.00	—	6.00	10.00	—	—	—	6.00	13.00
<b>INDIA:</b> New Delhi	818.00	840.00	122.00	76.00	15.00	24.00	221.00	710.00	100.00	4.00	7.00
<b>INDONESIA:</b> Jakarta	943.00	1,165.00	122.00	54.00	22.00	22.00	50.00	636.00	42.00	4.00	9.00
<b>ISRAEL:</b> Tel Aviv	815.00	2,706.00	181.00	58.00	19.00	20.00	—	203.00	—	6.00	26.00
<b>JAPAN:</b> Tokyo	715.00	1,191.00	120.00	114.00	28.00	31.00	542.00	483.00	941.00	14.00	17.00
<b>KENYA:</b> Nairobi	1,059.00	1,863.00	179.00	85.00	20.00	17.00	—	89.00	435.00	8.00	12.00
<b>LEBANON:</b> Beirut	700.00	1,150.00	86.00	63.00	20.00	20.00	—	535.00	12.00	10.00	12.00
<b>QATAR:</b> Doha	687.00	2,748.00	110.00	63.00	21.00	19.00	—	—	—	20.00	138.00
<b>SOUTH AFRICA:</b> Durban	908.00	2,760.00	174.00	111.00	29.00	23.00	610.00	500.00	269.00	10.00	48.00
<b>SRI LANKA:</b> Colombo	881.00	1,514.00	116.00	63.00	18.00	19.00	—	—	—	4.00	14.00
<b>TURKEY:</b> Ankara	573.00	384.00	86.00	35.00	10.00	11.00	79.00	—	132.00	17.00	19.00
<b>U.A.E.:</b> Dubai	517.00	2,042.00	79.00	44.00	17.00	33.00	76.00	176.00	—	10.00	—
<b>NORTH AND SOUTH AMERICA</b>											
<b>ARGENTINA:</b> Buenos Aires	4,810.00	—	396.00	279.00	38.00	70.00	928.00	1,481.00	516.00	56.00	119.00
<b>BARAZIL:</b> São Paulo	2,936.00	5,871.00	178.00	94.00	49.00	87.00	185.00	105.00	793.00	7.00	61.00
<b>CAYMAN ISLANDS:</b> George Town	893.00	4,939.00	190.00	193.00	42.00	45.00	—	261.00	—	11.00	51.00
<b>U.S.:</b> New York City	1,120.00	1,125.00	150.00	103.00	20.00	18.00	—	—	510.00	18.00	79.00
Los Angeles	1,140.00	1,030.00	110.00	111.00	11.00	12.00	143.00	149.00	420.00	18.00	71.00
Seattle	948.00	937.00	101.00	99.00	12.00	11.00	138.00	136.00	425.00	19.00	67.00
<small>SOURCE: GARDINER &amp; THEOBOLD., NEW YORK CITY, LONDON AND WORLDWIDE.  NOTES: PRICES INCLUDE DELIVERY TO SITE AND LOCAL DISCOUNTS, BUT EXCLUDES VAT AND LOCAL TAXES. PRICE ARE FOR HIGH-YIELD STEEL REBAR, STRUCTURAL STEEL, ALL GRADES OF AGGREGATE, COARSE SAND, FRAMING LUMBER, CLAY BRICK, 4-IN. CONCRETE BLOCKS, 1/4-IN. GLASS.</small>											

## How To Use the International Cost Survey

Comparing construction cost data among countries with vastly different economic, political and social systems poses several hazards of which readers should be aware. Due to constantly changing market conditions and fluctuations in exchange rates, the above data should be used for broad “comparative purposes only,” cautions Gardner &

Theobald Inc., London. G&T compiled the international construction-cost survey from its worldwide network of offices and associated companies. All costs were provided in local currency and converted to U.S. dollars using the exchange rates in effect on Dec. 9, 2010. The information on building costs includes contractors’ overhead and equipment costs. ■

By Tom Nicholson

# Overseas, Inflation Creeps Back

The global recession knocked down building costs in many Asian countries in 2009, but inflation appears to be making a modest comeback in the region this year. The London-based international cost consultant Gardiner & Theobald Inc. reports that building costs in Shanghai declined 3.4% in 2009 after increasing about 7% in both 2007 and 2008. This year, building costs in Shanghai increased 1.4%, says G&T.

In Hong Kong, G&T saw building costs fall 3.7% in 2009 after posting double-digit gains during each of the previous two years. In 2010, building costs in Hong Kong were back up 4.8%, says G&T. The firm reports a similar trend in Japan.

In India, building cost escalation is slowly coming under control. It has been declining from an annual rate of 19% in 2007 to 12% for this year, according to G&T's report.

Vietnam is experiencing its own building boom, and Turner Construction Co., New York City, is there working on several projects, ranging in size from 74,500 sq meters to 930,000 sq m. This activity is starting to drive costs up in Vietnam, says Ken Osterland, Turner's project manager in Hanoi.

Osterland says the overall market has been impacted by 12% inflation of the

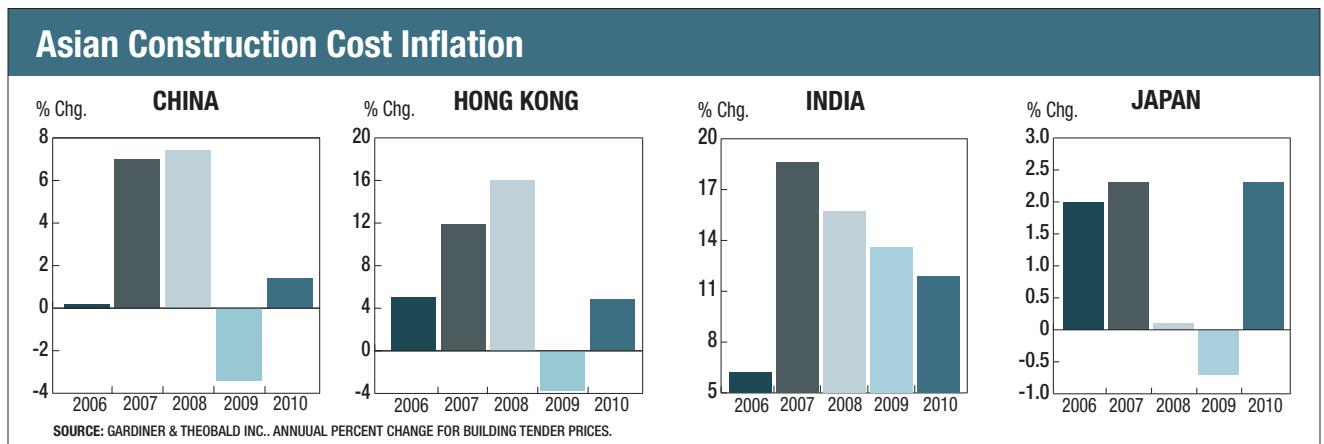
market, construction activities in China appear not to have been affected, and there is still a strong demand on construction materials," he says.

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On average, cement prices in China this year have risen by about 500 RMB per tonne, says Liu Zuoyi, spokesman for the China Cement Association in Beijing. He cites "increases in demand and production costs, along with electricity-use restrictions imposed by the government this quarter on energy-intensive industries," as the reasons behind the recent price increases for cement.

The same dynamics are also pushing up steel prices in China. Iron-ore prices went from \$60 per ton in December 2009 to \$170 per ton currently, says Gan Yong, spokesman for the China Iron & Steel Association in Beijing. "Robust global demand plays a role," says Yong. "This year, steel operations recovered significantly in South Korea and Japan, resulting in a surge in demand for iron ore which remains huge," he says.

Despite higher production costs that impact Chinese steel mills, construction costs in China are being driven by "a demand pull rather than a cost push," says Peter Morris, an analyst with London-based Davis Langdon. "Rising costs in China have everything to do with demand for a limited resource." ■



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