Percentage Change in Producer Price Indexes (PPIs) for Construction Materials, Structure Types & Subcontractors, 2003-2010

BLS Series ID		12 months through December--							to July 2010 since--		
		2003	2004	2005	2006	2007	2008	2009	6/10	4/10	7/09	12/03
Table 1: Changes in Consumer, Producer & Construction Prices												
CUUR0000SA0	Consumer price index (CPI-U)	1.9	3.3	3.4	2.5	4.1	0.1	2.7	0.0	0.0	1.2	18.3
WPUSOP3000	Producer price index (PPI) for finished goods	4.0	4.2	5.4	1.1	6.2	-0.9	4.3	0.3	0.1	4.2	24.4
PCUBCON	PPI for inputs to construction industries	3.0	9.1	8.2	4.6	4.8	2.8	0.4	-0.2	-0.5	4.5	37.8
PCUBHWY	Highway and street construction	2.6	10.8	14.1	6.2	10.1	-0.6	3.9	discontinued after June 2010			
PCUBHVY	Other heavy construction	2.6	13.4	8.8	5.5	6.9	1.3	-0.1	discontinued after June 2010			
PCUBBLD	Nonresidential buildings	2.4	9.3	7.4	4.0	4.8	2.2	0.3	discontinued after June 2010			
PCUBNON	PPI for inputs to nonresidential construction								-0.1			
PCUBNCS	Commercial structures								-0.1			
PCUBNIS	Industrial structures								0.0			
PCUBONS	Other nonresidential (highway, other heavy)								-0.2			
PCUBRSM	PPI for inputs to multi-unit residential	2.7	8.9	7.8	4.9	3.8	3.0	-0.5	discontinued after June 2010			
PCUBRES	PPI for inputs to residential (formerly single-unit)	3.5	7.0	6.9	4.2	2.5	5.0	-0.6	-0.2	-0.2	3.7	31.0
Table 2: Changes in PPIs for New Buildings & Subcontractors												
PCU236211	New industrial building construction						7.8	-4.7	0.1	0.4	0.0	
PCU236221	New warehouse construction			7.5	8.1	4.5	6.3	-4.1	0.2	0.2	-0.6	
PCU236222	New school construction				17.3	2.0	11.8	-2.6	0.1	-0.2	0.6	
PCU236223	New office construction					4.8	6.1	-3.3	0.3	0.4	-0.6	
PCU23811X	Concrete contractors, nonresidential building work						4.9	-1.1	0.6	0.3	0.1	
PCU23816X	Roofing contractors, nonresidential building work						12.6	0.3	-1.5	-1.5	-2.9	
PCU23821X	Electrical contractors, nonresidential building work						4.8	-3.3	-0.1	0.0	0.3	
PCU23822X	Plumbing contractors, nonresidential building work						9.0	-0.4	-0.4	0.1	2.7	
Table 3: Changes in PPIs for Specific Construction Inputs												
WPU057303	#2 diesel fuel	13.0	37.9	46.7	2.3	33.9	-38.2	22.1	-1.5	-9.0	26.4	122.6
WPU139401	Asphalt paving mixtures and blocks	3.7	4.3	14.3	27.6	1.6	34.3	-9.3	0.0	0.0	6.6	99.6
WPU136	Asphalt felts and coatings	6.3	4.1	15.3	5.0	1.4	57.8	-7.5	2.6	4.2	4.3	96.8
WPU1361	Prepared asphalt & tar roofing & siding products	5.3	4.6	16.2	5.2	2.3	57.5	-5.5	3.8	6.0	4.3	106.4
WPU133	Concrete products	1.5	7.6	10.1	8.1	3.8	4.1	-1.4	0.0	-0.1	-1.9	35.7
WPU1331	Concrete block and brick	3.2	4.7	8.1	6.8	3.3	4.2	0.2	-0.4	-0.4	-1.0	29.3
WPU1332	Concrete pipe	1.4	5.5	7.5	2.5	10.0	4.2	-6.5	0.5	-0.9	-4.8	25.1
WPU1333	Ready-mixed concrete	1.1	8.7	11.3	10.1	3.1	4.2	-1.1	-0.1	-0.2	-3.2	39.1
WPU1334	Precast concrete products	2.5	6.0	6.0	4.7	4.7	4.3	1.6	0.0	0.7	1.2	31.9
WPU1335	Prestressed concrete products	-0.2	8.2	14.3	4.9	2.2	2.8	-10.6	0.6	0.7	5.3	26.9
WPU1342	Brick and structural clay tile	0.7	3.0	9.4	6.0	0.0	0.3	-0.9	-0.3	0.6	0.2	18.9
WPU072106	Plastic construction products	3.2	7.2	21.6	-0.7	0.4	4.1	-0.7	-0.5	-0.7	2.7	37.5
WPU137	Gypsum products	2.8	20.0	18.8	5.5	-22.1	7.2	-10.2	-2.2	2.6	0.2	19.6
WPU1392	Insulation materials	2.0	8.6	2.6	2.1	-3.5	0.8	-0.7	0.3	0.1	0.0	12.3
WPUSI004011	Lumber and plywood	13.1	5.0	-1.1	-10.2	-0.7	-6.8	0.1	-1.4	-3.3	12.1	-5.9
WPU062101	Architectural coatings	3.9	5.3	9.2	6.3	4.2	16.6	-0.5	0.0	0.1	-3.2	43.0
WPU1017	Steel mill products	1.7	48.8	-3.8	11.6	0.9	4.8	-9.8	-1.4	0.7	26.1	76.1
WPU101704	Hot-rolled bars, plates, & structural shapes	11.3	53.8	-1.0	7.5	8.1	3.3	-13.4	-4.1	-2.0	17.2	81.8
WPU101706	Steel pipe and tube	3.3	66.0	1.2	5.5	-1.3	28.6	-19.5	0.9	3.3	22.2	116.4
WPU102502	Copper and brass mill shapes	11.6	29.6	31.0	44.4	-3.0	-23.3	41.3	-0.1	-13.0	16.1	127.9
WPU102501	Aluminum mill shapes	-0.5	9.9	5.0	12.7	-1.7	-4.0	-8.1	-0.6	-4.7	9.0	15.4
WPU1073	Sheet metal products	0.6	15.2	0.4	6.5	0.2	7.4	-4.2	0.0	1.1	3.6	29.8
WPU107405	Fabricated structural metal	0.1	24.7	2.8	3.6	5.3	11.8	-13.5	0.4	-1.5	-2.8	36.4
WPU10740501	Fabricated structural metal for buildings	-0.1	20.0	3.1	3.3	4.7	9.4	-10.2	0.5	-1.7	-3.5	30.7
WPU107408	Architectural and ornamental metalwork	0.7	23.5	3.1	4.9	2.0	21.8	-5.8	-1.2	-0.1	1.0	57.3
WPU107409	Fabricated iron & steel pipe, tube, & fittings	1.2	32.6	5.5	-2.8	-1.5	13.7	7.6	0.3	1.5	6.8	66.2
WPU1076	Fabricated steel plate	0.6	7.6	0.6	8.6	5.7	21.8	-11.1	-0.2	0.1	0.3	36.3
WPU1079	Prefabricated metal buildings	-0.7	35.5	2.0	5.5	2.0	25.5	-14.8	1.6	7.0	9.2	74.9
WPU112	Construction machinery and equipment	1.3	6.0	4.9	3.6	2.3	4.9	0.8	-0.1	-0.3	-0.3	24.3
Table 4: Changes in PPIs for Basic Inputs Important to Construction												
WPU056	Crude petroleum (domestic production)	14.3	30.5	49.6	0.1	51.7	-57.7	87.0	-0.1	-11.3	29.0	148.6
WPU05810112	Asphalt (at refinery)	10.0	18.3	17.8	34.9	-0.2	48.3	5.6	-2.1	-0.4	23.2	232.3
WPU066	Plastic resins and materials	6.4	28.6	10.8	-7.8	9.7	-8.3	3.4	0.9	-6.5	10.7	49.4
WPU1321	Construction sand/gravel/crushed stone	2.4	4.3	7.7	9.3	8.4	6.7	2.6	-0.5	0.0	0.6	46.7
WPU1322	Cement	-1.1	7.9	12.2	10.5	4.4	-0.9	-3.7	-0.7	-2.7	-6.9	27.4
WPU1011	Iron ore	1.6	6.7	15.5	7.5	1.3	12.1	0.5	7.4	7.4	6.8	55.4
WPU1012	Iron and steel scrap	64.9	50.8	-10.8	2.9	29.4	-35.2	52.9	-6.7	-16.5	45.6	115.7
WPU101212	Stainless and alloy steel scrap					-7.8	-39.8	97.5	18.8	-9.8	38.3	
WPU102102	Copper ores	37.4	65.1	39.3	53.1	-1.7	-46.6	84.4	-4.3	-21.2	15.6	217.5
WPU102301	Copper base scrap	30.7	34.5	51.9	50.0	3.1	-48.2	101.5	1.4	-15.1	27.1	226.7

Updated 8/17/10 Source: Bureau of Labor Statistics (BLS): www.bls.gov/cpi for CPI, www.bls.gov/ppi for PPIs

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Changes in Construction Materials and Bid Prices, 2003-2010

From the end of 2003 until mid-2008, the construction industry was jolted by a succession of steep price increases affecting a variety of materials. Recent changes have been milder, but the industry has been squeezed by falling bid prices. The attached tables document these changes, using producer price indexes (PPIs) from the Bureau of Labor Statistics (BLS) for specific construction inputs, finished building types and subcontractor categories. More familiar inflation measures--changes in the consumer price index for all urban consumers (CPI-U) and the PPI for finished goods--are presented to allow comparison with construction PPIs.

Background on PPIs

Each row shows the BLS series identifier and name for a PPI (or CPI), and two groups of percentage changes. The first group shows the 12-month percentage change for the years ending December 2003-09. The second group shows preliminary price changes in the latest month from 1, 3 and 12 months before, and from December 2003, when construction costs first spiked. Percentages are downloaded for PPIs from BLS' PPI website, www.bls.gov/ppi, at the page for "PPI Databases--One-Screen Data Search." Most of the PPIs are commodity indexes. There are also two types of industry PPIs. One type measures the finished cost of new buildings or subcontractors' work, including labor, overhead and profit, as well as materials. The other measures the cost of inputs for various construction segments. (Email simonsonk@agc.org for BLS tables showing the weights for each input.)

To provide consistency, “not seasonally adjusted” indexes have been selected for all items. For many items, BLS does not post a seasonally adjusted index, either because the price does not vary consistently by season or there is not enough data available to calculate a seasonal adjustment. However, users are cautioned that prices of items such as natural gas do show wide seasonal swings; for these PPIs, a large one- or three-month change may not be unusual. PPIs are available only at a national level.

As the name implies, the PPI for a commodity measures the price charged by a producer of that item or category. The index excludes any costs the buyer incurs beyond the producer’s loading dock or other point of sale, such as insurance, freight, storage, fabrication, or installation. Such costs are considerable for many construction inputs and may change at rates different from the PPI, but these rates cannot be estimated from PPI data. There is no PPI for construction labor, and the PPIs for trucking and insurance are not specific enough to indicate the specialized services and products used in construction.

The PPIs chosen for these tables are believed to be the closest approximation to items used or bought for construction. However, some PPIs cover a wider range of materials than items used specifically in construction. For instance, steel mill products include steel used in motor vehicles, appliances, equipment, etc., as well as construction. Other PPIs, like those for concrete products, reflect materials used solely in construction. An industry PPI measures the costs of all items used by an industry, including items such as diesel fuel that are consumed during construction. Readers are encouraged to scroll through the indexes on the PPI website. BLS invites ideas for additional PPIs. Send ideas to ppi-info@bls.gov; please copy simonsonk@agc.org.

Organization of PPI Tables

Table 1 compares the CPI-U with PPIs for finished goods and for construction inputs (materials that go into every type of residential and nonresidential project, plus items such as diesel fuel that are used up by contractors). Beginning in July 2010, BLS introduced indexes for nonresidential construction and three components (commercial, industrial and other) but also discontinued its former subindexes for highway and street construction, other heavy construction, nonresidential buildings and multi-unit residential; and renamed "single-unit residential" as "residential construction" (noting that inputs to single-unit accounted for about 90% of total residential at the time of conversion). Weights are available on request; they differ markedly for different types of construction.

Table 2 shows PPIs for completed new buildings (industrial, warehouse, school and office) and for the prices charged by concrete, roofing, electrical and plumbing contractors for new and repair work on nonresidential buildings. Unlike other PPIs, these indexes include general or specialty contractors' overhead, profit and labor costs, as well as material inputs. The indexes begin in 2004-08.

Table 3 shows changes in PPIs for specific construction inputs. Items are grouped into petroleum-based products; concrete and brick products; miscellaneous materials; and metal products. Indented index names show that the item is a subset of the last unindented item above it; this relationship is also shown in BLS’s numbering system, which assigns one or more extra digits to subcategories. For instance, "WPU1331 Concrete block and brick," is indented to show it is included in the index for “WPU133 Concrete products.”

Table 4 has indexes covering changes in PPIs for "crude" materials--items used to produce construction inputs--including nonmetals, metal ores and scrap metals. Recent changes in these indexes can show up later in price changes for materials made from these items.

Changes in Construction Costs

The PPI for inputs to construction materials increased more than the CPI each year from 2004 through 2008 as many materials had years with double-digit increases. Prices dropped in late 2008 and have fluctuated since then. But contractors' bids, as shown in Table 2, dropped sharply in 2009 as competition for projects became intense. In the past year, input costs have continued to outrun bid prices, squeezing contractors' margins.